

A comparative study of practice-based research and research-creation in media art: Comparing two doctoral studies in Australia and Canada

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Abstract

This paper examines the differences and similarities between practice-based research (PBR) and research-creation (RC) in media art. As case studies, two PhD research projects — one from Australia (Sojung Bahng, PBR) and the other from Canada (Stéphanie McKnight, RC) — are compared. The comparative analysis demonstrates that critical reflection and phenomenological awareness through creative practice are crucial in generating knowledge in both PBR and RC. Simultaneously, this study shows that research methods and approaches between PBR and RC differ due to different academic and socio-cultural factors. PBR's main aim is to generate knowledge through practice in a broader sense, whereas RC, with its conceptual roots in fine arts, emphasizes social and community-based engagement.

Keywords

Practice-based Research, Research-Creation, Media Practice, Cinematic Virtual Reality, Surveillance Studies

Introduction

This paper critically examines and compares the methodologies of practice-based research (PBR) and research-creation (RC) in media and fine arts from a multicultural perspective to further understand how these methodologies intersect and differentiate in global academic settings. In the 1980s, interest in PBR grew among creative disciplines in Australia and the United Kingdom [1]. The so-called "Canadian" approach, known as *research-creation*, is the use of practice-based methods in artistic research [2]. In Canada, scholars often define research-creation as a form of PBR, or even PBR in itself, and these methodologies are often mistaken as interchangeable. Indeed, this is because both PBR and RC emphasize generating new knowledge through creative practice and art-making.

For example, many scholars in Canada, such as Natalie Loveless [2], Erin Manning [3] and Owen Chapman & Kim Sawchuck [4], have outlined a direct link between PBR and RC, arguing that RC is a progression and development of PBR, or a Canadian "version" of PBR. For them, "research-creation" is a creative practice that is localized in Canada, therefore, carries its own name, beyond international terms such as "practice as research", arts-based research, practice-led research and so on [4]. We argue, however, although these concepts have shared values and identity, they are not identical or interchangeable ideas or approaches. They need to be analyzed through a localized, geographical, and multicultural lens. By comparing, contrasting, and analyzing both PBR and RC alongside each other, we can further understand the history of both these methodologies - how they intersect, and differentiate.

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This paper describes the differences and similarities between PBR and RC in terms of their knowledge contribution to artistic and creative practice in media and fine arts. As case studies, this paper analyzes two doctoral dissertations completed in 2020, one from Australia (Sojung Bahng, PBR) and the other from Canada (Stéphanie McKnight, RC). This analysis is unique and important because it situates two different dissertations alongside each other, and complicates their development, circulation, and assessment of both projects. Bahng used virtual reality (VR) as an artistic and cinematic medium to explore the concept of reflexivity and created three VR projects as part of the research process [5]. McKnight draws on methods of fine art and RC to investigate the issue of contemporary surveillance and colonialism in Canada [6].

Both artist-researchers critically reflected on their socio-cultural identities through their individual media practices, showing that reflective practices are essential for both PBR and RC projects. Although both researchers employed creative practices as part of their research processes, their methods and approaches for contributing academic knowledge are somewhat different. Bahng used the artistic investigation to explore her research questions around reflexivity and empathy in VR. On the other hand, McKnight explored their fine art practice as knowledge production for the field of surveillance studies. Bahng's approach reflects PBR's emphasis on extending knowledge through the process of media practice in general. McKnight's approach draws from the terminology of research-creation, which emphasizes the importance of creation in itself, showing the significance of artistic practice within the context of academic knowledge.

Our study shows that academic research which embraces creative media practice differs depending on the socio-cultural and institutional contexts, and that these cannot be easily simplified into one concept or approach. However, the research also demonstrates PBR and RC are reciprocal, and that both critical and phenomenological awareness are essential in contributing to knowledge in media art.

Related Work

Many scholars utilize creative methodologies for academic and research. This may be called art as research [7], art-based research [8], practice-led research (PLR) [9], PBR [1, 10], and RC [2, 3, 4]. However, there is some variation in the definitions of these types of research, where concepts are used differently depending on disciplines, cultural background, geography, research questions, and institutions. However, we are focusing our analysis on PBR in Australia and RC in Canada, specifically in relation to media and fine

art disciplines, because these methodologies are often seen as parallel, regardless of locality.

Practice-based research in Australia

PBR is generally understood as a mode of academic investigation and inquiry that pursues knowledge through practice [1,10]. PBR is differentiated from practice-led research (PLR). If the artefact or creative outcome is the basis for the knowledge contribution, the research can be considered PBR. In PLR, the study's main aim is to generate new understandings of the practice itself. Thus, the creative artefact is not necessarily considered as knowledge production [9,10].

The tradition of PBR in technology is related to the first polytechnic founded in London in 1880 [1]; the program was central to developing knowledge in practice but not contextualized as PBR. PBR in creative arts disciplines has grown rapidly in Australia since it was implemented in 1984 at the University of Technology, Sydney (UTS). Ernest Edmonds and Linda Candy, pioneers of the PBR program at Creativity & Cognition (C&C) Studios at UTS, defined PBR as "An original investigation undertaken in order to gain new knowledge partly by means of practice and the outcomes of that practice" [1]. This definition of PBR emphasizes the originality of creative outcomes and artefacts as knowledge production. For a practice-based doctoral submission, PBR normally requires the inclusion of creative artifacts (or artworks) as well as a written dissertation that contextualizes the creative outcome academically [1,10].

SensiLab, established in 2016 by computer artist Jon McCormack at Monash University in Australia, has suggested a new model for PBR in media art and creative technologies. SensiLab was created within the Faculty of Information Technology, but influenced by existing models used in creative disciplines in the Faculty of Art, Design & Architecture (MADA). SensiLab's program expanded the practice of PBR beyond the creative arts to include research in creative technologies, visualization, artificial intelligence, human-computer interaction, interactive media, games, simulation, cultural heritage, and information systems [11]. SensiLab acknowledges the value of tacit and implicit knowledge as an embodied phenomenological knowledge [12, 13]. For its doctoral program, SensiLab adopted an approach to PBR similar to that of C&C at UTS. The SensiLab PBR examination process requires an artefact with a public exhibition accompanied by a written exegesis¹. The length of the exegesis is approximately half the length of a traditional written doctoral thesis dissertation [11].

In general, PBR in Australia has developed by emphasizing the value of the process of knowledge production and embodied tacit knowledge in both creative arts and technologies. These movements can be considered fundamental academic efforts that include phenomenological approaches and methods: those that put forward the importance of suspension of judgement, bodily awareness and subjective reflection [14] as a primary method of knowledge production.

Research-creation in Canada

The Social Sciences and Humanities Research Council (SSHRC) in Canada define RC 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" [15]. However, many artist-scholars in Canada have redefined and expanded the concept of RC as a uniquely innovative research methodology. The idea of RC also has been developed as a tool to explore critical social engagement in artistic and experimental ways.

RC is rooted in practices of fine arts but borrows inspiration from multiple disciplines. RC is an interdisciplinary practice that brings together a constellation of theory, practice, and events [3, 4]. Artist-scholar Stéphanie McKnight has argued that the methodology of RC allows artists who work in academia the skills, tools, and support needed to generate research through the production of artworks and cultural texts [6,16]. In RC projects, research, knowledge, and production work reciprocally to form new ways of thinking of old and new ideas [2].

For research-creationists Owen Chapman and Kim Sawchuck, the process of RC is embedded in academic institutions, and thus draws on some traditional modes of research inquiry [4,17]. However, this is only one component of a series of ways that RC functions. RC projects can be incomplete, and may produce new knowledge throughout its creative process, and even beyond it. This is not to say that RC projects cannot be treated and exhibited like "autonomous artworks" [18], or translations of knowledge; however, the process of creation and manipulation of research and knowledge at all stages of creation is the primary mode of inquiry and knowledge production for RC.

Furthermore, RC arguably privileges feminist and activism methodologies [2, 3]. Many research-creationists draw knowledge from intersectional practices such as community-based research and socially engaged work. They speak to community members, install exhibitions, and think while creating, reading, performing, sketching, publishing, and failing [17, 19]. RC gives space for unsettling, uncomfortable, and productive failure [16, 19]. In short, research-creationists seek to produce artistic and innovative research that will change the way audiences, scholars, artists and viewers move throughout society and space.

Two PhD Case Studies

Cinematic VR as a reflective tool by Sojung Bahng

Sojung Bahng's Practice-based PhD research, conducted at SensiLab at Monash University in Australia, explores the reflexive dimensions of cinematic virtual reality (VR) within intersubjective contexts. Through conceptual and practical explorations of VR storytelling, Bahng developed new cinematic practices applied to VR and expanded the contextual understanding of reflexivity and empathy. Her practice-based research developed three cinematic VR projects: *Floating Walk* (360° video), *Anonymous* (interactive mobile

¹ The practice-based PhD research is examined on a written exegesis of around 30,000 to 50,000 words.

VR) and *Sleeping Eyes* (interactive navigable VR). Each creative work applied reflexive elements in qualitatively different ways, exploring the potential of cinematic VR for eliciting embodied reflection. The projects are responses to both personal and societal alienation, disconnection and isolation.



Figure 1. – A still from *Floating Walk*: the image shows the artist standing in front of a wall of passports from different countries carrying a 360° camera.

Background

Based on the developments of virtual reality (VR) technologies, many artists and filmmakers have attempted to create moving image works that provoke empathetic engagement in virtual characters or stories [20]. Bahng argued that immersive engagement without critical or reflexive awareness has the potential danger of objectifying others' pain or emotionally identifying with others' difficult situations without critically thinking about the social and historical issues around them [21]. Based on this perspective, she examined VR as a reflexive storytelling tool inspired by the reflexive mode of documentary filmmaking [22] and Bertolt Brecht's epic theater [23]. Bahng further noted that VR has a fundamentally reflexive nature due to the limitations of immersive engagement; thus, she explores these limitations as reflexive elements for VR storytelling to encourage audiences to actively fill in the gaps between their physical sensations and virtual perceptions.

Research Objective and Method

The research objective of Bahng's dissertation was to explore cinematic VR as a reflexive tool beyond empathy. She investigated her research objective through her creative projects by critically examining how reflexive storytelling is effectively used to promote self-reflection in socio-cultural contexts. Her research questions concerned the methods and techniques that can be used for reflexive VR storytelling.

Bahng's research covered multiple disciplines, including film and media studies, HCI, visual art, and philosophy. She drew upon a practice-based research methodology specifically in artistic practice, but utilized a variety of research techniques and methods: autobiographical,

autoethnographical, interview-based, and collaborative. As the research progressed, Bahng critically reflected on her creative works and applied what she had learned from one project to the next. The works informed and iteratively developed the framework presented in the exegesis, and this refinement informed the development of each subsequent work.

Thesis Structure

Bahng's exegesis is divided into two main parts: theory (Part I) and practice (Part II). In Part I, Bahng proposes a conceptual framework for reflexive storytelling design in cinematic VR. For example, she reframes VR as a reflexive tool by using theoretical backgrounds such as Buddhist philosophy, Brechtian aesthetics and phenomenology. She also introduces embodied spatial montage as a cinematic concept that is extended to the spatial dimension and the participatory situations of VR storytelling. In Part II, she uses the proposed conceptual framework and theoretical analysis of Part I to describe her three cinematic VR projects. She explains each project's background and overview and then describes the process of making the project. She also addresses the audience study and discussed the reflexive dimensions based on the findings from the audience interview. In the concluding section, Bahng discusses her overall research process by reflecting on this body of creative work and connecting the practical, studio investigation with the theoretical framework. She responds to the research questions and offers reflective analysis of the practice-based research.

Research Contribution

Bahng's research embraces both conceptual and creative knowledge, exploiting diverse technical possibilities. Through three distinct creative projects, Bahng reframes and develops a novel form of VR storytelling for self and social reflection. Together, the three projects provide insight into our understanding of VR as a cinematic, artistic medium and as a means of promoting self and social reflection, specifically regarding socio-cultural issues such as alienation, disconnection and isolation.

Each project emphasizes its own distinctive contribution. *Floating Walk* reveals the potential of 360° video for auto-biographical self-expression and as an autoethnographic tool that promotes reflexive thoughts about immigrants' identity issues. *Anonymous* contributes design factors and technical implementations for using VR to elicit self-reflection on loneliness and death. *Sleeping Eyes* demonstrates how phenomenological and participatory engagement in VR storytelling can elicit critical awareness of narcolepsy and social ignorance. Collectively, the body of creative research provides knowledge about reflexive modes of immersive storytelling while considering the various technical, design and narrative elements available to cinematic VR.

Colder Now: Surveillance as Contemporary Colonialism by Stéphanie McKnight

McKnight's doctoral research-creation project, conducted at the graduate program in cultural studies in Queen's University, investigates surveillance and colonialism in Canada through media art practice and exhibition. As a

representative outcome, her doctoral RC exhibition titled *Colder Now*, was exhibited at the Art and Media Lab in the Isabel Bader Centre for the Performing Arts on October 23rd to November 3rd 2017. Drawing from the methodology of RC, *Colder Now* juxtaposed surveillance studies, colonial studies, and media art technologies to ask how does surveillance and policing contribute to contemporary colonialism in so-called Canada post-9/11.



Figure2. *The triangle of trust* (2017) by Stéphanie McKnight

Colder Now's anchor piece *the triangle of trust* is one example of the ways that McKnight uses media, collaboration, installation, and surveillance studies theory to question their white settler relationship to Canada and its colonial histories. *the triangle of trust* is a neon replica of the Canada Security Intelligence Service (CSIS) headquarters on unceded and unsundered Algonquin territory (also known as Ottawa, Ontario), known for investigating "activities suspected of constituting threats to the security of Canada and to report on these to the government of Canada" (Government of Canada). This sculpture centers CSIS as a primary institution of surveillance and intelligence gathering. *the triangle of trust* replicates the aesthetic of CSIS, including the colour blue, which is referenced in several Google Images of the establishment. The line drawing was inspired by a screenshot taken of the CSIS building found on Google Maps.

Background

As an exhibition, *Colder Now* critiques the invasive and unclear intent of Canada's Anti-terror Act (Bill C-51). Canada introduced its first "Anti-terrorism Act" (Bill C-36) and "Public Safety Act" (Bill C-42) in 2001, as a response to 9/11 [24]. CSIS is one of the primary institutions governing these policies. Bill C-36 was heavily contested and protested because of its racially motivated tendencies (2012). Furthermore, Bill C-36 has affected Indigenous Peoples in so-called Canada, especially Indigenous activists who may participate in activities of resistance and political dissent (Adese, 2009). Bill C-51 and its successor Bill C-59 are arguably no different. They include similar languages that attempt to define terrorism in extremely broad terms. Regardless of the original intent of these bills, and whether or not citizens agree they are necessary for security purposes, they actively produce normal (white) and abnormal bodies (non-white). In these contexts, Indigenous resistance that challenges colonial and settler practices in Canada are labelled as unpatriotic, dangerous, criminal, and a national threat [25].

Research Objective and Method

the triangle of trust captures the architectural design of the CSIS headquarters by illuminating a line drawing of the building. The glass tubing and florescent blue tints intentionally replicate the glass exterior of CSIS. Painted with a sea of windows, the CSIS headquarter insists that it is a transparent and visible institution. Though as several scholars have argued, windows and glass façades don't actually equate visibility [25, 26]. Despite CSIS's desire to render its interior visible, viewers gaze is subject to several factors including security personnel, trespassing, limited gaze. As such, *the triangle of trust* complicates CSIS's desire to be transparent in its processes of security through its architecture by replicating its glass façade, but also illustrating limited architectural information through a simple line drawing. Despite this transparency, there is still a lack of transparency relating to their governing bills, such as Bill C-51.

Using these fine-arts-based methods, McKnight's research objective was to explore the ways RC is integrated with surveillance studies and McKnight's white settlerhood. By questioning the visibility and the institution who is governed by policies such as Bill C-51 through the creation of art, audiences can engage with the dialogues in ways that complicate their relationship to the research questions at hand.

Thesis Structure

McKnight's dissertation takes the form of a portfolio project. In the Cultural Studies program at Queen's University, a portfolio dissertation is defined as, "Like a monograph thesis, the portfolio thesis comprises a coherent research project based in academic literature, but the body of original work consists of multiple components that function as standalone elements and may be diverse in format, voice, medium, method, and address" [27]. McKnight's portfolio project consisted of seven individual standalone articles that addressed the research question, how does surveillance contribute to contemporary colonialism in so-called "Canada post-9/11"? Funded by the Social Sciences of Humanities Research Council in Canada (SSHRC), McKnight's dissertation unsettled traditional methods of knowledge dissemination at Queen's University, by centering interdisciplinary and novel ways of publishing their dissertation. More interesting than the articles embedded in McKnight's final dissertation package, was the inclusion of a visual essay titled *Working, Watching, Working: a methodology for a white settler surveillance artist scholar* – a journal and sketchbooks of ideas, drafts, photographs, and notes taken during the processes of creation. In this visual essay, we have access to their processes of thinking, critical reflection, failure, and the moments where their ideas have changed to better reflect their identity and posed research questions. As mentioned above, RC happens at all stages of the research process. McKnight's visual essay demonstrates this. The articles are a form of appendix to the visual essay and *Colder Now* exhibition to fulfil the traditional colonial and neoliberal expectations of Canadian Universities. The institutional expectation and rule that art cannot function as research and knowledge, in its own right.

Research Contribution

Not only does McKnight's creative dissertation project and exhibition *Colder Now* rethink and reveal contemporary colonialism through methodologies of art-making and interdisciplinarity, but it also reimagines new ways of integrating RC as a doctoral methodology in Canadian

Universities. It does this by inviting portfolio projects as an option to exhibit and publish a creative dissertation. *Colder Now*, and specifically *the triangle of trust*, interrogates Canada's security, surveillance, and policing strategy through the production of art. Through their art-making, McKnight reveals the invasive and violent colonialism still plaguing Turtle Island. The artworks are in themselves artefacts of social justice and self-reflexivity, as well as producers of new knowledges in their own right. The new knowledges that these pieces contribute to the social sciences and humanities, especially surveillance studies, is their ability to use surveillance the visual as methodology itself. McKnight's work function creeps' surveillance policies, anti-terror legislation, and white settler colonial ideations to critique the settler state against itself.

Finding and Discussion

Bahng and McKnight both use media and fine art practices to generate academic and scholarly knowledge in PhD doctoral studies. However, their research approaches and methods are different. Most noticeably, Bahng's PhD dissertation format is considered an exegesis in Australia, and it follows a relatively conventional format for PhD research that includes an introduction, theoretical background, creative practice and overall reflection and conclusion. However, McKnight's portfolio project combines several art projects that include the written contextualization of each work.

In a similar context, Bahng's creative practice informed the development of her next project through critical reflection and audience observation or interview. Her three creative projects are deeply interconnected, and her design process was iterative. However, each of McKnight's artworks has a separate emphasis and importance in terms of knowledge production, even though the three projects embrace a broader umbrella of ideas. Each of McKnight's pieces can work alone or alongside each other.

Bahng's study used explicit research questions that were addressed through practice. To answer the questions, she used a combination of different research methods combining autoethnography, ethnography, interviewing, collaboration, and more. In contrast, McKnight's research questions were unfixed, and their inquires did not aim to find specific answers. The artworks themselves became producers of knowledge; thus, the thesis and questions were unstatic and constantly changing. McKnight raises questions to investigate the way creative practice can produce new knowledges in surveillance studies, but they allow the audience to find answers or ask other questions. McKnight's research methods and questions are designed to provoke discourse or elicit critical inquires.

The differences in the research approaches and methods are not surprising because Bahng and McKnight's research topics and purposes are different. However, the noticeable difference between the two PhD projects is deeply related to the dissimilar traditions between PBR and RC. As discussed previously, PBR in media art in Australia has developed within interdisciplinary art and technology disciplines. Because Bahng's research was conducted at SensiLab, her dissertation format partially embraces a technoscience academic style and approach. However, as a SSHRC funded project, McKnight's research approaches are oriented toward the humanities and fine arts. They explore RC as an art

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practice to produce new knowledge for specific cultural, social and political events. Furthermore, McKnight suggests a new portfolio model for RC as a doctoral methodology for Canadian Universities. The trials of embracing creative practice for doctoral studies are relatively new, and there is a less established format in Canada. Therefore, McKnight combines the portfolio style dissertation and art exhibition in their PhD research to validate the value of artistic RC for doctoral research methodology more broadly.

Furthermore, it is clear that RC puts greater emphasis on social engagement, social justice and activism as a research practice. However, this does not mean that PBR places no importance on social value or community-based engagement. However, PBR's main aim is to generate knowledge through practice in broader research questions and themes; thus, PBR approaches are not necessarily limited within the frame of social intervention. As mentioned earlier, many artist-scholars use PBR and RC interchangeably, as though they are the same concept. However, it can be seen that PBR is a broader umbrella concept that values practice and creative artefacts as vehicles for knowledge production. On the other hand, RC has a specific tradition and history stemming from Canadian fine art practices and humanities traditions that facilitate social action through artistic practice.

Despite these differences, Bahng and McKnight emphasize the importance of self-reflexivity and critical reflection as a research method and artistic tool. They demonstrate that subjective knowledge and embodied understanding by practice are important in both PBR and RC. Furthermore, as media and fine art practitioners, both researchers use technology as a critical tool to deconstruct the conventional or old perceptions and provide new ways of explorative mediation to the audience. Simultaneously, they value the collaborative elements in all research or creation processes, demonstrating that many factors beyond a researcher's individual idea (e.g., artistic collaborators, audience members and collaborative technological tools) can produce unexpected but valuable contextual knowledge. Bahng and McKnight both indicate that new media can be used reflectively and critically in media and fine art research practice.

Conclusion and Limitations

This study brings forward the differences and similarities between PBR and RC in doctoral media and fine art research. Two PhD dissertations, one from Australia using PBR (Sojung Bahng) and the other from Canada using RC (Stéfy McKnight) were described and analyzed as case studies. We found both researchers used media practice to reflect their socio-cultural identities critically and to prompt an audience's critical awareness of and questioning in their socio-cultural contexts. In their studies, media practice was used as a form of knowledge production to demonstrate the significance of embodied knowledge through creative practice. However, we also found the research methods and approaches were significantly different between the two studies. Bahng's PBR study adopted various technical methods and demonstrated that PBR methods can be applied to broader research objectives. McKnight's RC project showed the way RC is positioned within fine art practice and humanities in Canada and that it prompts social engagement and activism. Comparing only two doctoral studies limits generalizing the characteristics of PBR and RC. Nevertheless, the differences based on the comparative analysis between two studies clearly show the histories and traditions of PBR are

different in Australia and Canada, demonstrating that creative research has been interpreted in complex ways, considering socio-cultural backgrounds and institutional or academic heritage and disciplinary lineages.

Acknowledgements

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