

Enlivening Tactics:

Collectively Produced Liveness in Theatre with Mobile and Locative Media

Nicholas Atkins

University of Technology Sydney

Submitted to the Faculty of Engineering and Information Technology in Fulfilment of the
Requirements for the Degree of Doctor of Philosophy

2026

Certificate of Original Authorship

I, Nicholas Atkins, declare that this thesis is submitted in fulfilment of the requirements for the award of Doctor of Philosophy, in the School of Computer Sciences at the University of Technology Sydney.

This thesis is wholly my own work unless otherwise referenced or acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

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This research is supported by the Australian Government Research Training Program.

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12/02/26

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Acknowledgements

Theatre is a collaborative artform. No show is made alone. This thesis is no different.

Professor Andrew Johnston and Dr. Baki Kocaballi have offered me consistent insight, patience and support. Their supervision has helped me form a critical distance from my creative practice without losing touch with the impulse that motivates it. Thank you.

Thank you also to the academic team in Theatre and Performance Studies at UNSW. The generous teaching and advice of Bryoni, Clare and Meg offered a foundation for this research over a decade ago. Their continued support and solidarity have helped me see where this might go and, perhaps more importantly, from where it has come.

While each of the performances documented in this thesis began with a memory, idea or hope, it was the drafts, rehearsals, improvisations, recordings, lunches, coffees, ad hoc phone calls and endless days getting lost in Parramatta Square that made them shareable. My collaborators Kate, Monikka, Challito, Lily, Peter and Katrina made these days as special as they were. Their words, ideas and pictures find their way into these pages.

This is true also for the researchers at the Creativity and Cognition Studios, UTS. People talk about a PhD as a lonely experience. The people who made up the CCS during my time there have made me anything but.

To bring a show from workshop to performance takes time, space and resources. The support of the City of Parramatta, Create NSW and Creative Australia made this possible. This extends to the support of PP&VA, Riverside Theatres, Parramatta Artist Studios and FORM Dance Projects. Collaboration between individuals can grow an idea, but it takes the kind of investment and infrastructure they provided for it to reach its audience.

Thank you to my family, my Mum, Dad, sisters, brothers, nieces & nephews. They are my sounding board, safety net and escape hatch that I never had to ask for and for which I'm always grateful.

Finally, thank you to Robert who has made space for me to be lost, confused, excited and rebuilt through this work. His design work is embedded in the pages that follow, but the impact of his company can't be captured in a table or graph.

Theatre is a collaborative artform. When I look at the people I've gotten to spend time with, I feel lucky that it is.

Abstract

This thesis introduces the concept of enlivening to describe a collectively generated sense of liveness that emerged through practice-led research in theatre with mobile and locative media (TwMLM). Enlivening describes a dynamic state of liveness that is continuously and collectively produced between performance and participant within mediated assemblages. Here it is examined through a series of tactics used to organise dimensions of time, space and action in the process of theatre making. This work contributes further understanding regarding how TwMLM enlivens an audience's relationship to self, others and environment.

The approach has been to use practice-led research to produce a body of TwMLM events and then investigate them through the experience of audience and practitioners. Five TwMLM events were produced and are documented through this thesis. The use of mobile and locative technologies varies from custom-made locative media applications through to commercially available applications. These technologies were formative in the development of each performance, affording the staging of scavenger hunts, secret missions, walking tours and games of hide and go seek as performance modes. These performances and their corresponding cycles of prototyping, production, reflection and iteration serve as research outputs and as process.

Alongside the practice component are practitioner reflections, analysis of scene studies, semi-structured interviews and focus groups with collaborating artists. This data informs the identification of key spatiotemporal tactics used in the performance works, a renewed taxonomy of descriptive dimensions for TwMLM and three experiential themes tied to two specific performances produced through a reflexive thematic analysis.

The results of the study are focused in three higher level enlivening tactics. They include enlivening as shaping contingency, enlivening as locations per second and enlivening as audience sync. These explore defamiliarizing place to resensitize audiences to their environment, organizing movement and interaction sensitivity with respect to narrative progression, and designing for ambient connection among asynchronous audiences. They reflect both making strategies embedded in the works and recurring patterns identified in audience and practitioner experience.

The contributions of this thesis are threefold. They include:

- a renewed time and space matrix for analyzing and designing TwMLM as well as six tactics that emerge from shifts in spatiotemporal relations,
- three experiential themes to further understand perceptual and relational shifts in TwMLM, developed through interactions with audiences and practitioners,
- and a dramaturgical framework that emerged from the research, offering enlivening as a structuring principle to organize spatiotemporal relations in TwMLM.

1. Introduction

1.1 Background

If you travel to Parramatta Park, on Dharug Country in 2025, you can find a series of Scarred Trees. The Burrumuttagal people, a clan of the Dharug, hold these trees with great significance (Hendriksen, 2012, p. 11). They speak to a connection with the land and a way of life. First Nations people have been custodians of this Country for over 60,000 years (Langton, 2020, p. 3). This thesis uses terms like mobile and locative media frequently. These terms are commonly used in reference to technology such as GPS, iPhones and sensors; but the Scarred Trees on Dharug Country are living reminders that locative and mobile media practices are not contemporary but ancient. The connection between ancient and contemporary practices has been noted by previous researchers (Riley et al., 2020, p. 236), but bears repeating. This research, and its embedded creative works, have been produced across Dharug and Gadigal Country. Dharug Country and what's known as Western Sydney is of specific significance. It's on this Country; in a public square, a Town Hall, a high school and an arts centre that the body of creative works at the centre of this research has been conceived, tested, shared, reflected on and written about.

“Feels like theatre” was a phrase used by the Wolf359 creative team when I interviewed them about their solo digital theatre work, *Temping* (Wolf359, 2023), presented in Adelaide by the Electric Dreams Festival. The phrase was offered in response to a specific moment when the relationship between the audience and the performance shifts. *Temping* asks the audience to role play as a temp worker. A solo audience member sits at a desk and responds to emails, calls and messages. The action of the show is primarily driven by the actions of the audience. A message arrives and then stays until the audience decides to act. However, towards the middle of the performance, after picking up a page full of names recently printed from a printer by the side of the computer, lights shift from bright white to dark blue. Sound changes from the chatter of an office to a low drone. The performance moves from an office simulation to something more expressive or poetic. The cueing of this moment also signals the presence of a remote observer. This cue could not be automated or triggered by the audiences' action and implies that another unseen person is engaged in the performance. The show is more live than it first appears.

The Wolf359 team explain that this moment arrived in later developments of the work and that, until this point, they perceived their audience to be reading through the performance like it was a to-do list. In contrast, they describe this moment as asking the audience to stop and *feel* the work. This is what they meant by a moment that felt like theatre. This comment has stayed with me and speaks to how this research has come about. My work as a student, audience and maker of theatre has been about chasing moments that feel like theatre. Auslander's writing on liveness (Auslander, 2023) and Baker's extension of this work into the areas of presence and feltness, with a focus on the use of mobile devices in performance (Baker, 2019a), have offered up theory and terms to make sense of these moments.

Chasing these moments has led me to study an undergraduate degree in Media with a major in Theatre and Performance Studies at the University of New South Wales. Captured by performances such *Mortal Engine* (Chunky Move, 2008) and writings such as Haraway's *Cyborg Manifesto* (Haraway, 2013, pp. 149-183) I completed an honours using practice led research to understand further the relevance of cyborgs and cybernetics in my own developing theatre practice. From this point I worked in the field for over a decade where I focused heavily on the development of new work and new writing for performance. I produced a diverse body of work; however, I hit a point where the projects I was making which most "felt like theatre" to me were beginning to sit outside of traditional theatre spaces and making structures. A small scale text messaging project called *Short Message Service* (Q Theatre, 2020) and the concept for a performance experience while riding the train from Sydney's Central to Penrith Station using the state Government's transport API guided me back to study. I wanted to understand what types of liveness were driving my interest in this work, how it might be felt by audiences and how it could be worked with by practitioners.

Jump to 2021. I'm in Melbourne. I've travelled from my home in Parramatta to attend a performance of *Rider Spoke* (Blast Theory, 2007). The performance was first created in 2007, not long after I attended my first play at a local theatre. It had been recommended to me while studying my undergraduate, but it took me another ten or so years before I'd catch the show in person. Riding around the streets of Melbourne I navigated the performance I had already studied closely. Shortly after it finished, I wrote down some scattered thoughts using the notes application on my iPhone.

Batteries
Zones
Responding to question about dad
Words were a blur
Scared
Unknown city
Couldn't find a location
Woman saying nothing makes it alright at the moment
Mixed desire to speak and to be heard
Time
Is the Machine taking care of me
Wanted to ride further / be more free
Did I feel invisible?
Cried in the middle of the city
Memories and thoughts were a blur
I feel awake
Near / near / far

This experience felt live to me, but in a way that was different to how I had encountered liveness in performance previously. This experience of liveness surfaced again at *Temping* by Wolf359 a few years later. I wanted to understand this feeling more. I wanted to understand this kind of liveness. This research begins with an impulse to chase liveness, but it ends with a shift toward designing for enlivening. Through this shift, liveness is not thought of as something to be amplified captured, protected or presented but rather collectively produced between array of people, places and technical systems.

Featured in the picture below is Kate Worsley, Lily Hayman, Robert Polmear, Challito Browne, Monikka Eliah and I photographed on Dharug Country in Parramatta. These are key collaborators who contributed to the performances produced through this research.



Figure 1: Creative Team Message Bank (2023) photographed on Dharug Country - Photo Credit, Anna Kucera – Left to Right, Kate Worsley, Lily Hayman, Robert Polmear, Challito Browne, Nick Atkins, Monikka Eliah

1.2 Aims

Theatre with mobile and locative media (TwMLM) is a subset of digital theatre (Masura, 2020) characterized by the central role mobile and locative media plays in the performance's development, production and presentation. In any theatre making process practitioners are required to make decisions regarding how they will work with time and space to gather the action of performance. Mobile and locative technologies afford different relationships to time and space than that of the proscenium arch or black box studio. For example, the audiences relationship to the landscape of a fragile home amongst towering city buildings signified by a constructed set in Miller's *Death of a Salesman*, first produced in 1949, (Miller, 1996) is different to that of the real-world streetscapes of Berlin in Rimini Protokoll's, *Call Cutta* (Rimini Protokoll, 2005). The temporal approach of Pinter's reversed chronological narrative in *Betrayal* (Pinter, 1978) can be further complicated through an exploration of *Blast Theory's* Rider Spoke

(Blast Theory, 2007) which brings voices from the past into the present through the actions of the audience.

The aim of this research is to explore how TwMLM shapes and might shape spatiotemporal relations to enliven an audience's relationship to self, others and environment by using a practice-led, reflective and reflexive approach. Enlivening, in this research, refers to a state of liveness (Auslander, 2023) that is continuously and collectively produced between performance and participant within mediated assemblages. Mediated assemblages refers to a repositioning of the actor and how acting is conceived in the context of new media dramaturgies (Eckersall et al., 2017, p. 2). This research makes a series of contributions to the field in response to three questions. They include:

- **Question 1:** How does theatre with mobile and locative media reshape spatiotemporal relations in performance?
- **Contribution 1:** A renewed time and space matrix for theatre with mobile and locative media as well as six experiential effects that are associated with shifts in spatial and temporal relations.

- **Question 2:** How do these shifting spatiotemporal relations influence participants' relationships to self, others, and environment?
- **Contribution 2:** Three themes exploring perceptual and relational shifts in mobile and locative theatre developed through interactions between participants and performers.

- **Question 3:** What dramaturgical tactics can support the creation of enlivening experiences in theatre with mobile and locative media?
- **Contribution 3:** A dramaturgical framework offering enlivening as a structuring principle to organize spatiotemporal relations in theatre with mobile and locative media.

In addition to the contributions outlined above, the output of this research includes the creation, presentation and documentation of five performance works, referred to as the Performance Works. These performances are central to the thesis. They form a foundation from which each of the contributions is developed and offer concrete examples for how TwMLM can shape spatiotemporal relations and enliven action. Through these performances, this thesis will demonstrate a shift from chasing liveness to designing for enlivening.

1.3 What is Theatre with Mobile and Locative Media?

In this thesis I will use the phrase theatre with mobile and locative media (TwMLM) to refer to theatre works that centre mobile and locative technologies in the performance's creation, development and presentation. Digital theatre (Masura, 2020), digital performance (Dixon, 2007) and networked performance (Baker, 2008) all offer helpful reference points to identify the kind of work on which this research is focused. Dixon's research helps limit the scope to performances that centre digital thinking in creation as opposed to simply presentation or distribution (Dixon, 2007, p. 34). Masura pushes for further detail, limiting the scope to work that features co-present actors and performers, the presence of verbal communication and a limited interactivity of message (Masura, 2020, p. 6). Baker adopts a perspective informed by performance studies more broadly. Her work offers a greater sensitivity to the role of locative, mobile and networked media as well as the themes of presence and liveness (Baker, 2008; Baker, 2019a, 2019b) with which work in this space is commonly concerned. These themes are also reoccurring points of interest for Masura and Dixon. These approaches are teased out in further detail in the Antecedent's section of the following Literature Review.

Parallel and intersecting the field of digital theatre are mobile and locative media practices. Farman's work on mobile interface theory (Farman, 2021) is highly relevant to this work and encounters some of the same case studies such as the work of Blast Theory. Given this, it is helpful to question why theatre and not performance with mobile and locative media? Or why not locative gaming or site-specific storytelling to align more closely with Farman's work (Farman, 2021, pp. 86, 128) or mobile media performance to align with Baker's (Baker, 2019b). The choice to use theatre and not performance is an attempt to narrow the focus of this research

and to be transparent about the lens that has been applied. Theatre is used here to note; the attention paid to the role of the actor and acting in these works, the interest in how narrative unfolds through action in real time and to distinguish these events from installation, dance or gaming. While some of the works explored in this thesis could equally be investigated through these frames, doing so would illuminate different questions, observations and points of interest. Like all attempts to articulate the boundaries of an art form, the use of the word theatre here is imperfect but is offered as a foothold to signal the perspective that is brought to this work and to acknowledge its limits. This is both a limitation but also a contribution.

Farman's recent work describes his key concern as "the production of social and embodied space through practices with mobile technologies" (Farman, 2021, p. 5). This concern is shared by this research. Themes such as proximity, distance and intimacy surface frequently. However, by choosing to investigate TwMLM, this research explores the implication of creating these social and embodied spaces while accounting for proximity, distance and intimacy through developing dramaturgy.

I do not consider myself a digital theatre maker or a theatre maker working specifically with mobile and locative media. I work and research theatre with mobile and locative media because it helps me to express something and make a connection with audiences that feels relevant and urgent to the moment in which I am making. In his 2016 article Causey describes common threads of postdigital performance as an effort to "think digitally in order to resist, or at least understand the systems of electronic and computational control" (Causey, 2016, p. 432). While Dixon and Masura's work is helpful in demarcating a significant shift and disruption to theatre and performance practices brought forth by digital technologies, Causey's thinking and the emergence of postdigital performance speaks to a moment of digital ubiquity. Although works featured in this research such as those by Rimini Protokoll and Blast Theory are now several decades old, this a chance to return to them within a more current context. In this context these technologies are less novel so much as they are pervasive. Despite the shift, researchers and creative practitioners such as Chidiac (Chidiac, 2022a), Riley (Riley et al., 2020) and Barclay (Barclay et al., 2018) continue to draw on them to produce mobile and locative experiences about our relationship to self, natural environment and neighbourhoods. By investigating theatre with mobile and locative media this work draws existing research further

into the context of theatre and digital theatre making while continuing an exploration of how mobile and locative technologies reawaken new relationships to self, others and environment.

1.4 Why Tactics?

A tactic is an action designed to achieve a specific end. It implies both action and intention. Stanislavski's acting system focuses heavily on how a character's inner motivation can be observed or played out through the tactics the character deploys to achieve their objective (Carnicke, 2010; Stanislavsky, 2003). In this research, tactic is used to identify strategies used by the theatre maker as opposed to the character within the theatre work. Tactics are used to bridge the how and the why of TwMLM practice. This research frequently moves back and forth between the practicalities of making TwMLM and the dramaturgical implications; the *how* and the *why*.

When approaching experience in mobile and locative media events, artists and scholars have drawn on differing but related terms. The Situationist International, a collective of artists working with mobile and locative media in Paris in the 50s, sought to push back against the deadening impacts of the modern city by reawakening people to the city's excitations (Matthews, 2021, p. 20). Works like Debord's *The Naked City* (Debord, 1957) offer a map designed to disorient the user to become intentionally lost; a tactical response to what they saw as encroaching control. Their approach to the *dérive* and psychogeography are returned to throughout this thesis. The word tactics itself has been used explicitly by theorists such as Michel De Certeau (Certeau, 1984). Although not focused on TwMLM, De Certeau's work is closely aligned with the work of the SI. Both De Certeau and the SI were concerned with everyday life as a site of resistance to some form of dominant control.

Terms other than tactics were considered in the development of this research including enlivening effects and enlivening trajectories. Hosokawa used the phrase the *Walkman Effect* to gather his observations on experience afforded by the emergence of the Walkman (Hosokawa, 1984). The effect he is describing identifies a new experience of privacy in public and mobile listening. Informed by Hosokawa's work, this research was initially titled the *Enlivening Effect*. However, while an exploration of affect and effects surfaces throughout the thesis, these are

offered as bridging points between intention and reflection. The research doesn't start and end with effect, but rather with intention and renewed intention.

Several generations later, and in response to a proliferation of digital technologies into performance, Benford and Giannachi use the notion of trajectories as a gathering ground for their explorations into dramaturgy and Mixed Reality Performance (Benford & Giannachi, 2011, p. 12). Trajectories here points towards their interest in the potential or scope for journey and continuity afforded by mixed reality experiences (Benford & Giannachi, 2011, p. 15). Like the work of Benford and Giannachi, this research follows closely the journeys generated through performance or how performance creates contingent space for these journeys to occur. The performance scores presented in Chapter Five seek to annotate these trajectories and to describe how time and space was organised in these performances. These performance scores and annotations also resonate with those produced by Benford and Giannachi. Given this; trajectory offers a fitting substitute. However, like effects, these trajectories are presented as offshoots of the research rather than landing points.

Instead, this research coalesces around three higher level tactics. They bring together the spatiotemporal tactics of Chapter Five with the experiential themes of Chapter Six. They bring together the *how* with the *why*, focusing on audience synchronicity, sensitivity of interaction and the shaping of contingency. They wrangle with the affordances and constraints of the form and offer further insight to how TwMLM continues to be a means through which enlivening is produced. Provided here is Figure 2; an image of three audience members and a performer during a close encounter in one of the five Performance Works, *Dancing Bear*. The presence of the performance is felt only by those participating. How these moments form and what they come to mean is the material of enlivening tactics. The insights produced through making of these moments signals a shift from chasing liveness to designing for enlivening.



Figure 2: Production Still, *Dancing Bear* (2024) - Photo Credit, Sam James

1.5 Significance of the Research

In her introduction to *Digital Theatre*, Masura argues that “the future, like Theatre, is continuously becoming. Theatre must meet its new audience where they live, but we must never give up the core ideas which make the art form speak the truth of human experience” (Masura, 2020, p. 1). This argument has three key points that underpin the significance of this research. Beginning with the notion of continuous becoming; TwMLM can help us think about liveness not as something that is or isn’t but as something that is continuously becoming. This is the shift from liveness to enlivening. Thinking about enlivening as a continuous becoming is a tactical approach that opens out explorations of dramaturgy and theatre making that help to make sense of a moment where new forms of participatory performance are growing. This shift is noted in works like *Experiential Theatres* (Bartley & Lewis, 2023). Bartley and Lewis respond to the multiple economic and cultural crises facing theatres in the U.S. with a recognition and interest

in the growing popularity of interactive, immersive and participatory theatre practices. Their work brings together perspectives on the making of this work and frames it through a pedagogical perspective that might uplift a new generation of theatre makers. While not focused on pedagogy, this research opens out process in a way that contributes to a growing body of knowledge in the areas of digital performance, digital theatre, networked performance and TwMLM that benefits students, researchers and practitioners working in this space.

With regards to meeting audiences where they live, this research adopts a postdigital performance perspective (Causey, 2016). It works with the assumption that audience's experience of the world is most commonly that of navigating a hybrid mix of digital and physical landscapes and structures. These performances are made, and these words are written in the context of ubiquitous computing. To meet an audience where they live, theatre works must adopt a sensitivity to this experience. This isn't to suggest that all theatre works must live online, across mobile networks or alternatively disconnected black boxes; but to ignore the mix of asynchronous and distributed platforms the audience's experience is split across daily is failing to meet them where they live.

Masura's final point refers to speaking the truth of human experience and resisting any compromise on this mission as digital adaptation and transformation occurs (Masura, 2020, p. 1). By drawing on the work of the Situationist International (Matthews, 2021) and Hosokawa (Hosokawa, 1984), this research joins dots between generations of mobile media and how they share an ongoing anxiety with compromise and the loss of social space in public life. In offering a perspective that stretches beyond digital contexts, this research helps to detail how mobile and locative technologies may play a role in continuing a lineage of creative practices that push back against rationalism to preserve spaces for creativity and spontaneity.

1.6 Structure of this Thesis

This thesis is structured around three key movements and eight chapters. The first movement includes this introduction, a literature review and an overview of the applied methodology. This introduction offers background to the research, key aims, terms as well as significance. The following literature review offers further background to this research through a

closer look at antecedents of the form, related practices and theories. An output of this review is a focus on enlivening itself as a point of focus. This work is combined with the methodology section to ground the practice-led, reflective and reflexive approach adopted. These sections come together to establish from where this research has come, how it will go about progressing and why it matters.

The second movement includes three findings' chapters. The Performance Works are documented in detail in Chapter Four. This chapter focuses heavily on descriptions of the works and corresponding practitioner reflections. A key output of this chapter is a compiled description of the Performance Works in line with Davey and Fleuriot's everyday descriptions (Rieser, 2011, p. 100). Chapter Five provides further detail through an analysis of shifting spatiotemporal relations. Rather than breaking the Performance Works up one by one, they are brought together through scene studies to home in on ways dimensions of time and space were arranged. Outputs of this chapter include a series of experiential effects found through the Performance Works and a renewed time and space matrix informed by Davey and Fleuriot's descriptive dimensions of mobile media design (Rieser, 2011, pp. 101-105). The final findings chapter, Chapter Six, shifts the focus towards experiential themes as gathered through a reflexive thematic analysis process following interviews with audience and artists. The output of this work are three themes that speak to relationships to self, others and environment as seen in the Performance Works.

The third and final section includes a discussion, Chapter Seven and conclusion, Chapter Eight. The discussion is used to gather insights from the three findings chapters presented as enlivening tactics. These include approaching enlivening as shaping contingency, enlivening as locations per second and enlivening as ambient and synchronized audiences. This section returns to the continuous becoming at the core of this research and seeks to detail how it has been observed across each of the findings. This structure has also been mapped out in the Figure 3. As you move through this research, this diagram is a useful reference point to locate how each section, chapter and output feeds back into the overall exploration.

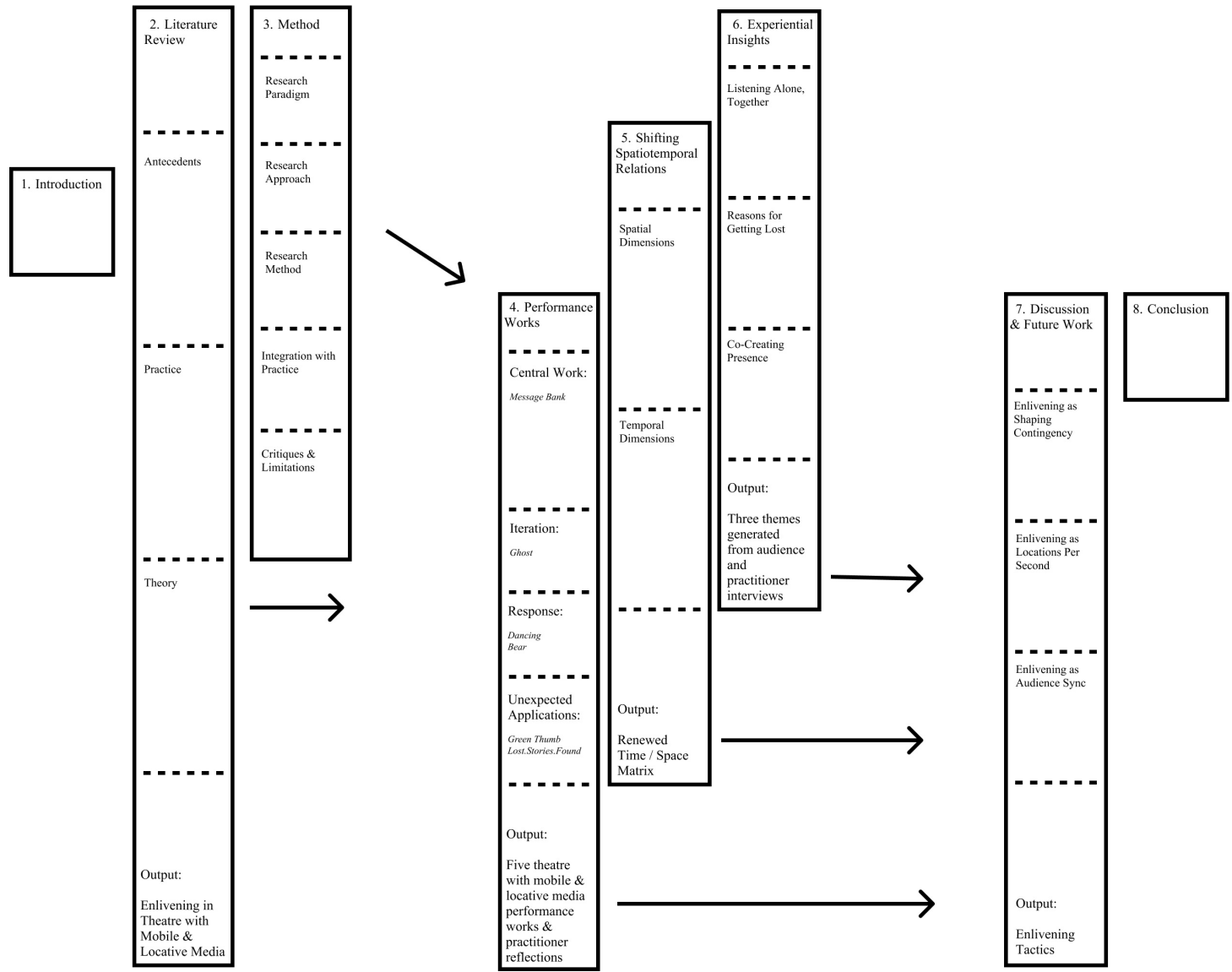


Figure 3: Thesis Structure

2. Literature Review

2.1 Introduction

Walking while listening. Following a map marked by anecdotes. Recording an anonymous confession and tagging it to GPS coordinates. These are mobile and locative media events. This literature review investigates theatre works that feature mobile and locative media in their creation and execution. TwMLM is both part of a long lineage of performance practice as well as a break towards new ways of making and thinking about performance. The tension between these two perspectives is tracked in further detail in *Digital Performance* (Dixon, 2007, p. 159) and it informs the structure of this review. To engage with the tension, the review is broken into three sections.

The first section, Antecedents, offers a context for TwMLM. It draws a line from digital performance (Dixon, 2007) to digital theatre (Masura, 2020) and to networked performance (Baker, 2013, 2019a). In doing so, a set of characteristics are identified that locate the creative practice driving this research. These characteristics also help to set up the second section, Practice, which offers a further look into performance practices with mobile and locative media. It gathers practitioners such as Blast Theory (Blast Theory, n.d) and Rimini Protokoll (Rimini Protokoll, n.d) as well as research that aligns with this work (Balme, 2008; Benford & Giannachi, 2011). The third section, Theories in Practice, takes a step away from case studies and outlines foundational theories for exploring relations within TwMLM experiences. This includes theories of liveness (Auslander, 2023; Couldry, 2004), presence (Fischer-Lichte & Jain, 2008), social ties (Latour, 2023) as well as defamiliarization (Mumford, 2018). The work of the Situationist International (McGarrigle, 2010) and Hosokawa's the *Walkman Effect* (Hosokawa, 1984) are threaded through both the practice and theory sections as references to help make sense of TwMLM as an intervention in social spaces. Through a mix of antecedents, practice, and theory this review scopes out a field of study to which this research contributes.

2.2 Antecedents: From Digital Performance to Theatre with Mobile & Locative Media

2.2.1 From Performance to Digital Performance

Theatre with mobile and locative media is a label used to describe a body of artworks. This label is not static or definitive. Figure 7, provided below, offers a series of characteristics for TwMLM. It draws on work done by Masura on digital theatre (Masura, 2020) and Baker on networked performance (Baker, 2008) to position TwMLM as a composite or compromise of the two.

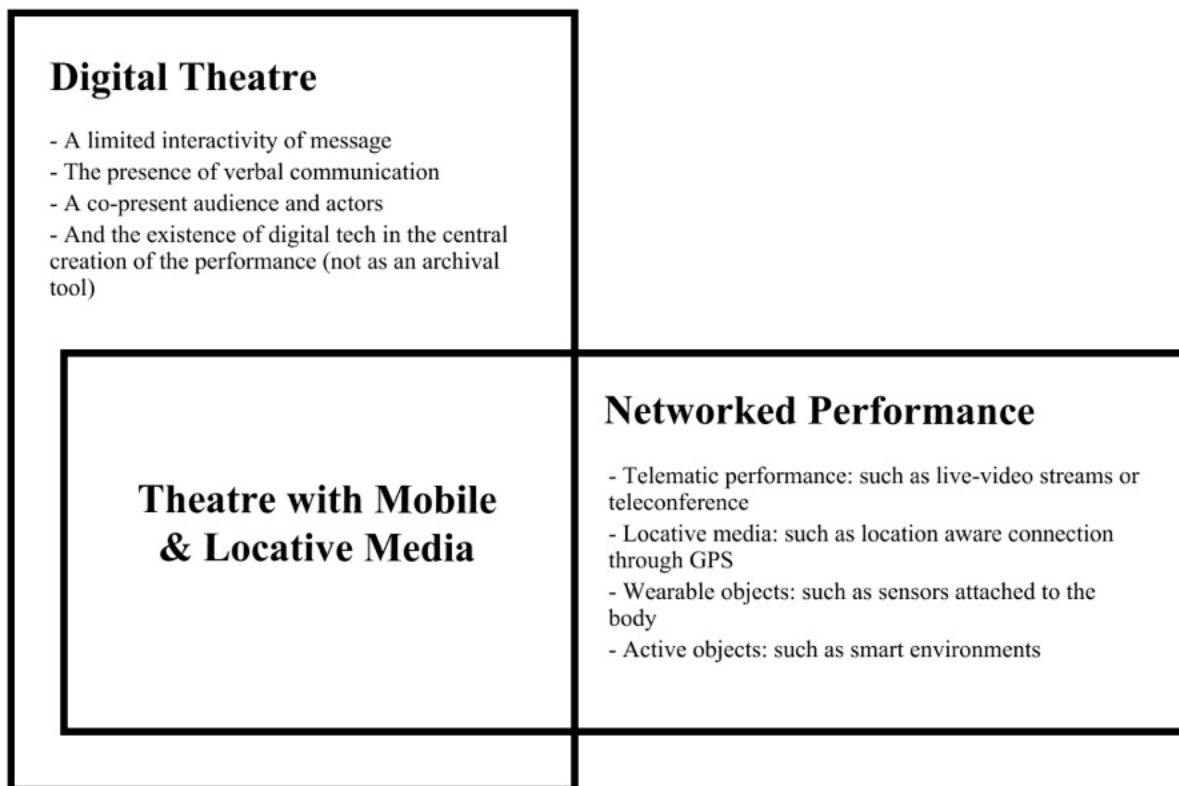


Figure 4: Characteristics of Theatre with Mobile & Locative Media

As trends in performance shift, new terms are required to explain what is being seen, heard and felt. Given this, this section also offers background to how and why TwMLM is deployed in this

research. It does so by mapping the wider context within which Figure 7 has been produced. This context begins with performance studies more broadly.

Schechner identifies four key points of interest of performance studies. These include behaviour, artistic practice, fieldwork and social practices (Schechner & Brady, 2013, p. 21). He breaks performance into eight categories including performance in everyday life, art, sports and other popular entertainment, business, technology, sex, ritual, and play (Schechner & Brady, 2013, p. 66). With respect to technology, Schechner's focus is initially limited but expanded in later work (Schechner, 2020). This renewed focus is closely tied to social media, and he goes into detail on the practice and dynamics of texting which he identifies as highly performative (Schechner, 2020, p. 275). Schechner provides a brief introduction to technology and performance, but his references to texting and chatbots are early signs of interest in digital performance practices. His work offers a broad-based starting point from which to observe the emergence of digital performance.

As texting, chatbots, satellites, dial-up internet and real-time video conferencing grew, so did responses to this technology from performance practitioners. Offering further nuance to the field, Dixon articulated what he observed as the emerging field of digital performance. He framed this as “all performance works where computer technologies play a key role rather than a subsidiary one in content, techniques, aesthetics, or delivery forms” (Dixon, 2007, p. 34). His research draws on the Digital Performance Archive, his own experience at various performances and interviews with practitioners. The Digital Performance Archive at the University of Bristol is a collection of videos, CD-Roms, printed works and other materials associated with digital performance activity. Dixon was a key figure in the creation of the archive, and this work informed the writing of *Digital Performance*.

His book is broken into two parts. The first focuses on the lineage of digital performance practice and the second focuses on the work of practitioners themselves. The work covers the spectrum, genealogy, and what Dixon refers to as the “inherent tensions of digital performance” (Dixon, 2007, p. 55). The first tension focuses on the extent to which digital performance signals a revolution in performance practice in contrast to an extension of an ongoing history of technical adaptation designed to increase its aesthetic impact. The second tension is found

between the “live ontology of performing arts and the mediatised, non-live and simulacra nature of virtual technologies” (Dixon, 2007, p. 55).

Both tensions remain present in this review. Research such as *Impossible Triangles* (Prior, 2014), *Telematic Connections* (Bennett, 2020), and *Digitalising the Shared Experience* (Beck, 2018) speak to an ongoing history of adopting technology to extend or amplify aesthetic impact. These are stories of adaptation. They find the old in the new. Whereas works documented in *What Are the Ties that Hold us Together?* (Trott, 2021), *Extended Theatre* (Petersen, 2007) and *Choreographing the Nonhuman* (Mansbridge, 2020) speak to a more revolutionary approach to performance practice. These works focus more so on new structures, approaches and paradigms that emerge through digital practices. They break apart the new from the old.

Dixon places the second tension in the context of a debate between two key theorists Philip Auslander (Auslander, 2023) and Peggy Phelan (Phelan, 1993). The debate concerning the ontology of performance is well contested across the field. This research is less concerned with the ontological debate regarding liveness as it is with the experiential qualities the term helps to articulate. These qualities are looked at in further detail alongside Auslander's approach to liveness in the final section of this review. It serves as a foundational theory from which the concept of enlivening is developed.

2.2.2 *From Digital Performance to Digital Theatre*

Thirteen years following *Digital Performance*, Masura extends Dixon's work in her book *Digital Theatre* (Masura, 2020). Masura's work presents a broad introduction to digital theatre drawing on case studies in the US and the UK from 1990 to 2020. Her book is broken into four parts covering spectacle, acting, authorship and theory. Liveness and co-presence, as informed by the work of Auslander (Auslander, 2023), are also identified as key themes. Additionally, she provides observations and insight generated from her experience as an artist practitioner in a section focused on creative authority and her work on *InterPlay*; an annual performance project that grew out of an online community of artists that saw remote sites developing new works curated together to form a new telematic theatre project (Masura, 2020, p. 157). Iterations of the project's process are documented including various technical and dramaturgical approaches.

These insights are offered alongside analysis of works by digital theatre practitioners such as Stelarc, Gertrude Stein Repertory Theatre and The Builders Association. A production image of the Builder’s Association’s *Super Vision* 2005 is provided below. It features a performer dressed in costume, behind a screen of projected images with a larger cast of performers stationed as operators at a long desk. The bulk of these examples are accessed via the Digital Performance Archive with additional research generated through interviews and Masura’s own responses as an attendee at performances. In this sense, her research methods are closely aligned with that of Dixon. The balancing of case studies, interviews with practitioners and insight generated through practice provides a relevant reference point for the method of this research outlined further in Chapter Three.

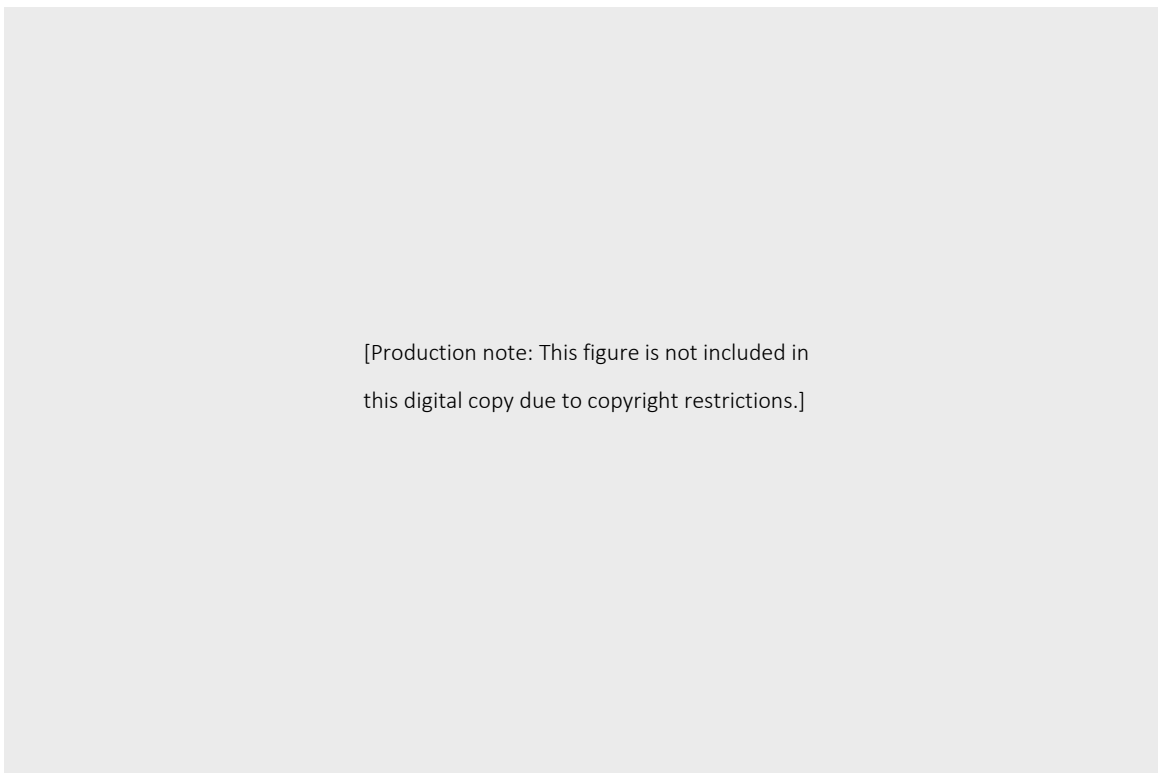


Figure 5: Super Vision (2005) - The Builders Association

Masura describes her work not as a guide for how to do digital theatre but rather why. The “why” commonly returns to the value of digital theatre for artform and audience

development. She states “the future, like Theatre, is continuously becoming. Theatre must meet its new audience where they live, but we must never give up the core ideas which make the art form speak the truth of human experience” (Masura, 2020, p. 1). This assertion is picked up in the introduction to this thesis and supports the overall significance of this research.

Masura’s work offers three key takeaways for this research; a tightening frame for digital theatre, a model of balancing practice-based research with analysis of works from the wider field and a case for why research and practice in this area is not just warranted but needed. Masura identifies four characteristics of digital theatre. They include:

- A limited interactivity of message
- The presence of verbal communication
- Co-present audience and actors
- And the existence of digital technology in the central creation of the performance (not as an archival tool) (Masura, 2020, p. 6)

These characteristics are included in Figure 4 at the start of this section. They begin to distil these performances from other examples of digital performance such as dance and installation. Like most attempts to define the borders of a category there are exceptions and points of tension. A limited interactivity of message is perhaps the least defined of these characteristics, although what is meant by co-presence and verbal communication also requires some further clarity. The following sections seeks to briefly further clarify this ambiguity.

With regards to interactivity, Masura offers; “interactivity is not being used in terms of a computer’s ability to react to a variety of input, but to indicate the level of participation of audience members in creating the total artistic project, where the messages flow primarily from performers to the audience” (Masura, 2020, p. 8). Masura points toward the function of interactivity as part of the total artistic project. Furthermore, the noting of limited interactivity works with the assumption that there is a spectrum of interactivity on which performance occurs, and that at some point on this spectrum the level of interactivity might shift the work from being considered a theatre event to something else.

Two works by UK based company Blast Theory, *Rider Spoke* (Blast Theory, 2007) and *Uncle Roy All Around You* (Blast Theory, 2003) can help to test this definition. *Rider Spoke*

invites the audience to ride a bike around a city while listening in and contributing stories based on provocations offered by a pre-recorded voice accessed through an application. *Uncle Roy All Around You* invites the audience to collaboratively explore a city to locate and travel to Uncle Roy's office. These works have a different approach to interactivity than theatre events common across the early 20th century. These performances are not designed for spaces with a seated audience and proscenium arch watching action unfold but rather for an audience navigating a city and taking actions within a larger narrative structure.

The dramaturgy for these works calls for active decision making and participation from the audience for the performance to unfold. The need for dramaturgies that support this work form an underlying objective of this research. An exploration of emerging participatory dramaturgies has been a recent focus of performance scholars (Bartley & Lewis, 2023; White, 2024) within and beyond digital contexts. These will be returned to later in the final section of this review. But to return to Masura's thinking on interactivity of message, *Rider Spoke* and *Uncle Roy All Around You* go beyond a limited interactivity by offering a wider scope for decision making and for the impact of these decisions on the performance in its totality. Notably Blast Theory's website describes *Rider Spoke* as an invitation to cycle and reflect, while *Uncle Roy All Around You* is described as a game (Blast Theory, 2007). These examples, and the Performance Works that will be introduced in this research, go beyond Masura's limited interactivity of message.

The presence of verbal communication and a co-present audience and performer are perhaps more direct than an interactivity of message, but again, call for a brief clarification. Masura notes the presence of spoken language or text (possibly written) which constitutes narrative as being critical to what makes this form discrete (Masura, 2020, p. 8). This point is significant in that narrative progression through spoken or written language delivered across a duration of time is a feature of the Performance Works in this thesis as well as the works by Blast Theory noted above. In terms of co-present actors and audience, there could be further specificity offered regarding the spatiotemporal dynamics through which this co-presence is experienced. The technologies used in this research afford interactions with people across an array of dislocated time and space dimensions. This research will approach co-present performers and

audience in real-time encounters, but it will also include temporally dislocated relationships that are made or remade live in real-time performances.


The example of *Rider Spoke* and *Temping* referenced in the introduction are instances of this kind of dislocation. For *Rider Spoke*, stories from the past are drawn into the present through actions of the audience. For *Temping*, pre-recorded performances are designed to produce the illusion of real-time co-presence and are triggered by the actions of the audience. This approach to co-presence possibly stretches Masura's definition beyond what was intended. This stretching suggests two takeaways. The first reinforces the earlier notion that this approach to categorizing form is limited. Instead of approaching these characteristics as absolutes to rule work in or out, they might be better approached as anchors or principles through which form can be explored. Secondly, there may be more fitting frames to place these Performance Works beyond the limitation of digital theatre. Baker's approach to networked performance offers an alternative.



Figure 6: Uncle Roy All Around You (2003), Blast Theory

2.2.3 From Digital Theatre to Intermedial Performance to Theatre with Mobile & Locative Media

While digital performance provides a foundation and digital theatre offers some basic characteristics for this work, networked theatre and intermedial performance can offer an additional layer of specificity and wider context for further clarifying TwMLM. Networked theatre is referenced by both Dixon (Dixon, 2007) and Masura (Masura, 2020) however its defining properties are at times blurry. Dixon introduces the term networked art in his chapter on telematics which are defined as performance involving “conjoining remote performance spaces” (Dixon, 2007, p. 468). He traces a history of telematic practices across the 70s, 80s and 90s and in doing so confronts a possible criticism of this work as occurring simply because it can. Masura builds on this by documenting a series of tele present works occurring between 1990 and the early 2000s (Masura, 2020, p. 58). She cites works such as *Network Touch* (Scorer, 2003) and *Telematic Dreaming* (Sermon, 1992) in a section documenting the use of digital technologies to create extended theatres and playing spaces. *Telematic Dreaming* surfaces as a common reference point. The work invites an audience to lie on a bed as projections of remote participants lay alongside them. While telematics is a gathering ground for both Dixon and Masura, the concept of networked practices that exist beyond the telematic is less so. At this point, Camille Baker’s research into networked performance (Baker, 2008; Baker, 2013, 2019a, 2019b) can offer additional insight.



[Production note: This figure is not included in this digital copy due to copyright restrictions.]

Figure 7: Telematic Dreaming (1992), Paul Sermon

Research on Baker's mobile media and participatory performance project, *MINDTouch* offers a set of characteristics to define networked practices. *MINDTouch* is a practice-based PhD project developed with SMARTLab UK, which seeks to find meaningful ways to communicate non-verbally and through the body directly to technology (Baker, 2013). Baker's work involves guiding participants through a process of image capture using mobile phones and then in a second stage, using a system of biosensors to enable them to remix or VJ their source material through motion. Notably Baker doesn't position her work as an example of theatre and if placed under Masura's classification of digital theatre, would not be included. The *MINDtouch* performance is driven by the aim to create "a more personal and private performance, without an actual spectator, only with interactors" (Baker, 2019b, p. 48). Baker describes her work as contributing to the field of participatory performance. She also makes note of similar and relevant work occurring in the areas of mixed reality, locative media and pervasive gaming.

Baker provides a description of networked performance with a series of distinct characteristics. They include:

- Telematic performance: such as live-video streams or teleconference
- Locative media: such as location aware connection through GPS
- Wearable objects: such as sensors attached to the body
- Active objects: such as smart environments (Baker, 2008, p. 126)

These characteristics are drawn from observations and analysis occurring across online discussion groups *soft_skinned_space-empyre* and *networked_performance* in 2005. She argues that “current works and research in the field of mobile performance and locative media are few but growing” (Baker, 2008, p. 126). The properties of networked performance outlined here create a constructive framework through which to define networked practices. They also start to draw in locative and mobile media with greater sensitivity. This can be added to the definition of digital theatre (Masura, 2020, p. 6) presented by Masura to create a composite definition that starts to frame the characteristics for a specific type of digital theatre or networked performance that is TwMLM. This is noted in Figure 7.

The process of locating TwMLM here has drawn in the wider field of performance studies and, within this, the more specific form of digital performance. Within digital performance the subsets of digital theatre and networked performance have been introduced alongside sets of characteristics to tease out how these forms align and diverge. While both have been shown to have relevance, there is also an in between space. TwMLM is offered to locate this in between space. Before moving towards a closer look at related practices, it’s helpful to consider the limitations of approaching TwMLM through these characteristics. Balme offers an perspective on this (Balme, 2008) as he engages with the work of a key practitioner working in the field, Rimini Protokoll.

In thinking through TwMLM works such as *Call Cutta* (Rimini Protokoll, 2005), Balme describes the theatre spectator as bringing to the event a sophisticated knowledge of different media. He argues that recognizing and working with this knowledge doesn’t mean an inevitable trend towards aesthetics informed by other media forms. Furthermore, he asserts that “attempts to define art forms in terms of specific, incontestable medial characteristics is symptomatic of high modernist aesthetics” and that this is a “fundamental move towards form at the expense of content” (Balme, 2008, p. 82). This criticism is notable. Thus far, this review has been heavily concerned with exploring these medial characteristics. For Balme, this justifies his approach to

the subject through the lens of intermedial performance as opposed to what he describes as media essentialism (Balme, 2008, p. 82). His focus is on the layering of mediascapes to form meaning, rather than breaking these apart to classify distinct bodies of work. Further background to intermedial performance is required to fully map the terrain in which TwMLM is situated.

Klich and Scheer draw connections between the evolution of digital performance works and performance theory in their book *Multimedia Performance* (Klich & Scheer, 2012). Multimedia performance is offered as a compromise or resolution to the opposition of liveness and mediatization that surfaces as an ongoing concern for the field. Klich and Scheer acknowledge the diversity of terms and frames offered to gather the diverse body of work they are seeking to explore. These include cyber theatre, transmedial theatre and networked theatre to name a few (Klich & Scheer, 2012, p. 11). While this thesis has identified one pathway through gathering this material from digital performance through to TwMLM, this work demonstrates that the process of gathering these works is an ongoing project. Their work focuses heavily on audio-visual technologies but also provides relevant touch points for related theories such as intermediality, remediation and a further exploration of liveness. Intermediality is described by Klich and Scheer as an exploration of the balance and patterns of mediascapes that can be found within the theatrical frame (Klich & Scheer, 2012, p. 5). While these trends relate to the body of work in this thesis, the focus on mobile and locative technologies offers a narrower focus than the work of Klich and Scheer.

More recent work compiled in *Mapping Intermediality* (Bay-Cheng et al., 2010) offers a perspective on intermedial performance through a network of terms to guide the research and practitioner through charted and uncharted territory. The authors are focused on pursuing the notion that “there is something distinctive about the ways in which mediums work together in digital culture to challenge established modalities of experience” (Nelson, 2010, p. 17). They approach the intermedial stage as being a site to observe these phenomena. Like the work of Klich and Scheer they are concerned with the implications of intermedial performance as it relates to representation, reproduction (Nelson, 2010, p. 16) and the blurring boundaries between the two. In the spirit of their text, it is more helpful to identify the nodes or departure points from which this research can be found. These are most aligned with work done on what is referred to as modes of experience which includes themes such as embodiment, intimacy and presence

(Bleeker, 2010, pp. 45-46). These themes persist through this work, resurfacing through an exploration of liveness and gather most concretely in Chapter Six on Experiential Insights. The second key point of alignment is their focus on time and space. This focus aligns closely with Chapter Five shifting spatiotemporal relations. *Mapping Intermediality* demonstrates that these dimensions are well worn areas of concern in the field. While these areas of research are well established, this thesis seeks to contribute through its specificity of focus on mobile and locative media and from within the perspective of a theatre making process.

As intermedial performance brings a focus towards experience and the interaction of mediascapes and digital theatre articulates relevant medial characteristics and a discrete body of work, Lavender's *Performance in the Twenty First Century* (Lavender, 2016) provides a wider context for this work and offers a vision for where it may be heading. Lavender's work here touches on intermedial performance and many of the same practitioners and case studies covered in this research but does so with a view to introducing a broader perspective on what Lavender terms theatres of engagement. In identifying this turn in performance Lavender identifies three key currents informing theatres of engagement. These include renewed approaches to truth telling, the incursion of digital technologies in performance and the ingrained nature of performance in contemporary culture (Lavender, 2016, p. 10). The theatres Lavender is describing are characterized by concerns of actuality, authenticity, encounter and experience. "Theatre has become something other than an encounter between actors, or between actor and audience. There is no longer a separation between the space of performance and that of spectatorship" (Lavender, 2016, p. 9). Of the three currents introduced by Lavender, it is the incursion of digital technologies that is most relevant to this work. What is also of relevance here is how Lavender draws a connection between movements such as postmodernism and Lehmann's post dramatic theatre as foundations for this work. For Lavender theatres of engagement move beyond this however.

This review argues that there is value in tracing the links from performance to digital performance, digital theatre and networked theatre through these characteristics to form an initial scope. These characteristics helps to place contemporary making practices within a lineage of antecedents to use Dixon's (Dixon, 2007) frame or a genealogy in the spirit of Zeffiro's (Zeffiro, 2012) genealogy of locative media. But there is also value in including Balme's criticism as it

helps to question the limitations of this approach. While an intermedial paradigm has not been applied, this review will seek to counter its focus on form by shifting attentions towards the practices of TwMLM and the thinking that has gathered around them. The intention here is to counterbalance the focus on form and what Balme describes as media essentialism.

This section has located TwMLM by drawing in the wider field of performance studies and within this, the more specific form of digital performance. Within digital performance the subsets of digital theatre and networked performance have been introduced alongside sets of characteristics to tease out how these forms align and diverge. While both are relevant, this section has teased out a composite or compromise space between the two. TwMLM has been offered to identify and now further investigate this in between space.

2.3 Practice: Theatre Meets Mobile & Locative Media

This section shifts focus to an exploration of artists and art works that engage with mobile and locative media. It uses practice to open out theory and wider thinking on how TwMLM shifts approaches to time, space as well as relations to self, others and environment. As noted in the introduction, the scarred trees on Dharug Country in Parramatta Park (Hendriksen, 2012, p. 11) speak to a long lineage of cultural practices that bring together story, markings, place and movement. This section will draw on three generations of mobile and locative media. It begins by dropping into the work of the Situationist International in the 50s (Matthews, 2021) and Hosowaka's Walkman Effect from the 80's (Hosokawa, 1984). These two examples speak to early interventions of mobile and locative media practices and their shifting relationships to modern urban landscapes. Following this, a brief introduction to Zeffiro's work (Zeffiro, 2012; Zeffiro et al., 2020) will open out a section on more recent examples of mobile and locative media in practice and it concludes with a reintroduction of Farman's work in *Mobile Interface Theory* (Farman, 2021) as a key text connecting this lineage of practice to contemporary scholarship.

Moving between generations of mobile and locative media brings forth a series of related terms. Table 1 gathers some of the theoretical terms that will surface through this section. The table here does not suggest that these terms are the same or can be substituted for one another.

But it does gather them broadly around their connections to the audience, the experience, the audience’s relationship to self and their wider environment. The intention here is to note these similarities and integrate them as this review works towards a contemporary approach to working with TwMLM.

| User / Audience | Event / Experience | Relationship to Self & Others | Relationship to Environment |
|---------------------|--------------------|-------------------------------|-----------------------------|
| Flâneur | Dérive | Autonomy | Unified Milieu |
| Playeur | Walk Act | Individualisation | Self-Unification |
| Tourist | Secret Theatre | Collectivisation | Alienation |
| Mediated Assemblage | Contingency | | Defamiliarization |

Table 1: Associated Theoretical Terms in Mobile Media Art

The Situationist International (SI) was an artistic movement operating in the mid twentieth century. The movement sought to resist the rationality of urban life under capitalism, facilitate new ways of living based on freedom, passion, creativity and to offer a new radical notion of public space that incorporated art and technology (Matthews, 2021, p. 14). The notion of art as commodity was to be challenged. Artistic production was to be pushed back into the streets and away from museums and presenting venues so that people might encounter a more direct relationship with art. The movement is recognised as having roots in the Dadaist and Surrealist movements and giving birth to concepts such as psychogeography, the dérive and the unified milieu (Matthews, 2021, pp. 1-4). Psychogeography and the dérive are tactics worth grounding further, but clarifying the notion of the unified milieu is an important starting point. This offers a bridge to the thinking of Hosokawa (Hosokawa, 1984) and later generations of mobile media.

The unified milieu is a term used by Situationist leader Guy Debord. It speaks to a goal of the SI’s to transform urban space through art and technology for social and creative purposes. It

also describes a state or a position the individual within the city adopts as the outcome of the “conscious choices made ... in terms of their auditory or visual environment, their mode of dress, and their corresponding intellectual and emotional well-being” (Matthews, 2021, p. 20). The unified milieu is an intentional relationship to the city that is seen as meaningful and authentic. It sits opposed to the dominant forces of the city which, from within a capitalist paradigm, seek to distract and fragment the individual for commercial purposes. An example of practice from the SI’s through which the unified milieu is pursued can be seen in Debord’s *The Naked City* (Debord, 1957). *The Naked City* is a visual representation and a map of Paris. But unlike a map that enables the user to navigate the city efficiently, Debord’s map is composed of nineteen cut-out sections connected by red arrows indicating possible paths. These journeys are non-linear and at times circle back on one another encouraging the user to participate in an exploratory open journey through the city. This journey creates a situation or *dérive* in which the user is reopened to the emotional and affective layers of the city. They become part of the unified milieu (Matthews, 2021, p. 20).

A *dérive* is sometimes referred to as a drift which echoes thinking on the *flâneur*. The focus on emotional and affective layers of the city are also early instance of psychogeography, a notion that has gone on to shape a genre of writing and creative practice. The relationship between *The Naked City* and the experience of the *dérive* is an early example of performance with locative and mobile media. From within the unified milieu, the individual can navigate the city while “remaining open to the fact that the voyage itself is more important than the destination” and in doing so, become able to “tune in” to the tone, quality and “excitations” of the city (Matthews, 2021, p. 20). Framing the relationship between the individual and the city through the unified milieu as a metaphor of tuning in is notable. It resonates with Latour’s description of the traces of social ties as becoming visible in moments of change (Latour, 2023, p. 9). This is picked up on the following section which gathers further theory to frame the nature of shifting social relations produced through experiences such as the *derive*. Within the *dérive* the relationship between the individual and the city is changeable. Malleable. Social ties are in flux resisting what the Situationists saw was the “deadening” impact of high modernist architecture (Matthews, 2021, p. 10).

Before progressing to the work of Hosokawa, there's value in sticking with this metaphor of tuning in a little longer as it resonates with work done by Wilken on the works of Blast Theory. In *Proximity and Alienation*, Wilken focuses on instances of public encounters with strangers as seen in *Uncle Roy All Around You* (Blast Theory, 2003) and *Rider Spoke* (Blast Theory, 2007), two works noted earlier. These encounters are framed through both sociological approaches and narrative analysis to consider how the performances might be read as disrupting the alienation of contemporary life in urban landscapes. Specific focus is placed on the relationship between narrative construction, actions of the participants and the actions of the performers or performance makers. They describe a process through which narrative fragments are designed as “scaffolding... around which the larger narrative threads of the game are woven by players” (Wilken, 2014, p. 183). They go on to note how the Blast Theory team refer to the input or influence of participants in their performance works as feeding into a process described as ongoing “recalibration” and “orchestration” (Wilken, 2014, p. 183).

While the metaphor of tuning in might be broad and easy to apply across various contexts, it's the thinking and intentions behind its application here and for the SI that is revealing. In both instances tuning in or orchestration is framed as an active task of co-production between individuals, practitioners and their environment for the purpose of shaping experience that opens out the participant to a renewed flux of social ties and the expressive potential of the city. For Wilken, alienation is a foundational theory that grounds these sociological approaches to social isolation while living in dense urban centres (Wilken, 2014, p. 177). This context resonates with the SI's view of Paris in the 50s that, despite a growth in activity, people and traffic, the distance between the individual and their environment was increasingly fragmented (Matthews, 2021, p. 1). While a deeper dive into alienation is offered later in this chapter, an understanding of the SI's approach to the unified milieu and links formed between this vision and the work of Blast Theory through acts of tuning in makes it possible to turn to Hosokawa's thinking several decades later to broaden the perspective on this phenomena and draw connections with a different generation of mobile media.

In the Walkman Effect, Hosokawa centres the emergence of the Walkman as a sociotechnical artefact and in doing so opens out a dialogue on mobile music (Hosokawa, 1984, p. 166), technical progression (Hosokawa, 1984, p. 168), regression and how these phenomena

can be conceived from within an urban context. Responding to the emergence of the Walkman and listening to music alone, he proposes that “one cannot imagine any further advance which constitutes more than examples of secondary progress” (Hosokawa, 1984, p. 167). This statement references the latest Walkman product in 1983. Given the ubiquity of mobile media at the time of this writing in 2025, and its expansion across multiple layers of everyday life, on first reading, this statement might seem nostalgic. But it’s worth noting that Hosokawa’s description of secondary progress points to the prospect of the Walkman becoming not only smaller and lighter, but also including features such as wireless headphones, alarm clock, calendar, calculator, videogame and a bio-rhythm indicator (Hosokawa, 1984, p. 167). These details are noticeably prescient for the current state of mobile devices. The intention for sitting with these observations momentarily is to highlight how the bulk of the features at play in this research such as Bluetooth, gyroscopes, magnetometers, from Hosokawa’s perspective, fall into secondary progress. In writing the Walkman Effect, it was the “musical event” (Hosokawa, 1984, p. 169) constituted and produced by the Walkman that was considered primary and transformative. The musical event produced by the “walk act” has parallels with the “dérive” in the terminology of the SI (Matthews, 2021). The unified milieu also has similarities with what Hosokawa observed as a process of self-unification.

Self-unification is teased out by Hosokawa through engagement with a response to an interview recorded in 1984 with Walkman users aged eighteen to twenty-two years old. In the interviews, a group of young people are asked whether people using the Walkman are losing touch with their reality and whether people using the device are human or not. Do they fear for the fate of humanity? Hosokawa homes in on one respondent who argues these problems belong to the 60s and 70s. The 80s are “the years of autonomy, of an intersection of singularities” (Hosokawa, 1984, p. 170). Hosokawa offers a more extended argument for the case being made here. It contains a series of key ideas and is therefore included in its full form below.

Autonomy is not always synonymous with isolation, individualisation, separation from reality; rather, in paradox, it is indispensable for the process of self-unification. Walkman users are not necessarily detached (‘alienated’ to use a value-laden term) from their

environment, closing their ears, but are unified in the autonomous and singular moment – neither as persons nor as individuals – with the real. (Hosokawa, 1984, p. 170)

Introduced in the quote above and underpinning some of the anxieties raised in the interview is the “value-laden” notion of alienation. This concept will operate as a hinge between various pieces of research and will be picked up on the following section on distancing. Both Hosokawa and the SI encounter cultural anxieties. For the Situationists, it’s the capitalist paradigm of the modern city that is “deadening” the landscape and rupturing social ties (Matthews, 2021, p. 10), for Hosokawa it’s introduced as a cultural anxiety associated with the isolation of a new mobile media device. Hosokawa pushes back on these fears to offer a more nuanced picture of the Walkman and its users’ relationship to their environment (Hosokawa, 1984, p. 170). Autonomy, commonly associated with Kantian philosophy (Wood, 1999), can be understood as the capacity for self-government or that of an agent to act truly of their own will. Hosokawa focuses on the autonomy of the Walkman user to describe a process where they participate in becoming unified with their time and place in the singular moment through the simultaneous deconstruction and construction of meaning that occurs while navigating the city with the Walkman.

Hosokawa’s self-unification and the Situationists unified milieu offer a vision for an audience or user who has agency, is in dialogue with their landscape, is open to the city’s “excitations”, and in doing so, becomes more sensitised or resensitised to the city itself. For the Situationist’s this resensitising is specifically with respect to the social, cultural, affective, emotional currents of the city as opposed to its economically rational forces. Hosokawa is less pointed in offering an intention for this dynamic as he occupies a place more so as a researcher and observer rather than as artist or activist. The unified milieu and the user in the act of self-unification offer ways to conceptualise experience between user, mobile media and city.

Whether it’s a *dérive* or the construction of meaning through the walk act, the user in both instances is equipped with the materials to step into a new journey or reality despite not leaving a familiar place. Given this position, the role of “tourist” could be offered to describe the audience in performance with mobile and locative media. This term stresses the foreign or unfamiliar landscape the audience ventures through. These ideas will be returned to in the final

section of this review as key theories are brought together to offer a series of key concepts around which this research is anchored and to which it contributes. While the SI and Hosokawa have offered background to this role and its relationship to self, others and environment, it's now possible to shift towards more recent instances to consider how these ideas have continued to manifest or shift.

Zeffiro's genealogy of locative media offers an introduction to the field and notes a significant uptake in the use of locative or location-based media in arts and cultural projects around the early 2000s (Zeffiro, 2012). To be clear this work maps out the wider space of locative media art as opposed to the more specific area of TwMLM that has been outlined in the previous section. However, Zeffiro's work is helpful in tracing locative practices which are being developed in parallel and at times at intersections with work occurring in the areas of digital performance. Zeffiro notes the significance of GPS and the impact of its accessibility in commercially available devices as being a significant driver in activity in the field (Zeffiro, 2012). Beyond the static maps of the Situationist International and the mobile music of the Walkman, GPS afforded a mobile and locative experience that could track the user in real time. This change brings with it a series of distinct interests and concerns. For example, an interest in the ethics of locative practices is raised in Zeffiro's later work (Zeffiro et al., 2020) and Silva's work on the spatial participation gap (Silva, 2018) open a discussion around access and equity when it comes to who can author and experience locative media works. While the handheld map could be produced almost anywhere and by anyone, the GPS driven work was the domain of the technically proficient and equipment rich practitioners. Many of the works featured in this review are included in Zeffiro's genealogy. Digital theatre practices which work closely with mobile and locative media commonly fit well in this space, however their relationship to location can also be analyzed to open out discrete threads.

The body of work gathered here features a range of practitioners working specifically with real-time GPS and proximity data as a material in their work. Early contemporary examples of creative practice in this area include Teri Rueb's *Trace* (Rueb, 1999), Paula Levine's, *Shadows from Another Place* (Levine, 2003), Blast Theory's *Rider Spoke* (Blast Theory, 2007) and RATS Theatre's *Maryam* (2013) by Rebecca Forsberg (Ekenberg et al., 2017; Rossitto et al., 2016). *Trace* is described by Rueb as a memorial sound installation and called on the user to hike

through a series of allocated trails in the Yoho National Park in British Columbia. Equipped with a knapsack, a small computer, headphones, and a satellite receiver, the user's location triggered audio samples (Rueb, 1999). *Rider Spoke* called on audiences to ride a bike around a city while listening in and contributing stories based on provocations offered by a pre-recorded voice accessed through an application (Blast Theory, 2007). *Maryam* took the form of an interactive drama presented as part of a trilogy of theatre works around the theme of women in science. Audiences experienced the dramatic narrative via an application to their phone and a series of scenes that corresponded to different sites around the RATS Theatre in Stockholm (Rossitto et al., 2016). More recently and locally to Australia, Leah Barclay's *WIRA* (Barclay et al., 2018) offered audiences a geolocated audio walk along the Noosa River and Claudia Chidiac's *The Village by the Kids* (Chidiac, 2022b) provided a neighbourhood storytelling tour co-created with young people living in Bondi.

Each of these works make meaning from the relationship or contingent space that forms between location, data that is generated as user or audience moves and content accessed through a device, interface and headphones. Fan offers up the notion of contingency to help account for the meaning making process playing out in works such as these (Fan, 2017). Contingency is a concept drawn on extensively with regards to performance and performativity. Massumi's work explores the force that allows an event to unfold in ways that exceed pre-determined structures (Massumi, 2002, pp. 23-26). Similarly, Manning explores what allows for unexpected shifts in experience through the notion of incipient action (Manning, 2009, pp. 12-14). Auslander approaches contingency through its common association with live performance asserting that liveness is historically contingent (Auslander, 2023, pp. 7-8). Fan draws a line between contingency and digital arts as being "a condition through which a dynamic narrative can emerge between the parameters of digital writing and a user's narrative play" (Fan, 2017, p. 5). This description of contingency could be considered the outcome of actions when co-present actors and audience meet with the affordances and constraints of mobile locative narratives (Ritchie, 2014). For this research, a spectrum of contingency ranging from greater to lesser contingency is used practically to consider different works or different sequences within the one work.


In Rueb's *Trace* (Rueb, 1999) location works as a trigger that makes audio accessible. Barclay's *WIRA* (Barclay et al., 2018) is similar with the added feature that the range of detected proximity impacts the volume of audio that is played. For example, a geolocated trigger will result in the audience hearing a sound and as the audience gets closer to the trigger, the volume of the sound will increase. Neither of these works require a temporally co-present audience or actor nor do they involve a set time or duration over which the work is intended to be experienced. Location is framed as a site of landmarks or artefacts with which the audience is encouraged to be present in their own time. A feedback loop occurs between audience and location. Through this feedback the audience is in conversation with the location. Location could be considered an actor in the sense that it brought in dialogue with the audience. Additionally, the audience could be understood as playing a role as both audience and actor. They participate in the creation of the work while also receiving it as an experience.

Rider Spoke (Blast Theory, 2007) and *The Village by the Kids* (Chidiac, 2022b) are similar in this sense but distinct in that they involve a more structured and temporally co-present audience. Both set a start and finish between which a group experiences the work simultaneously. Audiences are equipped with a device and are free to travel alone or together where they may or may not encounter one another. Their structure calls for an ending to the work which is signaled to the audience. For *Rider Spoke* this was a programmed voice instructing the audience to return to their starting point after a set period. For *The Village by the Kids* this was a voice triggered by location and a map which guided the audience on a circuit. These references outline two categories of endings. One occurs when an audience chooses to stop engaging with the experience. The other is controlled by the author of the work. *The Village by the Kids* and *Rider Spoke* are more linear or monodirectional. They present a series of events that will lead to a resolution, even though the audience moving through these events may at times be afforded a level of agency in shaping those events. *Trace* (Rueb, 1999) and *WIRA* (Barclay et al., 2018) are multidirectional. The audience can travel in a direction and at a pace they choose, and the resolution of the work will be informed by the audience's decision to finish. This could be understood as examples of greater or high contingency. This multidirectional approach could be understood through the notion of the flâneur.

The flâneur is a commonly used notion in mobile and locative media art (Comfort & Papalas, 2021; Hjorth et al., 2020). Historically, the concept of the flâneur is associated with 19th-century French literature and culture, particularly within the works of Baudelaire (Baudelaire, 1964) and later Walter Benjamin (Benjamin, 1999). A flâneur is a leisurely wanderer, an urban explorer, and an astute observer of city life. There is an intersection here with the work of the Situationist International. The notion of flâneur can be coupled closely with that of the dérive. The dérive focuses on the situation that is created to open out the user to the city whereas the flâneur shifts the focus more so to the individual. The links between the flâneur, locative experiences and the space they open out for play are also noted by Evan's et al. who teases out an extension of the flâneur as the "playeur" (Evans & Saker, 2019). This term is used to describe the experience of the locative media gamer in experiences such as Pokemon Go. Contingency could be imagined as the space in which the flâneur is afforded to wander, or the scope of the situation that is designed. In the examples noted above, contingency shifts from lesser to greater and back again over time. Investigating the role of contingency in theatre with locative and mobile media can draw together the practical threads of structuring time and space with the more theoretical foundations that have been introduced.

So far, the works gathered in this section have all used GPS as a system for locating their user. Despite the evolution in technical affordance, the concepts of contingency, the flâneur and the dérive have continued to offer a through line that speaks to how meaning is being generated and experience is shaped. To ground this section on practice, it's beneficial to shift the focus slightly from the locative to the mobile. That is, theatre works that center mobile media in how they are conceived and experienced. Each of the works noted above already falls into this category. In each mobile media forms the necessary hardware to enable the locative tactics of GPS. This might suggest the terms mobile and locative are interdependent in a way that makes using both words redundant. What is mobile must be locative and vice versa. However, mobile media and its capacity to facilitate remote exchanges between users offers a related but distinct thread to this work that should be noted. This distinction helps to separate out slightly works that focus on the locative such as *Rider Spoke* (Blast Theory, 2007) with works that focus more on mobile and remote connections such as *Call Cutta* (Rimini Protokoll, 2005).

Trott explores the formation of networks using smartphones (Trott, 2021) in performance through a response to two new works *As if No One is Watching* (Peters, 2018) and *Body of Knowledge* (Hersch, 2021). *As if No One is Watching* uses smartphones and headphones to enable the audience to access independently triggered audio while collectively observing a co-present performance. *Bodies of Knowledge* uses smartphones to facilitate exchanges between audience and remote participants to coordinate the audience / participants attempts to build a blanket fort. Trott's response to these works highlight moments where the created networks cause audiences to experience a sense of individuality as well as a collective drawing together. Trott speaks of the audience's "active individualisation [being] simultaneously collectivized" (Trott, 2021, p. 249) suggesting that perhaps a binary between the individual and collective is complicated in networked theatre. Trott argues that these works are situated firmly in the physical as opposed to the virtual and that the use of smartphone devices demonstrates "the potential to embody rather than alienate their audiences" (Trott, 2021, p. 249).



[Production note: This figure is not included in this digital copy due to copyright restrictions.]

Figure 8: *Body of Knowledge* (2021), Samara Hersch

The prospect of alienation, albeit a resistance to it, resurfaces here as it does in the work of the Situationists (Matthews, 2021) and Hosokawa (Hosokawa, 1984). These works also tie back to the earlier discussion of telematic practices noted by Dixon (Dixon, 2007) and Masura (Masura, 2020). The analysis of these works as being firmly grounded in the physical environment resonates with the telematic practices featured in work such as *Z/Z Twin Lab* (Mansbridge, 2020), *Phone Home* (Beck, 2018), *Crossing Over* (Irwin, 2011), *Telematic Connections* (Bennett, 2020) and *Impossible Triangles* (Prior, 2014). Notably these use telematic technologies more broadly such as teleconferencing or the transference of real-time motion data were. These works and the research around them tend to focus more so on the hybrid space that is produced across locations. Trott is focused more closely on mobile media networks and more how the experience of remoteness binds audiences sharing the same location.

Trott describes the network she is observing as an assemblage and draws on the concept of secret theatre to explore the impact. The use of secret theatre is a return to the work of Hosokawa. While the Hosokawa's writing has been featured regarding autonomy and self-unification, Trott pulls attention more so the interplay of networks and private space. Hosokawa details the layers of music that play out across an urban environment from the incidental, the organised, the projected and the now private experience afforded by the Walkman. This private experience is described as contributing to a secret theatre where the user is aware of what they are listening to while the people on the street around them are not (Hosokawa, 1984). The private and individual experience of secret theatre as described here is a stark contrast to the extended, conjoined and collective experience that are often described in networked practices. The combination of networks and the private space afforded by headphones are a key factor. While the audience occupies the private space of the secret theatre via their headphones, the network turns this into something shared. This is the simultaneous individualization and collectivization Trott is seeking to describe. Klich (Klich, 2017) also draws on the work of Hosokawa when providing context to the use of headphones in contemporary theatre practice by influential theatre makers such as Roslyn Oades (Oades, n.d).

Trott's use of the term assemblage is a sign of telematic networks become increasingly complex. Given this, it is beneficial to note how approaches to the audience and performer have shifted in this context. So far, the flâneur, playeur and tourist have been terms offered to describe

this role in the TwMLM. When considering the complex interplay of devices, bodies and data in digital performance Eckersall et al use the term mediated assemblages (Eckersall et al., 2017, p. 2) to describe a new approach to the performer. This approach helps describe the increasingly intricate network the performer finds themselves within. They describe a repositioning of the performer as one part of a broader assemblage of technologies. The assemblages at play in the bulk of works introduced so far are simple when compared to examples of networked performance such as that by *Z/Z Twin Lab* (Mansbridge, 2020) which feature exchanges of motion capture data distributed between multiple performance spaces with multiple co-present audiences. But despite their simplicity they are still mediated assemblages navigating a performance environment.

Mediated assemblages (Eckersall et al., 2017, p. 2) draw in a focus not just on relationships to time, place and environment but also to the assemblage of systems at play and how they reposition the performer, audience and participant. Baker's *MINDTouch* project, introduced earlier, is an intricate example of a mediated assemblage bringing bio sensors, smartphone devices, video material and a performer into network (Baker, 2008; Baker, 2013). Baker argues that theories of liveness and presence are most appropriate to make sense of what is occurring in these networks and that they require a deeper integration into her work on *MINDtouch*. From Hosokawa's writings on the Walkman (Hosokawa, 1984) through to the Baker's *MINDtouch*, this section has followed a lineage of mobile and locative media practice. Zeffiro's genealogy (Zeffiro, 2012) has offered a touch point on the locative side of this work and Baker's writing has opened out more towards mobile media performance. Farman's work through *Mobile Interface Theory* (Farman, 2021) provides a bridge between the two that can help to gather this material and offer further direction for this research.

Farman's work is closely tied to an interest in the unfolding of embodied space in a mobile media context (Farman, 2021, p. xiv). His writing is focused on how these contexts shift how we understand our body's location in space and time. This interest is echoed in this research and informs the structure of this thesis. It moves from the Performance Works themselves to an analysis of spatiotemporal relations and then to experiential insights. The key concern of Farman's writing here is "the production of social and embodied space through practices with mobile technologies" (Farman, 2021, p. 5). Tracing the work of the Situationists and Hosokawa

provides a foundation for thinking through this historically. The following section on theories in practice will take Farman's interest in the social space produced by mobile media and seek to articulate this through the work of Latour (Latour, 2023) and Auslander's writing in liveness (Auslander, 2023). Farman's work on asynchronous time (Farman, 2021, p. 108) and site-specific storytelling (Farman, 2021, p. 128) resonates strongly with discussions introduced through the taxonomies introduced in Chapter Five and one of three Enlivening Tactics introduced in the conclusion of research, Enlivening as Audience Sync. Farman's work helps to articulate the tensions between proximity and distance and how these have manifested through mobile and locative media experiences. This work seeks to contribute to this work by reentering the "cocoon" of experience (Farman, 2021, p. 5) afforded by these technologies, observing this process and drawing links between this work on mobile media and theatre and performance practices.

This section has drawn in a body of TwMLM work and in doing so has traced key terms and concepts through which the qualities and characteristics of these works can be understood. Whereas the former section stepped through movements of performance to gather a form-based perspective, this section has looked at instances of experience. Tactics such as the *dérive*, the walk act and intimate encounters with strangers in public have been introduced and linked to shifting perspective on the role of the audience and performer from *flâneur* to *playeur* to tourist within a mediated assemblage. These terms are listed at the introduction to this section. They speak to the developing focus of this research, pointing to the lineage of research and creative practice to which it responds. In bringing together these examples of practice and research a wider concerned with the social space constituted has been introduced. Notions of alienation, distancing and social ties have been noted briefly. The following section provides further foundation for these theories and how they come to inform this research on TwMLM.

2.4 Theories in Practice: Social Ties, Liveness & Enlivening

So far, this review has moved from a focus on form through to practice and theories surrounding this practice. In doing so it has located TwMLM in a wider context and identified varying perspectives on how TwMLM works have approached the relations to audience, time

and space. In doing so, wider thematic interests have emerged that open out a focus on the audience's relationship to their environment and social space. This section outlines key theories concerning the social dimensions of TwMLM. It draws together ideas developed throughout this review to position enlivening as a key conceptual frame. The work of Brecht, particularly his theories of defamiliarization (Mumford, 2018, p. 60), is used to clarify how social and critical distance might be mobilized through this work. This is introduced as a response to the use of theories such as alienation used previously by researchers to conceive of the social spaces produced in mobile and locative media performances (Wilken, 2014, p. 175). This provides a basis for understanding the audience in mobile and locative theatre as a kind of tourist within a mediated assemblage navigating an unfamiliar landscape. Latour's thinking on social traces is introduced to further articulate the invisible space (Latour, 2023, p. 159) between people, place, and performance as an ephemeral but important focus of this research. By identifying points of intersection between the Situationists, Hosokawa, and Brecht, this section links historical precedents with contemporary practice. This leads back to the concept of liveness (Auslander, 2023), and ultimately to enlivening, which is offered as point of synthesis and a site of ongoing inquiry.

A busker plays music on a busy street corner. Some people stop. Most pass by. In observing the phenomena, Hosokawa describes the two parties as momentarily "shar[ing] the ongoing flux of time and consciousness, and thus feel[ing] a recovery of the lost links of social life" (Hosokawa, 1984, p. 167). The perceived loss of social ties has been introduced in this review as a source of anxiety in the works of the SI (Matthews, 2021) and Hosokawa. The first perspective is informed by France in the 50s, the second Japan in the 80s. Both are linked to mobile and locative media. It's worth pausing briefly on what is meant by social ties and how these can be understood.

In seeking to locate the social, Latour breaks the term into two different phenomena. The social is described as "at once a substance, a kind of stuff, and a movement between non-social elements. In both cases the social vanishes" (Latour, 2023, p. 159). Latour goes into greater detail to document the force of the social and the challenge of locating it in a way that is stable and able to be studied. He compares a speed bump to a stop sign to clarify the difference between two forces which will slow a car down. The speed bump constitutes a concrete material force that

will generate resistance against a speeding car. The stop sign will have a similar impact, but its force is not informed by the sign's materiality itself but the social space that exists between the sign and driver. Latour goes on to argue that despite the "massive and ubiquitous" evidence of the social, "there is nothing more difficult to grasp than social ties" offering further that the phenomena is "only traceable when being modified" (Latour, 2023, p. 159).

It is notable that in the work of the Situationists and Hosokawa, both encounter social ties as being threatened or perceived as threatened in some way. Where Latour argues that social ties are made visible in moments of change (Latour, 2023, p. 159), the Situationists and Hosokawa are drawn to locative and mobile media interventions as instances of social change or transformation. While these are different perspectives, a similar phenomenon is being explored here. They provide background for focusing attention on the traces of social ties as observed in moments of modification, with an acknowledgment that these moments may be fleeting and elusive. For this research, like the busker being observed by Hosokawa (Hosokawa, 1984, p. 167), these moments are formed between people at points of shared experience constituted by creative action. Earlier in this review, this background was offered to provide a perspective of the mobile media user not as detached from reality but rather resensitised, unified, or tuned in to their environment. The focus now shifts to the journey taken through this tuning and the qualities of distance it creates. It searches for the how, where and why the tourist travels. Already the Marxist theory of alienation has been briefly introduced and will be drawn on more heavily here to help conceptualise distance with respect to social ties. Links between the theory of alienation and performance in public spaces with mobile media have already been identified by Wilken (Wilken, 2014) in a reading of encounters between strangers in the performance and narrative games of Blast Theory (Blast Theory, n.d). To tease this out further, it's necessary to offer some background to the theory of alienation.

Alienation, in the Marxist sense, can be traced to Marx's use of the notion in *Economic and Philosophic Manuscripts of 1844* (Marx, 2014; Musto, 2021, p. 6). Here, alienation is described as a phenomenon occurring when the product of a person's labour is presented "as something alien, as a power independent of the producer". Musto (Musto, 2021, p. 3) and Raekstad (Raekstad, 2022, p. 79) point towards a long and contested history concerning the notion. It has been interpreted in wider contexts beyond the immediate economic frame above to

describe more broadly the process by which something is separated or made strange from something else (Musto, 2021, p. 3; Raekstad, 2022). Wilken follows Simmel's application of the theory in the context of modernized and industrialised cities to conceptualise social interactions in shared public spaces. The argument is that as people come to live within greater proximity of one another, they grow more socially distant and isolated (Wilken, 2014, p. 3). "One never feels as lonely and as deserted as in the metropolitan crush of persons" (Simmel, 2014, p. 225).

Although Hosokawa (Hosokawa, 1984) is writing decades earlier than Wilken and the work of Blast Theory, he too notes a similar anxiety. He evokes David Riesman's the lonely crowd (Riesman et al., 2001) to capture the common attitude of the time that as people have begun to live in increasingly industrialized cities, they have lost a "harmonious contact with nature" (Hosokawa, 1984) and have become alienated. This echoes an anxiety for the loss of social ties but also draws in an additional layer that concerns alienation from the natural environment and a perceived harmony it brings. Tuning in to dialogue with natural or non-urban landscapes is a notable point of focus in some cotemporary locative and mobile media experiences such as the work of Barclay's *WIRA* (Barclay et al., 2018) and Riley's *Epiphyte* (Riley et al., 2020, p. 236). While these works are notable and rich with ideas, the focus of this research is tied more closely to social ties between human participants in urban contexts. While theory concerning social ties and alienation help to conceive the social space and social anxieties of TwMLM, a further look at alienation through the work of seminal theatre maker Bertolt Brecht can help to reconnect these theories back to the practice of theatre making.

Mumford describes the use of the word alienation, as seen in Brecht's writings, as an unhelpful translation pointing towards other possible translations such as dislocation, distancification, estrangement and her preferred term defamiliarization (Mumford, 2018, p. 60). The tactic of defamiliarization is also at times referred to as *Verfremdung* or V-effects in Brecht's theatre. *Verfremdung* is as a tactic through which critical distance can be created between actor and character so that the normally concealed creative labour of the actor is revealed (Mumford, 2018, p. 60). This description points to an active engagement with the theory of alienation through the means of theatre making. The actor and director in collaboration take on the work of revealing the labour of their practice as a means of disrupting the process. Mumford points to cross gender or cross generational casting as applications of *Verfremdung* in so much as they

emphasise how behaviour is socially constructed. It brings to the fore the social forces at play and resists an illusion which might otherwise seek to conceal them. “Brecht regarded *Verfremdung* as a political intervention into the (blindingly) familiar” (Mumford, 2018, p. 61). While the scope of this work has not extended to the social forces Brecht is referring to here, it has begun narrowing in on social ties and social alienation.

Both Hosokawa and Wilken both point to common perspectives on the urban city as a place of perceived social alienation, they also stress the potential for connection and contradiction. Hosokawa does this through his observation on the Walkman in action as creating positive distance. A contradictory force which both creates distances from the user and landscape while also constituting a renewed proximity to the autonomous and singular moment (Hosokawa, 1984, p. 170). Wilken similarly points to the work of sociologists who conceptualise the city as both a place of social alienation and yet also a site of greater potential for connection (Wilken, 2014, p. 178). He draws parallels with the nature of technology and mobile media itself. Whereas Hosokawa uses Deleuze’s term an “impossible” Wilken uses the phrase “Janus faced” meaning two faced. Both are reaching for a way to simultaneously hold the potential of the city and mobile media as a site of connection and construction of meaning as well as isolation and alienation from social ties.

The Situationists would argue the modern city is “deadened” by its economic rationalism (Matthews, 2021). Hosokawa and Wilken offer a less absolute position, rather pointing to the city as a site where social ties become in flux as the mobile media user navigates the landscape. For Hosokawa this navigation takes the form of the “walk act” accompanied by headphones (Hosokawa, 1984, p. 172), whereas Wilken is more focused on the more structured and collaborative performance encounters of Blast Theory. This research works with the assumption that as the participant enters TwMLM, this journey offers a moment where social ties become in flux. It follows the vision of the Situationists in shaping these journeys as opportunities to reorganise the audience’s relationship to their landscape in way that is inherently social.

2.4.1 From Liveness to Enlivening

Having traced TwMLM through antecedents, practice and now in the context of theories that account for social dimensions, this section returns to the central concept of this research: enlivening. Liveness is a notion well contested across performance studies (Dixon, 2007, p. 125). Auslander argues against the division between mediatized and unmediatized performance, in a contemporary context. His 3rd Edition of *Liveness: Performance in a Mediatized Culture* was written in the context of the COVID-19 pandemic. He notes how formative this context was as he reviews the thinking in what is a key text for the field. In introducing the edition, he notes that his initial 1999 edition was intended as a provocation and a bridge between work occurring in performance studies and that in media studies (Auslander, 2023, p. x). Two decades later he speaks to an interest in how the text is a “living book” and how the subject of liveness has taken the form of a “moving target” (Auslander, 2023, p. x) resisting stable ontological characteristics and subject to continual revision. Staying consistent across his editions to this point is the notion that liveness itself is historically contingent. The central thesis to this work, enlivening, is a direct reference to this work and is offered in the spirit of the continual revision. It offers up enlivening as shift of focus from the “moving target” to the continuously and collectively produced state of liveness produced between participant and performer. In the direction of Auslander’s work, this research is not focused on ontologies of liveness, but the action of enlivening and how it is observed in the making of the Performance Works.

Within Auslander’s wider thesis is the argument that modes of mediatized representation such as television were initially informed by performance and techniques of theatre but, over time, began to develop a language that was more informed by the technical potential of the dominant medium in and of itself (Auslander, 2023, pp. 41-42). Then, as mass mediums such as television became more dominant, this new language in turn began to shape the language of theatre. His position asserts that since the introduction of film and television, theatre has been engaged in an ongoing process of mediatization or remediation in how it is conceived, produced, distributed and consumed. Where his earlier editions focus heavily on the emergence of film and the dominance of television, his third edition notes that broadcast television is no longer the dominant medium in contrast with the emergence of streaming and digital media. Although he notes that digital media is still largely tele visual by nature (Auslander, 2023, p. 2).

The emergence of theatre streaming practices by companies such as National Theatre Live (NT Live) where theatre is either live streamed or filmed and presented as prerecorded media to a live audience, present an informative case study in the context of Auslander's theories of mediatization. Auslander himself picks up these practices in his updates to *Liveness*. He notes that unlike performances where the performer and audience is co-present, events like those held by National Theatre Live must be explicitly identified as "live" (Auslander, 2023, p. 34). It's notable in the literature, that there is a developing body of research available concerning audience attendance and experience at prerecorded or live streamed theatre. This includes coverage of work such as NT Live (Bakhshi & Throsby, 2012) but also evidence based on Australian theatre companies (Fotheringham, 2016) and streaming activity in places like South Korea in response to COVID-19 (Cho, 2021). Following his argument that theatre, film and television have been engaged in cycles of reform led by the dominant mass media of the moment, streamed theatre could be described as an evolution in the lineage of theatre's ongoing process of mediatization or remediation (Bolter & Grusin, 1999, p. 45).

In the context of networked and digital theatre making (Baker, 2008; Masura, 2020) these works fall outside the scope based on the condition that digital technologies are not central to the creation of the performance but rather distribution. Complicating this a step further are examples of telematic works such as *The Cyberian Chalk Circle* (Selim, 2020) and *Crossing Over* (Irwin, 2011), which featured real-time streamed action and mix this with co-present audiences gathered through social networks. There is a wide range of debate on the question of what constitutes liveness, much of which cites the work of Auslander (Auslander, 2023) and Phelan (Phelan, 1993). There is also research, such as that of postdigital practitioners, who challenge the value of the debate itself (Causey, 2016). This research seeks to contribute to the dialogue in liveness by exploring the concept through its manifestation in TwMLM and by offering enlivening as an extension. The notion of enlivening is offered as a more precise description of liveness as it relates to TwMLM.

Enlivening is a state of liveness that is continuously and collectively produced between performance and participant within mediated assemblages. It responds to the participatory affordances of TwMLM and to the wider emergence of immersive and experiential theatre practices (Bartley & Lewis, 2023). It is both action and experience. Or experience *in* action. It is

characterized by emergence rather than a binary “on” or “off” condition. Enlivening can be understood as a process of continuous becoming. Enlivening is offered not only as an extension of liveness but as a reconnection with and a return to much older ideas and practice.

In a keynote speech at the 2025 International Symposium for Electronic Art (ISEA) in Seoul, Yunchi Kim, introduced the Buddhist notion of dependent arising (Rāhula, 1967, p. 53) to describe the relationship between an artwork and its user. They proposed the term *paraduct*, a shift from product, to describe an artwork not as a fixed outcome, but as an evolving entity shaped through ongoing interaction. The emphasis on contingency, becoming, and interrelation aligns with the shift of liveness to enlivening. While it’s not in the scope of this research to follow the lineage of notions such as dependent arising further, like the Scarred Trees on Dharug Country in Parramatta Park, this gestures to a longer and ancient history. Given the framing of enlivening offered here, it is important to note that such an approach is not necessarily limited to TwMLM or the wider fields of digital theatre and digital performance. That said, this approach to enlivening has been arrived at through working closely with mobile and locative technologies in the making of theatre works. For this research, the notion of enlivening and these technologies is bound up. One would not exist without the other. This research does not claim that enlivening has relevance beyond TwMLM, but by clarifying how and why this approach was developed, it offers pathways for others who may wish to consider this further.

Drawing on the discourse around liveness, this research works with four recurring components: spontaneity, presence, feedback and community. These align with aspects frequently associated with live performance such as co-presence, unpredictability, and the possibility of interaction (Auslander, 2023, p. 16). These components remain active within the dynamics of enlivening and continue to surface throughout this research. The following orientation offers a quick reading of each, supported by examples from digital and postdigital theatre practice.

2.4.2 Spontaneity

Spontaneity relates to the potential for unplanned, and unscripted actions or responses that occur during a performance, rehearsal, or creative process. The concept is interwoven with various theatre and performance traditions, methodologies, and genres. It could be understood as the kinaesthetic response to an impulsive movement in the tradition of Viewpoints (Bogart & Landau, 2012) or the improvised conversation between two chat bots in Annie Doresen's *Hello Hi There* (Stojnic, 2015). In the creation of location-based audio work *Maryam*, a process of design aimed at loose couplings is described that weaves together the location, pre-recorded audio narrative and the unplanned actions and events of the public location to afford spontaneity (Rossitto et al., 2016). This is the possibility of what can occur at any moment.

2.4.3 Presence

In the years following her research on *MindTouch* and networked performance, (Baker, 2008; Baker, 2013). Baker extends her work on the theme of presence and offers a concise introduction to presence theory. "Presence is an embodied physical and/or virtual engagement of otherness and others elsewhere in time and/or space. This notion of presence also encompasses a physical, conceptual, lived sensibility, like a vibration or physical agitation, felt viscerally and intuitively" (Baker, 2019b). Baker stresses what she describes as the "feltness" of presence. Extending the experience of presence for performer and audience/participant is a reoccurring point of interest for digital and networked theatre works. In *Body of Knowledge* (Hersch, 2021), Samara Hersch uses mobile phones to connect teenagers remotely with audiences in the theatre instigating a dialogue which leads to audiences being guided in the construction of blanket forts. Rimini Protokoll uses mobile devices in *Call Cutta* (Rimini Protokoll, 2005), linking phone operators in Kolkata to help navigate audiences on the streets of Berlin. These are exchanges with live performers unlike works like *Rider Spoke* (Blast Theory, 2007) which feature interactions with pre-recorded audio made live by the audiences actions. *Rider Spoke* doesn't seek to create the illusion of real-time presence. Instead, audience takes real-time actions in navigating a city, and these actions lead them to places where they access audio recorded by people who share proximity with the audience but at a different time. This involves a sort of past presence. The presence of something that was and has gone.

2.4.4 Feedback

Feedback, in this research, is being used broadly in two areas. Feedback occurring between audience and performer as well as feedback occurring between technology and performance. Feedback between audience and performer surfaces as a challenge for practitioners like Prior (Prior, 2014) as they set out to develop telematic practices to bring performers and audience into remote locations in a way that can enable a sensitivity required for collaboration and connection. UpStart's *Phone Home* (Beck, 2018) also points to the challenges of enabling this kind of feedback in their creative process. Petersen (Petersen, 2007) on the other hand takes this a step further and explores how feedback and constraints such as latency start to form a palette for their specific compositional practice. Using different techniques but leaning further into feedback *Z/Z Twin Lab* and *Zuni Icosahedron* (Mansbridge, 2020) create a mix of telematic and motion capture feedback systems to stage dance theatre works between Zurich and Hong Kong. Feedback in these examples speaks to the qualities of connection in these works and how it enables, constrains or becomes the work itself.

2.4.5 Community

Community might also be understood through the term co-presence which is commonly considered in works concerned with digital or networked theatre practices. Forced Entertainment are a company with a long history of digital theatre practice tracing back to “dial up days of the early internet” (Buckley, 2016, p. 38) . A live stream hosted on the Forced Entertainment website was the primary access point for the durational performance *12AM Live* to which Buckley offers a series of thoughts on liveness and the community that was facilitated in this instance. A core focus of her study and conclusions rests on observed interactions occurring simultaneously with the performance on twitter. Buckley notes the “performance is both hypermediated and re-enlivened for the online audience” (Buckley, 2016, p. 47). But later notes that after tracking comments it became evident most comments were not connected to one or another or responded to. She argues this parallel performance occurring on twitter was one where people felt a great sense of community, togetherness, and participation in the work despite the

evidence suggesting they were not engaging in a conversation so much as performing small acts of expression. It could be taken from this that these small acts of expression are key to presenting or simulating a feedback loop between performer and audience that provokes a deeper sense of presence. She argues that works such as this are a sign of how theatre might continue to grow and evolve in the digital era. This example speaks to a remote community brought together in a virtual space. Works introduced above such as *Phone Home* (Beck, 2018) and *Z/Z Twin Lab* (Mansbridge, 2020) also bring together a community of audiences while mixing this with audiences co-present in the room of the performer. Works like *Rider Spoke* (Blast Theory, 2007), *The Village by the Kids* (Chidiac, 2022b) and *WIRA* (Barclay et al., 2018) push this further by using pre-recorded audio and geotagging to bring communities of people together across time as well as place. Community, in these examples is enacted through the bringing together of audiences and performer in a digital, virtual, hybrid or physical context which enables feedback and interaction between the participants.

2.5 Conclusion

This review began by tracing a line from digital performance (Dixon, 2007) to postdigital performance (Causey, 2016). In doing so it provided background to what Dixon termed the ‘inherent tensions’ of the form; between revolutionising practice and a history of extending the aesthetic impact of performance through technological development. It also introduced the ontological debate concerning liveness through the work of Auslande (Auslander, 2023)r and Phelan (Phelan, 1993). Situated between digital performance, digital theatre (Masura, 2020) and networked theatre (Baker, 2008) a composite definition of TwMLM was offered. A body of work featuring artists working with locative media, telematics as well as mobile media was introduced to illuminate trends in practice. These works were contextualized through theories accounting for the social dimensions of mobile media observed in the work of the Situationists (Matthews, 2021) and Hosokawa (Hosokawa, 1984). What the review provides is a renewed framework for considering liveness as enlivening. It offers enlivening as a conceptual point of departure for examining TwMLM. With this point of departure established, the question becomes, how can we meaningfully venture in this direction? This question guides the chapter.

3. Method

3.1 Introduction

This chapter moves from the what of enlivening in theatre with mobile and locative media (TwMLM) to the how. As practice-led research, this thesis produces knowledge both on the page and through the creation and documentation of performance works. This dual output poses a challenge; to design a process that allows these elements to interact meaningfully, and to make that process transparent and accountable to an external reader. This chapter focuses on mapping that methodology. It begins by establishing an interpretivist and constructivist research paradigm as a foundation for thinking about knowledge. It then moves toward research approaches, offering further detail on Action and Practice Led Research. These approaches are then grounded by the following section on Research Methods which track how the performance works were produced, rehearsed, presented and how data surrounding them was generated. This includes semi-structured interviews, focus groups and practitioner reflections. The final section on analysis introduces reflexive thematic analysis as a tool used to bring data together and to generate insights.

There is not a singular method that sits across this research. The Findings Chapters Four, Five and Six each prioritize a different approach that shifts the nature of evidence from experiential to analytical and to reflexive. An exploration of enlivening is not limited to this approach, but this chapter will justify why they have been applied. It will introduce factors including the experiential nature of live performance, the lived and professional experience of the researcher leading the work and work done to balance creative and research practices. In doing so, this chapter will confront the limitations of this methodology while also arguing why it offers an effective and accountable approach to investigate enlivening in TwMLM.

3.2 Research Paradigm

A paradigm is a basic set of beliefs or a “distillation of what we think about the world but cannot prove” (Lincoln & Guba, 1985, p. 15). Like a perspective, it limits what can be seen and in exchange affords a process of understanding or meaning making. In this section I introduce

the paradigms of this research and track the associated ontological, epistemological and methodological limitations and affordances. To investigate enlivening is to explore an intangible space between performance and participant within mediated assemblages (Eckersall et al., 2017, p. 2) of TwMLM. Here the word space points beyond the physical space and toward something that is more social, energetic and imagined. These words signpost an exploration of phenomena that is interpreted but also constructed. Given these characteristics, a constructivist and interpretivist paradigm will be used.

While these paradigms are closely aligned, they also offer discrete points of focus. Constructivism emphasizes the co-construction of knowledge through interactions, reflexive practices, and relational dynamics (Lincoln & Guba, 1985, p. 83). This perspective aligns with the iterative and collaborative nature of the study, where audience feedback, practitioner reflections, and creative processes contribute to emergent understandings of enlivening. Interpretivism, on the other hand, focuses on the interpretation of subjective meanings within specific contexts (Schwandt, 1994, pp. 119-137). This paradigm supports the study's exploration of how spatiotemporal relations and relations to self, others and environment are interpreted in TwMLM. These paradigms resist positivist notions that knowledge is objective, instead emphasizing that knowledge is socially constructed and context-dependent (Lincoln & Guba, 1985, pp. 15-17, 83). For this research, enlivening is not something that can be counted, measured and weighed but rather understood through interpretations of interactions between people and processes.

3.2.1 Ontological Position

The ontological implications of these paradigms offer an approach to reality not as a fixed external truth. Rather reality, the same as enlivening, is emergent from relationships between people, places and technologies. If two audiences or artists report differing observations or responses to an act of enlivening, this does not invalidate the phenomenon but rather reinforce the constructed nature and further justify the ontological approach adopted here. My moment of enlivening does not have to align with that of the readers for us to accept the reality of enlivening as collectively constituted. However, this raises an uncomfortable but important question: where is the line between collective construction and collective illusion? A false truth or conspiracy can

operate through shared affect, mutual affirmation and the co-creation of a world. What checks are offered on this emergent reality to support auditing, accountability and processes of self-correction? A response to this question and possible criticism will require holding two oppositional approaches to reality in tension simultaneously.

Latour's approach to the traces of social ties (Latour, 2023, p. 159) can help outline and navigate this tension. Latour points toward the force of the social as being obvious and yet the social ties that bind this force as unstable things that only come into being through associations and interactions. Instead of attempting to catch, hold or quantify the social, Latour accepts that it evades any such packaging and instead points toward the traces of the social. Instead of collecting the social force that guides a driver to put their foot on the brakes of their car, we can observe the traces of the social in the form of the red stop sign installed on the street side or the system of laws and demerits that might come into effect if the driver fails to stop. In this sense, we must accept the social as part of a shared reality that is co-constructed between people while also investigating this reality through its traces which can be more concretely located. This study accepts that enlivening occurs through co-construction and interpretation. It does not seek to unify a reality around an objective truth but rather accept a plurality of enlivenings through differing perspectives, while focusing on the traces of enlivening as sources of evidence.

3.2.2 Epistemological Position

Given these paradigms and ontological position, we can now consider the kind of knowledge that is generated through investigation. These types of knowledge fall into two categories that align well with Latour's distinction of the social and its traces (Latour, 2023, p. 159). Firstly, this research produces experiential and relational knowledge concerning enlivening in TwMLM. It expands an understanding of how enlivening operates in action and is both informed by and extends my own embodied knowledge as a dual researcher and creative practitioner. Secondly, beneath this layer is a body of knowledge that concerns the traces of enlivening. This is situated knowledge constructed through interpretive analysis. It is produced through analysis of spatiotemporal relations and shifting social relationships observed in performance. These traces draw from interviews, reflections, contextual observations. It offers

insight into how enlivening manifests and is made legible within specific settings. Together, these layers reflect an epistemological stance that prioritizes context, relation and emergence.

3.2.3 Methodological Position

As an approach to reality and knowledge has been teased out in the preceding sections, a mixed method approach has begun to be introduced. Methods of creative practice, interview, observation and analysis are covered later in this chapter but for the moment the question remains: why? Why is a mixed method approach privileging emergence, iteration and reflexivity a fitting methodological framework for a study of enlivening in TwMLM? A case for this approach can be made based on alignment with existing research, a sensitivity to the subject of enlivening and as a response to working with the bias of myself as a researcher.

Concerning alignment to existing research, performance studies is concerned with the notion of performing while simultaneously producing what is performed. This is a relationship of showing and doing at the same time, with neither occurring independently. This approach resonates with the notion of enlivening as a continuous becoming which, alongside the established exploration of liveness in performance studies, makes the field a well aligned area of study. Schechner makes clear performance studies' interest in mixed method approaches that gather field work, critical inquiry, analysis and practice itself (Schechner & Brady, 2013, p. 21). By echoing these research principles and methodologies, this investigation is aligned with a wider methodological approach and therefore more compatible with academic oversight and is also primed to contribute.

With regards to my bias, this is simultaneously a limitation of perspective, a source of possible strength and a requirement for this methodology to occur. This methodological framework is not developed in a black box for any researcher to pick up and deploy. It has been developed in a tension between the established creative practice I brought to the process and the needs of research outcomes. This is an intentional tension designed to produce outcomes that are transparent and able to be observed by others outside of the process. At times this tension surfaces as methods of knowledge discrete to both the creative and the research sides of this work and at times they blend. For example, the performance works prioritize the creative process

and knowledge generated, whereas interviews with audience and analysis of spatiotemporal relations privilege the research side of this work. The tactics outlined in Chapter Seven concerning enlivening as shaping contingency, as locations per second and as audience synchronization are examples of blended outputs. These tactics bring together data generated and analyzed through more formal research methods with an iterative and speculative process informed by creative practice.

3.3 Research Approach

In discussing reflection in creative practice Candy (Candy, 2020, p. 6) notes a conversation between artist Francis Bacon and historian David Sylvester on intention and accident. Bacon describes setting out to draw a bird but, through the act of doing so, another picture emerging. Bacon uses the term “accident” to describe the moments between his action, reflection and the decision to pursue a new intention leading to action and more reflection. The journey of intention, action, reflection to renewed intention, action, reflection and so on, describes the cyclical nature of this research. The moments being described by Bacon are fleeting and rapid arriving between each stroke. In pointing to this exchange Candy draws out an understanding of reflective practice as oscillating between these momentary instances of iteration that occur within a larger arc. This section works with Candy’s research as a foundation to mark out these cycles, both micro and macro, while introducing the research approaches of Practice-Led Research and Action Research.

3.3.1 Practice-Led Research

Practice-based research involves “taking purposeful actions within a specific context, typically in a creative or professional way: [through] the making, modifying or designing of objects, events or processes” (Candy et al., 2022, p. 27). In this approach the model, artifact or object is submitted as evidence of research alongside the written exegesis. Practice-led is a similarly aligned approach, however the goal is to generate new insights about practice rather than through it. “If a creative artifact is the basis of the contribution to knowledge, the research is practice-based. If the research leads primarily to new understandings about practice, it is

practice-led.” Practice plays a foundational role to the investigation mapped in this thesis. However, the primary research outcomes contribute new knowledge concerning practice and given this; the approach can be best understood as practice led.

In addition, it’s helpful to note how practice features and operates. Practice takes the form of five performance works presented over a period of twenty-four months. Live performance is an ephemeral form and therefore presents an obstacle for examination. While the performances themselves have not been presented for external examination directly, throughout this thesis there is a range of documentation which offers the reader further insight into these works. This includes text-based description, scripted materials, still photographs and video documentation. The practice itself should be viewed alongside the insights generated as it embodies the challenges of this research and the discoveries made. This is particularly relevant for Chapters Four and Five which include the closest description and analysis of the performance works in action.

Candy et al. further clarifies that the research dimension of this approach must go beyond personal research to make a broader contribution to knowledge (Candy & Edmonds, 2018, p. 64). New knowledge which is generated for the researcher alone is insufficient. This leads to the question, how might practice-led research be organised to produce a broader contribution to knowledge and to make this contribution legible to people beyond those implicated in the practice itself? The need to clarify this contribution is a challenge (Candy & Edmonds, 2018, p. 65) and an ongoing tension of work in the field. At the same time, a pattern is noted of PhD researchers becoming tempted into making larger claims of significance or overly complicated work to account for insecurities regarding the perceived “quality” of “simplicity” of outcomes produced.


From these insights, what becomes clear is the challenge to conduct practice-led research in a way that clarifies how it contributes new knowledge beyond discoveries of the individual practitioner, without being drawn into larger claims that can’t be substantiated by evidence generated through or in parallel with the practice. The contrasting methods deployed across Chapters Four through to Six seek to balance these needs. Chapters Four and parts of Five anchor around description and reflection. The intention is to introduce the Performance Works and illustrate their development while resisting the temptation to make larger claims of

significance. Chapters Five and Six deploy further analysis such as scene studies and reflexive thematic analysis to make the knowledge generated accessible and impactful to others.

3.3.2 Action Research

While Candy's work anchors the practice-led frame, principals of Action Research are also applied to clarify the iterative nature of how this work has been organized. These two approaches feature philosophical and practical overlaps. Kemmis and McTaggart's spiral of self-reflection (Kemmis & McTaggart, 1982), is an early example of the kind of reflective practice Candy is discussing above. The spiral outlines a series of key steps that include planning, acting, observing, reflecting as well as replanning. These steps are joined in an iterative spiral which stresses the significance of ongoing change and learning throughout the process. To place these steps in the context of my work, following this process I have:

- created proposals for the creation of a new performance informed by perceived gaps in the field and by discoveries made in earlier work,
- produced the work while gathering data from artists and audiences during the development process and at its presentation,
- reflected on the data through analysis,
- used these reflections to formulate plans for refined or renewed performances that more deeply addresses the research problem,
- and continued this spiral iteratively while the research problem maintained its relevance.



[Production note: This figure is not included in this digital copy due to copyright restrictions.]

Figure 9: Self Reflection Spiral (Kemmis & McTaggart, 1988)

Kemmis and McTaggart introduce the spiral in their early work on Action Research while tracing the foundational ideas to the research of Lewin who also stressed the value of a cyclical process with ongoing iteration (Lewin, 1946).

By 2014 Kemmis and McTaggart evolved their thinking on the Action Research in two ways. The first is the notion that that the spiral of self-reflection may have overemphasized the individual steps (Kemmis et al., 2014). By this point in their thinking, there is a renewed sensitivity that the researcher and practitioner may move back and forth between each step regularly before a full cycle or spiral is completed. A challenge this presents as a researcher and practitioner is how to work with this back and forth while still maintaining progress in a direction which will result in research outcomes. Work in progress presentations and final presentations were planned and used in my own creative process to provide milestones and structures for gathering data while protecting the sensitivity to iteration being noted here. Various threads of creation such as story, design and application development are presented as multiple threads.

These are key moments when the recursive movement between planning, action, and reflection being noted by Kemmis, McTaggart and Nixon (Kemmis et al., 2014) is particularly noticeable.

The second evolution in thinking on method for Kemmis and McTaggart concerns the development of distinct forms of Action Research such as Action Science, Participatory Research and Critical Participatory Action Research (CPAR). CPAR makes a case for the value of “insiders” or participants in their fields undertaking research with a view to enacting change. As opposed to the outside observer, the researcher is actively interested and potentially impacted by the consequences of the research. This change is generally motivated by the practitioner identifying certain conditions in their field that are irrational, unsustainable, or unjust (Kemmis et al., 2014). CPAR is noted as being a common tool for people who, as part of their research, seek to enact change in their respective fields. Practitioners such as teachers seeking to improve educational practitioners or farmers looking for ways to transform agricultural practices are noted as both the kind of people and the potential beneficiaries of a CPAR approach. In these contexts, Kemmis and McTaggart become critical of positioning the researcher as an external “outsider” and seek to better understand how the researcher might operate as an “insider” within this spiral of spiral of self-reflection. While a reflective practice is a key a starting point, positioning the researcher as an “insider” is seen as of value.

Returning briefly to the notion of enacting a change and addressing problems through research that are irrational, unsustainable or unjust, I want to build a few more threads that make sense of these terms as related to a creative process. Kemmis and McTaggart use these terms, in part, to point to the role Action Research has played in enabling people from communities who have not had access to the tools of research, or the language to frame the work already being done, to find their own answers to the problems impacting them. My motivation is not driven by a problem that is irrational, unsustainable or unjust. While new knowledge in this area has the scope to benefit artform development including more dynamic and sustainable practices, this project is driven by an artistic inquiry and therefore falls short of a “pure” CPAR project considering the points raised above.

The subgenre of Action Research termed Action Science may be a better fit in some ways. Action Science is described as the study of practices in an organisational setting to generate new understandings or improvements that feed back into practice. But where Action

Science falls short is that to understand a creative process and the participants involved as an organisation feels ill fitting. What CPAR offers is an understanding that the members of the creative team act as participants in the work and are people who carry a stake in the broader interests of the artistic community in which they practice. For this reason, principles taken from Action Research, CPAR and Action Science have all been considered as part of the research approach taken.

3.4 Research Methods

The following section introduces the methods used to generate data throughout this research process. It includes creative methods employed in the development of the performance works themselves, as well as accompanying strategies for producing further traces of these performances for study. This ranges from foundational practices of playwriting and collaborative performance-making to the use of semi-structured interviews and focus groups. These creative and analytical processes are not presented as distinct, but as mutually informing reflecting the iterative and integrated nature of both Action Research and Practice-Led Research.

3.4.1 Playwriting & Collaborative Performance Making

Across the five Performance Works the practice of playwriting and collaborative performance making was used both as a way of making new work and as a mode of inquiry. These ways of making informed how we generated, prototyped and embodied an exploration of enlivening in TwMLM.

Message Bank, Ghost and Lost. Stories. Found were primarily text-based. A script was generated at the start of the process, it then moved through an interpretative, rehearsal and rendering process. In the case of *Message Bank* this was co-authored with two other writers Monikka Eliah and Challito Browne. For *Ghost* this was written independently and the text in *Lost. Stories. Found* was curated from archival material by a creative team led by FORM Dance Projects. In *Message Bank* and *Ghost*, I played a dual role as a writer and director. In this sense I

saw material from its point of generation through to production. For *Lost. Stories. Found* my role was more responsive to the direction of the creative team.

Dancing Bear and *Green Thumb* were produced through more collaborative performance making practices. In the case of *Dancing Bear* this was primarily an improvisational process where material was generated by two performers Challito Browne and Kate Worsely. Here I played a role as director. For *Green Thumb* narrative was developed by a class of high school students at Parramatta Marist. In a sense, this was like the multi writer model of *Message Bank* but the scale of collaboration was pushed further. In both instances my role was that of director but with a heavier focus on working as a facilitator director. These processes stress a more participatory approach where my role was to provoke, guide and enable a team of people to generate material in contrast to authoring it myself.

In addition to the process of generating initial narrative and conceptual material, it's important to note the significant amount of contribution, iteration and creative dialogue that occurred across the varying rehearsal and production phases. Some of this is stepped through in the following chapter, however not all can be captured. In this phase roles such as that of the sound designers and composers, set and costume designers, creative technologists, outside eyes and producers all contributed to the shaping of the performance works that anchor this research.

Throughout the making process of this work, I remained keenly aware of my dual role as lead artist and researcher; an approach grounded in Lincoln & Guba's (Lincoln & Guba, 1985, p. 20) notion of the "reflexive researcher." As both lead artist and researcher, I moved between authorial, facilitative, and observational modes. Here I'm referring to working as a writer, director and researcher. When referring to the work of the writer, I'm referring to generative work. This involves developing concepts and communicating these through written outputs like performance scripts or scores. When referring to the work of the director, I'm referring to interpretive and rendering work. That is, working collaborative with a wider creative team to turn the written outputs mentioned before into live action that can be witnessed by an audience. In some of these processes these roles are blurred. For example, *Dancing Bear*, is produced primarily through an improvisational process. In this instance, the role of the director is that of guiding the team through a process of collaborative writing as found in rehearsal. Working across these roles required continual attention to how my own intentions, preferences, and presence

shaped the material that emerged. In collaborative settings, particularly *Dancing Bear* and *Green Thumb*, I was challenged to relinquish control and attend more closely to emergent patterns, unexpected contributions, and group dynamics. These shifts in authorship and relational power did not just affect the works themselves but influenced how I came to understand and articulate concepts like enlivening and spatiotemporal relations. In this way, reflexivity was not only a stance but a methodological engine, shaping the insights that underpin this thesis.

While the method through which narrative and text-based material was generated across the five performance works shifts, my presence in each work is consistent. For the most part my work was as a director, but the nature of this direction shifted. Playwriting and collaborative performance-making were not simply modes of creation but functioned as methods for investigating how liveness, narrative, and social interaction were perceived, tested, and reconfigured in situ. This dual function reinforces the methodological grounding of this research in practice-led inquiry.

3.4.2 Semi-Structured Interviews

Semi-structured interviews include both open-ended and theoretically driven questions (Galletta & Cross, 2013, p. 45). This type of interview is frequently used throughout this research to gather data from practitioners and audiences. These interviews were conducted individually and in groups. This section clarifies some top-level details for how these were approached. The following section on Focus Groups offers further background to how this was extended to consider group settings. Semi-structured interviews can be structured around three segments. The first being an opening segment intended to establish a level of comfort and to create space for the participant to share their experience through responding to broad questions. This should also clearly outline the context and intentions of the research (Galletta & Cross, 2013, p. 47). A middle segment designed to narrow the focus toward the intended research area. This might include teasing out initial responses and looping back some of the participants opening comments (Galletta & Cross, 2013, p. 50). And finally, a closing segment that invites the participant to reflect and share perspective now informed by theory-driven questions while also ensuring they are thanked for their contribution and offered space for any final observations (Galletta & Cross, 2013, p. 52).

This pattern can be observed in semi-structured interviews conducted in response to the presentation of *Ghost*. Participants were first asked to describe their experience or response they had to the work. They were then offered descriptions of specific sequences, along with further context as to what was informing the design. For example, one sequence featured the use of gyroscopic data to shift the volume the background sound was playing. Questions were homed in to gather data responding to this interaction, and how it might relate the audiences experience of liveness, feedback, and spontaneity. Finally, audiences were invited to reflect again the experience as it related to theories of liveness, presence and spontaneity introduced through the middle section.

3.4.3 Focus Groups

Approaches to focus groups can be differentiated by those that are conversation focused and those that are content focused (Gubrium et al., 2012, p. 163). These approaches can, in turn, influence the style of moderation and the data gathered. A conversation focused approach typically uses a less structured approach to moderation whereas a content focused would be more direct. The goal of the former being to make room for participants to take greater agency in setting their agenda and to make meaning from what this illuminate versus the latter which seeks out data more actively concerning a specific subject matter. Gubrium et al make a case for bridging the divide between research that is focused on the “what” is said and that focused on “how” it’s said, by offering up a middle ground concerned with the “co-construction of meaning” (Gubrium et al., 2012, p. 163), a notion traced to Wilkinson (Wilkinson, 1998, p. 123). This is offered to make sense of the material that discussed in a focus group while retaining a connection to how this material has been arrived at through a process of social interaction. “Sharing and comparing” and “organizing and conceptualizing” as two processes that focus group participants commonly engage in through the co-construction of meaning. Focus groups with audiences and artists have been used in a mixture of ways through this research. A spectrum of focus from conversation to content and modes of sharing and comparing or organizing and conceptualizing can help to clarify how these focus groups have run and why.

Focus Groups run with audiences and artists shortly following a presentation are content focused and primarily remain at a sharing and comparing level. These are generally five to ten minutes in length and are conducted in a foyer or a location that is adjacent to the presentation. The form of these focus groups is heavily shaped by the constraints of the context. Participants in this focus group have already committed time attending the presentation and are most likely near a larger group of people who have also attended. The time between the presentation and their focus group is also short meaning their responses have not been the subject of a longer process of reflection.

Focus groups run with audiences in the days or weeks following the presentation are described as follow ups. Follow up: focus groups run with audiences are slight longer, generally running for twenty to thirty minutes. These offer a mix of opportunities for sharing and comparing as well as organizing and conceptualizing. The first half of the focus group is focused around inviting initial responses to the presentation and then stepping through specific sequences to help recall action. The second half of the focus group offers an opportunity for the participants to reflect and make sense of the initial responses raised. High level concepts and themes from the research are offered to invite further questions or discussion.

Focused groups run with artists in the days or weeks following the presentation are described as reflections. They are longer than follow ups ranging from thirty minutes up to two hours. I've differentiated follow ups from reflections based on the argument that experience brought to the table by practitioners shifts the frame of the focus group into something different. Whereas follow ups tend to start as sharing and comparing then progress towards organizing, these focus groups often move the other direction and back again.

3.4.4 Reflexive Thematic Analysis

Reflexive Thematic Analysis (RTA), as developed by Braun and Clarke (Braun & Clarke, 2006, 2021; Marija, 2022), is the primary analytic method used in this research to generate experiential insight from post-show interviews, follow-up focus groups, and creative debriefs. RTA is a flexible, theoretically informed method of qualitative analysis that supports the identification and articulation of patterns across a dataset (Braun & Clarke, 2006, p. 79).

Importantly, RTA is not simply a set of steps but a qualitative sensibility that treats meaning as situated, fluid, and constructed in relation to the researcher's own theoretical position and lived experience (Braun & Clarke, 2021, pp. 329-330).

This aligns with the interpretivist and constructivist paradigm of this study. In particular, the version of RTA employed here is largely deductive and theory-driven, shaped by prior work on liveness, feedback, presence, and spatiotemporal relationality. Braun and Clarke note that most coding processes blend inductive and deductive approaches, but clarity about one's epistemological stance ensures transparency (Braun & Clarke, 2021, pp. 331-332). In this case, theoretical concepts did not emerge from the data alone; rather, they were brought into the analytic process as tools for attunement for noticing where audience insights rubbed up against or extended existing ideas (Braun & Clarke, 2021, pp. 343-343). Braun and Clarke's six-phase model was used to guide the coding process (Braun & Clarke, 2006, pp. 87-93):

- Familiarization with data: Transcripts were manually cleaned and lightly corrected using NVivo. Any ambiguities or errors were checked against original recordings.
- Initial coding: The data was coded using both descriptive tags (e.g., “moment of feedback,” “unexpected connection”) and thematic clusters.
- Theme development: Codes were grouped under evolving categories guided by the research questions.
- Reviewing themes: Themes were tested across the dataset for consistency, richness, and scope.
- Defining and naming themes: Each theme was defined with a clear conceptual focus (e.g., “Solidarity through Identification”), refined through writing.
- Producing the report: The resulting themes shaped Chapter 6, with each theme containing both interpretive synthesis and supporting participant quotes.

This process yielded five themes that form the basis of the *Experiential Insight* chapter. These insights are not definitive conclusions, but reflective distillations that emerged through cycles of writing, reading, coding, and reflecting. These themes were not just 'found' but actively

constructed through moments of resonance, dissonance, and felt interpretation. What RTA makes visible is not only what audiences say, but how the researcher's attention, informed by dramaturgical sensibility, shapes what is drawn out and why (Braun & Clarke, 2021, pp. 332-333).

Reflexive Thematic Analysis is also threaded more loosely through Chapter 7. While that chapter takes on a more narrative and conceptual structure, it draws on the same analytic process, particularly in shaping the “stories” that integrate data with broader propositions. In this way, RTA operates as both an explicit method of insight generation and a broader methodological ethos: one that values transparency, contextual responsiveness, and the researcher’s critical reflexivity as an asset (Braun & Clarke, 2021, p. 329).

3.4.5 Practitioner Reflections

In addition to audience-facing methods such as semi-structured interviews and focus groups, this research draws on a series of written reflections produced during and after the creation of the five Performance Works. These practitioner reflections, included in Chapter 4, range from contemporaneous field notes written during rehearsal and production periods, to retrospective accounts written months or even years later. While they are not coded or analyzed in the same way as audience data, they function as a third lens through which the works are understood, part experiential record, part analytical observation.

This approach aligns with established methodologies in practice-based and practice-led research where the researcher-practitioner’s own process and insights are treated as meaningful data sources (Candy et al., 2022; Nelson, 2013). As Nelson argues (Nelson, 2013, p. 37), reflexive commentary by the artist-researcher plays a central role in articulating how creative decisions are made and how knowledge is generated through practice. These reflections also serve to “clarify the contribution” to knowledge made by practice, which Candy (Candy & Edmonds, 2018, p. 65) identifies as a central challenge in PBR.

The reflections operate within a reflexive frame, not only documenting creative choices but also surfacing tensions, contradictions, and contingent decisions that shaped each performance. This aligns with Finlay’s (Finlay, 2002, p. 219) view of critical reflexivity as a

method of engaging with the “politics of the self” in research, where positionality, power, and partial knowledge are actively interrogated. As such, these reflections are not positioned as neutral records but as subjective articulations of a practice-led inquiry, consistent with the epistemological commitments of this thesis.

3.5 Case Study: Process on Message Bank

This section presents *Message Bank* as the pilot case study. It shows in further detail how the spiral of self-reflection and iteration introduced in section 3.4 unfolds in practice. The four subsequent works received a condensed description of their process as they are introduced across Chapter 4. The rationale for drawing this example forward, and in further detail, is that it sheds light on how the method outlined in this section plays out in practice. The remaining Performance Works are developed through a similar process, with some shifts in scale of the creative team as well as their approach to working with pre-written performance text or improvisation. A brief introduction to the process on each case study.

- Message Bank: Text-driven, co-written by a multi-writer team
- Ghost: Text-driven, developed with a single writer
- Dancing Bear: Devised through improvisation with two performers and a creative team
- Green Thumb: School-based adaptation of Message Bank collaboratively adapted with students
- Lost. Stories. Found: archival curation led by an external producer

3.5.1 Making Message Bank

My role on *Message Bank* was as artist practitioner and researcher. I was responsible for leading the team as director & co-writer. The extended creative team consisted of two additional writers, a digital artist, designer, composer, outside eye, production observer, creative producer, and actors. The team collaborated over a period of five months during which the project was conceived, workshopped, drafted through script and application development, recorded as audio

and video extracts, and tested through prototypes. As many of these layers occurred asynchronously, a shared online production folder operated as a gathering ground for storing and sharing draft materials. The first author and creative producer were responsible for maintaining correspondence and facilitating feedback sessions throughout the process which were documented and stored in the production folder.

3.5.2 *Components*

The components of *Message Bank* included 7 x Bluetooth beacons, 15 x iPhones, 2 x stationary “reporting booths” and the *Message Bank* application itself. Each audience member was given one device, one set of headphones and a messenger bag containing hand sanitizer, a printed message in an envelope and a plastic bottle with a label that read, ‘Sleeping Pills.’ These components were a mix of objects that were conceived of in the initial provocation and objects that became required as the cycles of iteration occurred. The first *Message Bank* application produced to host the performance was programmed using the Swift programming language and deployed using the iOS app store. The programming of this initial application was done by myself as an artist and researcher. The application was not distributed publicly but rather deployed via iOS test flight and installed on a set of devices. There was ongoing discussion around whether the experience should be made available to participants personal mobile devices or through those provided by the creative team. Initial prototypes relied on devices that were handed to the audience. This was partly informed by a desire to ensure the quality of the device the experience was on and based on a dramaturgical offer that invited participants to take on a new identity. Later iterations of the *Message Bank* application were produced using React Native and developed by Robert Polmear. React Native enabled greater access to cross platform distribution for iOS and Android.

3.5.3 *Process*

The figure below outlines each stage in the *Message Bank* creative process and how it operated through a spiral of self-reflection and iteration.

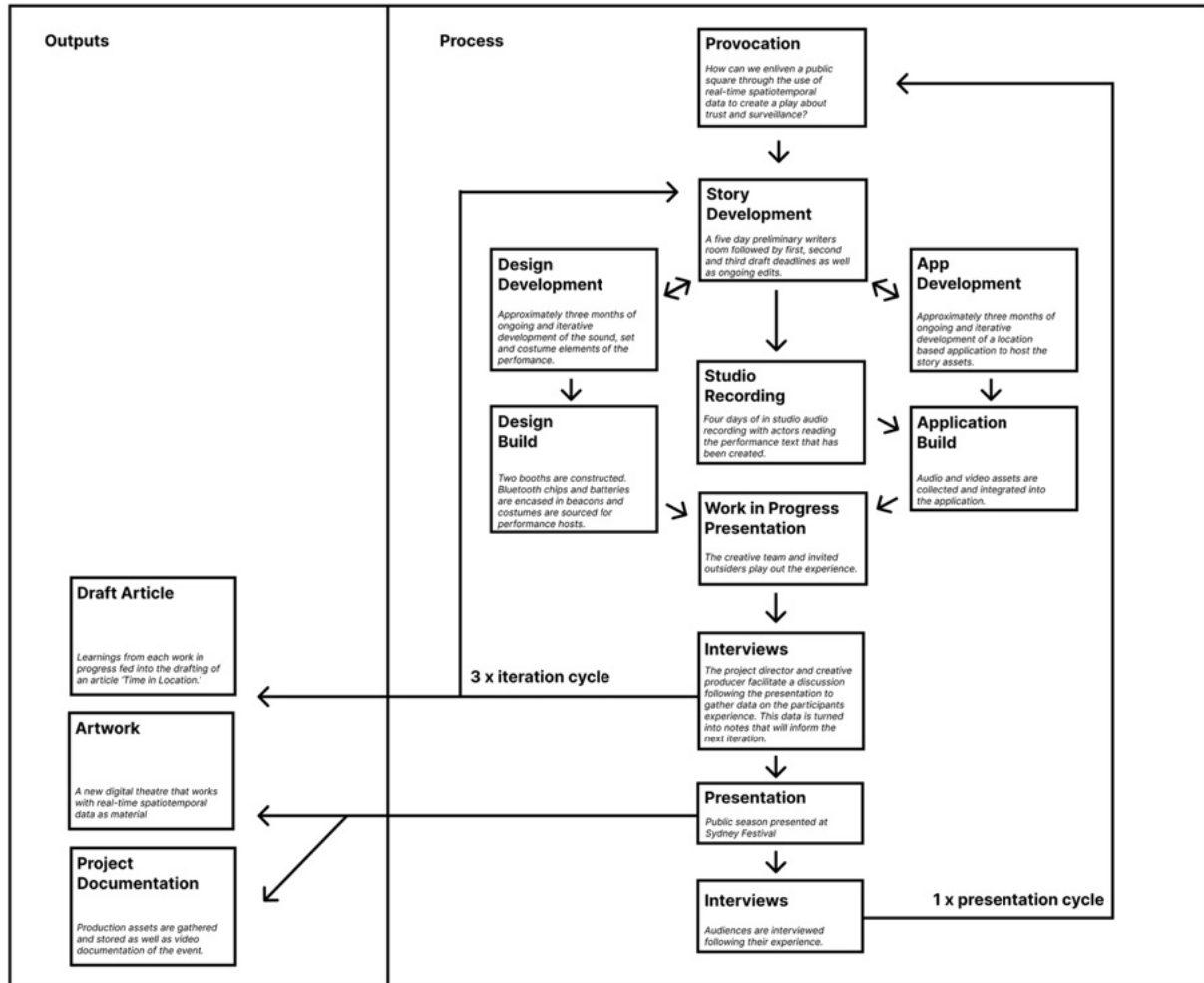


Figure 10: Research Integration with Creative Practice

Message Bank began with a thematic, technical and research-based provocation. A personal experience of identity theft I had was offered as a starting point in thinking about trust, identity and how they play out across mobile devices. A work in progress application and technique of proximity detection was the technical constraint and opportunity proposed. How might these tools and the real-time spatiotemporal data generated through their use shape and be shaped by the experience we were creating?

The story and script for *Message Bank* was developed through a series of collaborative workshop days and individual deadlines. The co-writers all had prior experience working together across screen and stage projects. The project began with five days where the writers

worked together to discuss ideas and make key decisions on tone, world, character and plot. After these days they each took allocated sequences of action and over three draft deadlines generated the bulk of the performance text that would be featured in the final presentation.

Set, costume, application, sound and composition design occurred in a parallel process. Offers occurring in story development were used to create a brief for the design processes, but the design processes fed back into story development through the references, opportunities, constraints and materials being generated. An example of this is an early mood board of visual materials brought together by set and costume designer Katja Handt which were used in the workshop room as characters and plotting was being developed. Elements such as the reporting booth were part of the concept at the point of provocation and informed story development.



Figure 11: Mood board, Message Bank (2023)

Over three initial workshop days and one day later in the process, actors were brought into a recording studio to record pieces written for the performance extract. This activity was hosted several months before the performance was bumped in for rehearsal so that the

application design could incorporate the audio material testing. Because this occurred early in the process, these sessions often involved dramaturgical discussions at the start of each day and the script itself was being iterated through the process of recording.

Three works in progress presentations were hosted in the lead up to the final production outcome. There was not a consistent group of testers across each presentation but rather a different mix of two to four people at each stage. The variation here was the result of availability as well as relevance for differing creative team members at different stages of the process. Each presentation also featured a different iteration of the performance as notes generated from the previous presentation were integrated. The key point to stress here is that insights and reflections speak to an ongoing conversation between a creative team and a performance actively subject to experimentation and adaptation.

Debriefs were focused on what elements or moments the team perceived to be contributing successfully to the experience. They took the form of semi structured interviews with the creative team where the project director took notes based on observations raised. Following each debrief these notes were shared with the full creative team by email which included those who had attended as well as those who hadn't. The creative team was offered the opportunity to add additional observations the notes might have provoked following the debrief or to provide a response if they felt the notes failed to capture a critical point. These notes were used to document the process for research but were also a practical reference for different team members working to iterate layers of the performance for which they were responsible. These various iterations, including draft scripts, design sketches and audio files, were all collated and are also used to inform insights for the purpose of research. Across this period there was an ongoing and ad hoc conversation occurring between the creative team as ideas, offers and questions surfaced throughout the process. These conversations occurred across email, Zoom and WhatsApp.

Each debrief and interview led to renewed action to clarify or evolve intention and execute that through each layer. While there were multiple tests and trials, the *Message Bank*, involved three primary works in progress presentations which instigated a new cycle of iteration.

Message Bank was presented twenty-four times to audiences of fifteen people at a time over two weeks as part of Sydney Festival '23. Following preview performances as part of the

public season short interviews were held with groups of trial participants. Details coming from these interviews feed into the preliminary results section included in this report.

3.6 Critiques & Limitations

Throughout this chapter a series of critiques regarding method have been introduced alongside the research paradigm, approach and methods. This is a sign of the active reflexivity at play. While this is ongoing, it's beneficial to gather these threads for a more direct illustration of the limitations they present. This section will revisit the limitations of positionality and researcher bias, the limits of practice and generalizability as well as the limited sample size of audience and artist responses.

Given the array of projects, people and process interacting through the performance works my role and positionality is a necessarily consistent and stabilizing force. It is the common ground that enables these actions and their accompanying data to be gathered and explored meaningfully. However, this creates a reliance on a sole perspective that is subject to personal bias. This bias and my own positionality within the process is noted in further detail in section 3.4.1. When projects are described as iterations, adaptations or responses, these frames and the choice to take these actions are defined by my own personal response to their prototyping and ongoing development. This bias cannot be removed and there are not efforts taken to do so. Rather, this methodological framework is designed to be responsive to this bias. The constructivist and interpretivist paradigm offers a way to accept this bias and work from it rather than against. It's aligned with practice-led research and methods such as practitioner reflections offer snap shots of this bias so that others can observe and assess this perspective. Here bias isn't removed but rather centered and documented to provide greater transparency and further depth of understanding.

Moving towards generalizability, there is the ongoing risk that the benefits of knowledge generate in this way fail to extend beyond the idiosyncratic creative practice driving the action. Practitioner reflections as well as audience and artist responses are particularly vulnerable to this limitation. Analytical tools and engagement with existing taxonomies of practice are offered as a

means of pushing beyond this limitation. The process of reflexive thematic analysis as well as naming and describing themes pushes idiosyncratic responses are guided towards more shareable insights. In addition, dramaturgical analysis through contrast with existing taxonomies of practice links reflections with recognizable and transferable structures. Like bias, there will always be a degree to which the outcomes here are specific to their time and place. Similar again, it's important this septicity isn't lost as it's fundamental to the credibility of the insights produced. However, this must be done hand in hand with tactics of transferability such as those noted above.

Beyond bias and the challenge to make these insights relevant beyond my immediate practice is the challenge of limited sample sizes. With regards to audience and artist responses, twelve semi-structured interviews ranging from fifteen to twenty minutes and a two-hour focus group with four artists who worked on *Message Bank* and *Dancing Bear*. These participants had a preexisting relationship with me as researcher and practitioner as well some knowledge of the overall field of research. They are not experts in TwMLM, but are people interested and invested in performing arts. They are practitioners or people who regularly attend. While the sample size is limited and my positionality brings more bias, the intention behind gathering this data this way was around depth of engagement. These were participants with whom I did not have to prime with context but could speak actively to the body of work and share their perspectives on enlivening in TwMLM.

To resolve this section on critiques and limitation, shifting focus towards a strategy of triangulation highlights an overarching strength of the outlined methodological framework. As stated, each chapter draws from a different but related evidence base. Where Chapter Four leans heavily on practitioner reflections, Chapter Five focuses on dramaturgical analysis and interactions with taxonomies. Chapter Six shifts focus on experiential observations taken from audience and artists. As each method of data gathering is limited in its scale or bias, it's how each of these interact that a process of oversight and accountability is offered. This process enables each chapter to work from its strength rather than limitation and helps to inform a series of synthesized discussion points in Chapter Seven.

3.7 Conclusion

Positivists and post positivists are social engineers, interpretivists are storytellers, and critical theorists are catalysts of social change (Pickard, 2007, p. 15). This description from Pickard is a helpful angle from which to summarize this chapter and to pivot toward the findings presented. This chapter has grounded itself within an interpretivist and constructivism paradigm. This includes the interpretation, analysis and practice of storytelling as a mode of exploring enlivening in TwMLM. Practice-led research and Action Research are approaches that provide structure to this storytelling and enable the knowledge generated to benefit others beyond those directly involved. While the phenomenon of enlivening has been identified as existing in a space of interactions or 'betweenness', methods such as playwriting and performance making as inquiry, semi-structured interviews, focus groups, practitioner reflections and reflexive thematic analysis have been introduced as methods to gather tracings of enlivening and to construct meaning. The next three chapters will deploy these methods with shifting focus from the individual practitioner to analysis through existing literature and to the perspectives of others interacting with the Performance Works. Each chapter produces insights that sit alone, while also complementing a wider analysis gathered in three enlivening tactics in Chapter Seven. In doing so and informed by principles of reflexivity and iteration, the method of this research starts and finishes with an act of storytelling. The next step is to introduce the stories of the Performance Works themselves.



Figure 12: Production Still, Message Bank (2023) - Photo Credit, Nick Atkins

4. Performance Works

4.1 Introduction



Figure 13: Production Still, Dancing Bear (2024) - Photo Credit, Sam James - Performer, Challito Browne

Secret missions in public spaces, encounters with entities from the past, blurred fictitious and real-world places, scavenger hunts, hide and seek, invitations to act and to seek out stillness. This is the material of the Performance Works. Together, they make up five performances developed and presented over a twenty-four-month period. Some were planned from the outset; some produced as iterations from breakthroughs or responses to frustrations in earlier work; others were responses to opportunities that formed along the way. They are each idiosyncratic while also sharing some threads. Most critically, they each explore enlivening as practice and as experience. In doing so they bring light to the affordances and constraints of TwMLM and how this leads to shifting spatiotemporal relations. Additionally, they offer a spectrum of shifting social dimensions across private and public spheres and moments of intimacy, alienation and

defamiliarization. Before these layers can be analysed in Chapters Four and Five, an introduction to the Performance Works is needed. This chapter provides this introduction.

While the creative team shifts and overlaps between works, my role is consistent as the leading creative practitioner on each. My experience forms a perspective around which they are gathered here. Given the amount of works, this chapter offers a practical gathering ground and positions them in a timeline of development. Later chapters will move back and forth between performances gathering insights and observations as if they were available in the one moment. However, this chapter takes a retrospective approach. In doing so, it outlines from where this body of work came and how the works unfolded across time.

This chapter begins with a table of Everyday Descriptions for mobile media performance adapted from Rieser's *The Mobile Audience* (Rieser, 2011, p. 100). This table offer a practical reference and a bird's eye view. As shown in the following chapter, this table can be analysed alongside a taxonomy of Descriptive Dimensions to produce insights and reflections. In doing so, we head further into the weeds moving from overarching intentions to a closer scene by scene and beat by beat analysis of key moments. For the moment, Table 2 - Performance Works as Everyday Descriptions, is offered to help the reader navigate the body of work. It also begins to tease out their relation to one another and informs the structure of this chapter. This structure is as follows:

- 4.2 Performance Summary: Everyday Descriptions
- 4.3 Instigating Performance Work: *Message Bank*
- 4.4 Iterations & Responses: *Ghost & Dancing Bear*
- 4.5 Unexpected Applications: *Green Thumb & Lost Stories Found*
- 4.6 Conclusion

The three sections on instigating work, iterations and responses as well as unexpected applications contain details and documentation of the Performance Works themselves. This is broken into synopsis, process, background notes including creative context such as points of iteration or response as well as practitioner reflections. By introducing each of these works the

chapter forms a dialogue on how this exploration of enlivening developed over time. It also provides the foundation from which a more forensic analysis of scenes and spatiotemporal relations occurs in Chapter Five. This chapter contributes to the thesis by documenting the evolution of a dramaturgy through iterative, situated performance-making.

4.2 Everyday Descriptions

The table included below is adapted from Rieser’s *The Mobile Audience* (Rieser, 2011, p. 100). This table complements the taxonomy of Descriptive Dimensions (Rieser, 2011, p. 101) and the renewed taxonomy provided in Chapter Five.

| Performance Works as Everyday Descriptions | |
|--|--|
| Performance Work | Activity - What your body does |
| Message Bank | Navigate an external environment. Sit. Observe others. Seek out beacons. |
| Green Thumb | Hold a handheld device near the beacons to activate an audio player. |
| Ghost | Navigate an internal environment. Sit. Observe others. Seek out beacons. |
| Lost. Stories. Found | Hold a handheld device near the beacons to activate an audio player. |
| Dancing Bear | Navigate an external environment. Hide. Seek out others. Observe dramatic action. |
| Place - Where does it happen? | |
| Message Bank | <i>Message Bank</i> is performed in public spaces with medium to high traffic flow. The performance has had multiple presentations. These have included in the exterior environment of Parramatta Square and an abridged version at the International Conference on Motion and Computing (Utrecht) '24 and SXSW, Sydney '24. |
| Green Thumb | <i>Green Thumb</i> is performed in a mix of exterior spaces including hallways, squares, garden beds and staircases. The performance was designed for and presented throughout a series of locations on a school campus. |

| | |
|--|---|
| Ghost | <i>Ghost</i> is performed in an interior environment. The performance was initially designed for and presented in the Atrium Foyer of the Joan Sutherland Performing Arts Centre, Penrith. |
| Lost. Stories. Found | <i>Lost. Stories. Found</i> is performed within the interior of Parramatta Town Hall. |
| Dancing Bear | <i>Dancing Bear</i> is performed in public spaces with medium to high traffic flow. The performance was initially presented in Parramatta Square. |
| Equipment - The visible equipment | |
| Message Bank | Headphones. Mobile devices. Beacons fastened to anchor points. In V1.0 this performance also included physical reporting booths as well as brief cases containing a letter, hand sanitiser and an inactive BLE Chip concealed in a container labelled as sleeping pills. In V2.0 the bags and reporting booths were no longer used. |
| Green Thumb | Headphones. Mobile devices. Beacons fastened to anchor points. Beacons were encased in 3D models designed to represent strange weeds. |
| Ghost | Headphones. Mobile devices. Beacons fastened to anchor points. Beacons were also attached to white lights. Two photo booths. |
| Lost. Stories. Found | Headphones. Mobile devices. Beacons fastened to anchor points. Beacons were placed next to key historical artefacts such as wood working tools. |
| Dancing Bear | Headphones. Mobile devices. |
| Content - What is it about? | |
| Message Bank | A recruit begins an induction for a surveillance agency but becomes compromised when an outside side force seeks to test their loyalty. The audience places the role of the recruit and is asked to choose between safety through surveillance, or an unknown entity offering to disrupt the status quo and bring about a new radical privacy. <i>Message Bank</i> is about trust, privacy and proximity. |
| Green Thumb | Strange weeds are growing around the school campus. The audience finds themselves holding a device that has been snuck in by an outsider trying to stop the spread. The audience is tasked with the mission of finding each of the weeds and sampling its DNA so the source of the infestation can be uncovered. <i>Green Thumb</i> is about when rules need to be broken. |

| | |
|--|--|
| Ghost | A woman has died. Her consciousness has become stuck in a foyer in the form of a ghost. The user interacts with the ghost through the mobile device. This interaction helps the ghost to understand why they are stuck and enables them to move on. <i>Ghost</i> is about moving from stuckness to stillness before being able about to move on. |
| Lost. Stories. Found | To celebrate the reopening of Parramatta Town Hall following a major renovation, audiences are invited to explore the interior of the revamped hall by listening in on a series of stories inspired by the region’s history. Each story is gathered around the identity of a renowned figure and framed by a narrator known as ‘the flying pieman.’ <i>Lost. Stories. Found</i> is about memory and commemoration. |
| Dancing Bear | The audience is invited to participate in a mission to intercept a document being smuggled through a public square. Through the arrival of an unexpected guest, the mission is derailed and unravels to reveal the mission was a hoax. There are no secret agents here. Just people trying to connect. <i>Dancing Bear</i> is about secrets and belonging. |
| Media mode - E.g. Sound and still images | |
| Message Bank | Binaural sound. Mobile media application. Small scale animation and video. Locative-media (Ble beacons). Audio player. |
| Green Thumb | |
| Ghost | |
| Lost. Stories. Found | |
| Dancing Bear | Teleconference facilitated by a WhatsApp channel. |
| Genre - E.g. history, drama, documentary | |
| Message Bank | Sci-fi. Spy. Espionage. Drama. |
| Green Thumb | Sci-fi. Comedy. |
| Ghost | Supernatural. Drama. |
| Lost. Stories. Found | Documentary. |
| Dancing Bear | Spy. Espionage. Comedy. |
| Affect - How does it make you feel? | |
| Message Bank | Uneasy. On edge. Excited. Intimate. |
| Green Thumb | Excited. Competitive. Frustrated. Accomplished. |

| | |
|--|--|
| Ghost | Quiet. Curious. Sad. Reflective. |
| Lost. Stories. Found | Reflective. Curious. |
| Dancing Bear | Scared. Excited. Connected. |
| Sociability - Is this something you do on your own or with other people? | |
| Message Bank | V1.0 was presented in groups of between 5 and 15 people. V2.0 was presented with individuals one at a time, however at almost all times individuals were participating at the same time as others. |
| Green Thumb | This performance can be performed on your own. However, often audiences are experiencing the performance at the same time as others. |
| Ghost | |
| Lost. Stories. Found | |
| Dancing Bear | <i>Dancing Bear</i> was performed for groups of 5 to 20 people. <i>Dancing Bear</i> requires a minimum of 5 people to be performed. There is no specified upper limit. |
| Skills - Do you need any special abilities to do it? | |
| Message Bank | No. |
| Green Thumb | |
| Ghost | |
| Lost. Stories. Found | |
| Dancing Bear | |

Table 2: Performance Works as Everyday Descriptions

4.2 Instigating Performance Work: *Message Bank*

4.2.1 Research Intention

To explore enlivening through the creation and presentation of a new theatre event that centres mobile and locative media in its design, development and production.

4.2.2 Synopsis

Message Bank told the story of a recruit named Charlie. The audience took on the role of Charlie as they followed instructions issued by a fictional entity named *SAFE*. Their goal; to identify imposters working for a disruptive and anti-institutional collective, *Dancing Bear*. As some names repeat across performances, it is worth including an additional note here for clarity. In this section, *SAFE* and *Dancing Bear* refer to characters within the narrative world of *Message Bank*. Later, *Dancing Bear* refers to a secondary performance in and of itself. The overlap in names here is due to the fact that elements from the narrative world of *Message Bank* were the starting point for secondary performances that followed. The performance operated using a mix of location-based media, interaction with a visual interface, pre-recorded audio and video material, physical set pieces, as well as co-present participants in the shared public space of Parramatta Square. The performance was presented as part of Sydney Festival 2023. Subsequently the work has been adapted and abridged for presentations at the International Conference on Motion and Computing 2024, Utrecht (Atkins, Johnston, Kocaballi, et al., 2024) and SXSW, Sydney '24.



Figure 14: Video Extract, *Message Bank* (2023) – Link: <https://vimeo.com/798187194>

4.2.3 Background

Message Bank was the instigating Performance Work from which other performances in this research either iterate or respond. The performance was motivated by a mix of technical, creative and personal points of interest. On a personal level, I was responding to the experience of an attempted identity theft. This response took the form of both reflective and creative writing about the intensity of the experience I had as I came to discover, in real-time, actions being taken by an unknown person to access a series of my personal accounts. This event felt violent and intimate in a way that stuck with me. It was an event that played out over a few hours between me, my phone, one room and actions taken by an antagonist. Once I got over the shock and the implications for my own security, I began thinking further about the intense feelings of closeness and distance the incident provoked, and how this all played out through a series of phone calls, notifications and phone trees. I had already been experimenting with modes of performance that mixed live action and mobile media, but this experience brought those experiments into focus on an affective level and formed a starting point for an exploration into intimacy, trust and mobile media.

While enlivening remained an overarching point of interest, at a narrative level the performance set out to explore interests in trust and public spaces. Through workshops with the creative team this expanded further into an exploration of surveillance and

proximity. The team was interested in both the desire for personal privacy and the desire to be a voyeur. Poe's *The Man of the Crowd* (1840) surfaced as a key literary reference point for this discussion. The story centres on a protagonist observing passersby until they become fixed on a person that presents a contradiction. The desire to reconcile the contradiction motivates the protagonist to pursue the person through the city until they conclude that the person cannot be made sense of or "read". The slippery relationship between personal and public space as well as feelings of closeness and distance will come into clearer focus in Chapter Six, Experiential Insights. However, in this early work, insights regarding how TwMLM influences the audience's relationship to self, others and environment were not yet explicit in thinking and planning. They were however, sitting underneath narrative ideas being generated.

Poe's protagonist is often associated with the flâneur (Baudelaire, 1964; Comfort & Papalas, 2021) and described as counter force to the momentum of modernity occupying a place within the city but removing itself through the act of observation (Tester, 1994). The flâneur, a 19th-century figure popularized by Charles Baudelaire and later theorized by Walter Benjamin, is a leisurely urban observer who strolls the city with detached curiosity and critical reflection (Benjamin, 1999). The notion has significant overlap with that of the *derive* introduced in Chapter Two. Whereas the flâneur is a role, the *dérive* is an event or situation. Despite their differences, they both resist a linearity of motion and experience. The flâneur and the *dérive* are returned to throughout this research as manifestations of enlivening in TwMLM.

The narrative of *Message Bank* sought to tap into the audience's desire to observe and to eavesdrop. A seductive quality connected to the act of observation was a strong initial impulse which, again, harks back to *The Man of the Crowd* described by Nicol's as "an encounter with an opaque" and "seductive text" (Comfort & Papalas, 2021, p. 215). The team wanted to create an experience where an audience was tempted to play the role of voyeur, confronted with an invasion of their own privacy and then positioned to wrestle with these two desires in a final action. Based on limits of time, budget, and location, it was decided that there would be six locations where audiences would listen in on scenarios developed by the writers. Six was considered a workable middle ground to allow each writer enough scope to create something substantial while also creating enough locations for an audience to navigate the landscape.

The location of Parramatta Square consists of a series of civic buildings, commercial vendors, a train station, and a steady flow of foot traffic. The intention was to invite participants to listen to audio exchanges and through this act, amplify their consciousness of other people moving through the location. They were invited to think more deeply about the relationship between the location and the people they were observing. In the creation of the mobile media audio drama *Maryam* (Rossitto et al., 2016) a similar strategy is implemented. In this instance it is described as a tactic of “loose coupling” (Rossitto et al., 2016, p. 245) between the location and narrative. The task of creating this required the scripting of six scenes from the writers and the creation of an application which enabled the interaction. In addition to this, a larger narrative structure was required to set up and resolve this action.

The characters of *SAFE and Dancing Bear* were conceived to provide this set up. *SAFE* (Security and Freedom through Encryption) was written as a fictional government agency that gathered information for the purpose of contributing to public safety. *Dancing Bear* was inspired by hacktivist groups such as Anonymous and conspiracy communities such as QAnon. *Dancing Bear* was conceived as an extreme libertarian collective of individuals cooperating to digitally disrupt state surveillance efforts. These two entities had competing objectives. The team was interested in positioning the protagonist and the participant at the centre of their conflict. By the end of the first draft, a scenario had been created to distill these objectives into action. The participant would play a role as a probationary recruit for *SAFE*. Over the course of their probation, they would be asked to listen in on the audio exchanges and attempt to detect who in these exchanges was secretly working for *Dancing Bear*. By the third draft this scenario had developed further to include splitting the participants into two groups with each pursuing a similar objective but one framed by *SAFE* and the other *Dancing Bear*. The goal here was to encourage suspicion and cross purposes between audiences.

Within *Message Bank* the entity of *SAFE* operates as a force for standardization and rationalization. It provides briefings and tasks within which the audience is asked to follow suit. Alternatively, the role of *Dancing Bear* is to disrupt. The cross purposes of *SAFE* and *Dancing Bear* creates space for narrative play between the audience and place. The tension between structure and disruption is embedded in the story world of *Message Bank*. This tension created

structure for the performance but also contingent space for discovery to occur. Fan describes contingency as a resistant or counter force to “paradigms of standardization or rationalization” (Fan, 2017, p. 5). This description parallels the role of the flâneur. Like the shifting nature of private and public spaces in mobile media, working with contingency emerges as an ongoing thread and enlivening tactic in this research. At this point, its relevance concerns how it bridges the narrative references with the interaction designed for *Message Bank*.

Before moving to process, a brief critique of the flâneur is worth noting. Responding to the evocation of the flâneur in the context of mobile and locative media works, McGarrigle critiques the figure as passive and removed (McGarrigle, 2013). The role of *Dancing Bear* can be seen as an attempt to replace the passive audience in the spirit of McGarrigle’s call to replace the flâneur “with an alternative model which is of necessity engaged, a disruptive activist who does not merely observe, but actively seeks to create alternative narratives and shape outcomes” (McGarrigle, 2013, p. 1). While *Dancing Bear* plays out a scenario of resistance and disruption, it is still a fictional entity operating within a structure authored by the creative team. Whether this creates the contingency Fan is discussing (Fan, 2017) or simply the appearance of contingency is a point for further exploration.

4.2.4 Process

Message Bank was collaboratively written by Monikka Eliah, Challito Browne and me. I also played a role as director leading the work through its interpretative, rehearsal, recording, production and installation phase. A more detailed overview of this process is outlined in Chapter Three.



Figure 15: Rehearsal Still, *Message Bank* (2023) – Photo Credit, Nick Atkins

4.2.5 Practitioner Reflections

Between the first and third prototypes of *Message Bank* the creative team produced three iterations of the performance responding to a host of notes. A core area of work that bound many of these iterations was how the team worked with time. At the stage of the first prototype, the performance had been written as a text script, a map of locations with sketched out set elements, a directory of media files and an interface. By the third prototype a score which gathered each of these elements to present the performance in its totality in relation to time was produced. This is shown in Figure 16.

Figure 16 presents a timeline of the approximate 45-minute run time of the performance. It then breaks this into three parts which linked to the narrative structure. Below this are key production elements of the performance and a thickened line to indicate when those elements are active in the work. For example, the application interface presents a series of views and is a constant through the work. Atmos and music is also noted as being regularly present. Layers of narration and tasks oscillate back and forth signalling sequences where the audience is receiving

instructions and playing out objectives. These layers speak to moments of greater or lesser contingency. The Narration and Notification layers were moments in which the team reduced contingency by introducing instructions or constraints to the user to shape a dramatic arc through experience. The Tasks layers involved sequences where there was greater contingency for the user to navigate the landscape and to experience the work through their allocated role.

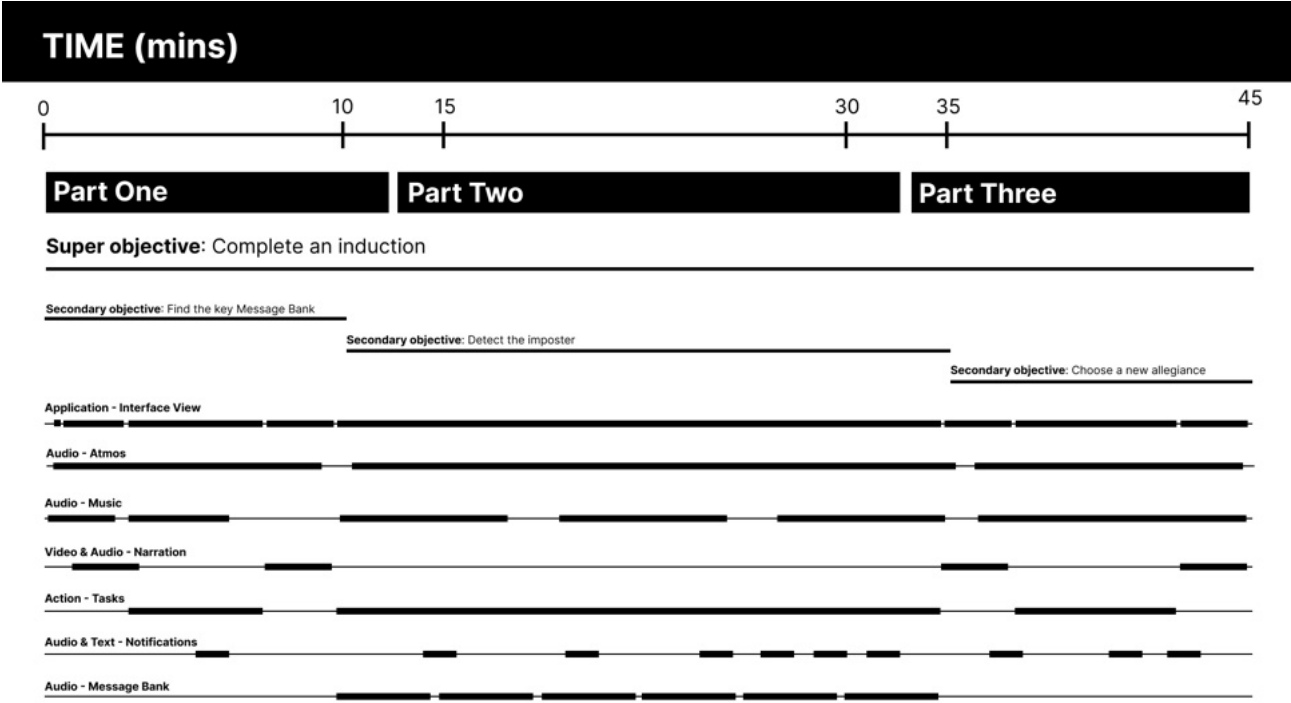


Figure 16: Performance Score, Message Bank (2023)

The creation of Figure 16 and the discussion around it was a key factor in how the team went about redrafting the performance over Prototypes 2 and 3. It brought to the surface a discussion around how the user is onboarded to the experience. While a briefing was initially used to explain the interaction and then offer people the chance to engage with the work, a game was developed to replace the briefing. Instead of gaining immediate access to the audio exchanges, audiences were given the task of finding a specific key beacon before they could progress. Figure 16 is reintroduced towards the end of Chapter Five alongside a forensic scene by scene and beat by beat analysis. Here it shows initial discoveries concerning how shaping

contingent space through time became a concern. In Chapter Five the focus shifts to how spatiotemporal relations shift to afford this process.

As the team considered the performance more consciously over this time structure, redrafting became not concerned with producing more story or material, but strategies to conceal information so that they might be revealed at structured moments. The locative media element of *Message Bank* which formed the entirety of Prototype 1, became one layer or just one part in a multipart and multilayer score. This isn't to suggest that locative media or location itself came to play a smaller role in the creation of this work, but rather that through prototyping, the team discovered it was how location had been conceived through time that was critical to the story they were telling. Failing to consider this more deeply at the outset required the most attention through prototyping. Multidirectional works which might be more open ended or exploratory such as *Wira* (Barclay et al., 2018) and *Trace* (Rueb, 1999). In contrast TwMLM works that seek to develop a narrative and dramatic arc leading towards a structured resolution like *Message Bank*, require strategies to structure the concealment and revelation of information across time as well location. These findings and further details on each prototype was presented at the International Symposium for Electronic Art (ISEA '24) in Brisbane (Atkins, Johnston, & Kocaballi, 2024).



Figure 17: Production Still, *Message Bank* (2023)

4.3 Iterations & Response: *Ghost & Dancing Bear*

4.3.1 Introduction

The following section documents the development and presentation of two performances: *Ghost* and *Dancing Bear*. These works were produced over a similar timeline with *Ghost* being presented in February '24 and *Dancing Bear* in March '24. These presentations were roughly a year following *Message Bank*. The timing was partly informed by the programming cycles of organizations who supported the work as well as the time taken to reflect on feedback from *Message Bank* and feed this into new action. While there are many ways *Message Bank* informed these works, at a top level this chapter approaches these new works as an example of an iteration and response.

Ghost is introduced as an iteration, seeking to consolidate discoveries and enhance features of the performance to arrive at a more enlivened experience. This leads to a reflection on the social ties at play in the performance. *Dancing Bear* on the other hand is introduced as a response. Instead of iterating on discoveries, it steps away from the process set up by *Message Bank* and reprioritizes the co-present performer and real-time synchronizing of participants while still drawing on the affordances of mobile media. This leads to a reflection on real-time interaction and the quality of attention it produced. Summaries, process notes, and practitioner reflections are provided for each. Draft materials and extracts are included to illustrate how the works were developed and to access the works in finer detail. Further insights, drawn from interviews with participants, performers and the creative team, are analyzed in Chapter Six through a reflexive thematic lens.

4.3.2 *Ghost*



Figure 18: Promotional Still, *Ghost* – Photo Credit, Robert Polmear – Performer, Yunyu Ong

4.3.2.a Research Focus

To iterate on lessons learnt from *Message Bank* while using the same foundational components to explore how spatial design and temporal rhythms might be shaped to enhance moments of enlivening.

4.3.2.b Synopsis

Ghost was a performance about being stuck. It was the story of a woman who had died and found herself in limbo. The audience encounters the woman as they navigate the foyer of the Joan Sutherland Performing Arts Centre, Penrith. This foyer is a thoroughfare that connects various performance spaces as well as rooms for creative arts workshops. Through this encounter, audiences are asked to help the ghost make sense of why she is stuck. This involves moving to six locations the ghost identifies as holding significance and is indicated with white lights. As they arrive at each location, the ghost uncovers a moment associated with the spot. The moments are fragments of an experience. As the fragments build upon one another, the ghost comes to realize the time and place they are stuck is a memory of getting stage fright as a teenager. This revelation triggers a new action, breaking the loop in which they've been trapped. In the imagined landscape, the stage door opens, a voice invites her to enter, and the participant is encouraged to stay close to the doors of the real-world Concert Hall. Here, the participant witnesses the ghost playing a concert they were too scared to play when they were alive. The sound of an off-stage audience clapping brings the performance to an end. The duration of *Ghost* was approximately fifteen minutes. The performance was able to be run for one person as a time, however commonly multiple people participated in the performance simultaneously.



Figure 19: Video Extract, *Ghost* (2024) – Link: <https://vimeo.com/918795107>

4.3.2.c Process

The process for creating *Ghost* was like *Message Bank* but on a smaller scale. Over two to three months the concept and script were developed by me and then shared with sound designer and composer Peter Kennard and actor Kate Worsley. Kate and I held three meetings to discuss the draft and align our interpretations of the story and character. Kate recorded the extracts remotely. Peter then began editing this together and mixed it with his performance score. Parallel to this, there was a design process focused on interaction and user experience. The beacons were repurposed from *Message Bank* and additional support was offered from two digital artists, Jacob Hedges and Dan Garrett. Jacob and Dan were tasked with investigating opportunities for enhancing the sensitivity of motion detection. Alongside this, Robert Polmear worked on the interface and user experience design of the application itself. This was built from the foundations of the *Message Bank* application. Draft scripts, mock ups, tests and discussion were shared between the digital development process and the process focused on script and sound. However, for the most part these were discrete processes that were packaged together in the final stages of building the show.

4.3.2.d Iteration Notes

While *Ghost* was a new work, the development featured explicit iterations from *Message Bank*. These iterations were a mix of creative and technical points of focus that sought to enhance the performance as an act enlivening. Key points of iteration that were explored through *Ghost* are included below.

- **Increased Sensitivity of Signal:** As noted in the process notes, there was an intention to experiment with a greater sensitivity of signal and range of interactive applications on *Ghost*. A series of workshops explored alternative techniques for working with proximity and location including AR and motion capture. While these alternative methods afforded a greater sensitivity of signal, each came into conflict with a constraint of the project such as time, resources or the limits of the venue itself. At the end of this process, the Ble beacons were considered the most workable option. This decision was based on the beacons requiring minimal maintenance needed for sustained operation in the venue. They could be distributed across a large site such as the foyer and although their signal was volatile, they could be anchored to specific locations with confidence.
- **Expanded Range of Sensors:** While the team couldn't implement a method for advancing location detection, *Ghost* did draw on the use of additional sensors available through the iPhone to generate a more sophisticated interaction. This included the use of the Gyroscope, Accelerometer and Magnetometer. Data generated from these sensors was bound to audio properties and layered in some sequences to create a more complex interaction.
- **Direct & Deeper Character / Audience relations:** Both *Message Bank* and *Ghost* featured direct address between a character and the audience. However, in *Ghost* the desire was to make this more explicit and consistent. Whereas in *Message Bank*, the audience moved through modes where they were listening in on others, the action, dialogue and events of *Ghost* played out between the user and the ghost itself.

- **Shorter Duration of Story Beats:** On a pacing level, the audio fragments of *Ghost* were significantly shorter than *Message Bank*. These fragments usually ran for twenty to thirty seconds whereas in *Message Bank* these tended to run for two to three minutes. The intention here was to create a more active relationship to the space that encouraged audiences to move frequently between spots rather than dwell.
- **Enhanced Participatory Impact:** Through this work, I wanted to afford greater agency to the audience in shaping the narrative. While both *Message Bank* and *Ghost* began with a question-and-answer sequence, *Ghost* was programmed to store these responses and shape the experience in response to the input made. These inputs were fed back into the dialogue and impacted action sequences. The goal was to make the performance wrap around the user as they interacted. While this was achieved at points, some initial plans had to be reduced. As audience inputs increasingly shaped the narrative action, it called for the creation of exponential story and sound materials. Some limits had to be put on this until a method for managing these options is found or more resources allocated.
- **Shifting Temporal Relationship:** Constraining time became a tactic for creating suspense and sustaining a sense of rhythm over the duration of *Message Bank*. However, I wanted to approach this differently with *Ghost*. I wanted to pull back on a “ticking clock” mechanic to focus more clearly on the writing and how it could be shaped to sustain an arc and sense of pacing. The goal was to make the experience feel less like a game. With this in mind, we pulled out the timers from the interaction and offered more open-ended provocations such as “find a place you feel comfortable” before pressing “continue”.

4.3.2.e Practitioner Reflections on *Ghost*

Ghost was presented over two weeks in the Atrium Foyer of the Joan Sutherland Performing Arts Centre. The audience was a mix of people directly invited to participate, public that booked a session to attend the show and incidental participants who moved through the foyer and became drawn in. On the first night of the season, I played a role as a front of house facilitator, welcoming people to the work and onboarding them. There would have been roughly

thirty to forty people that stepped through the experience on the night. The show tended to grow and fall in waves. One person would be participating; this would grow slightly and then balloon out to fifteen people at a time before quietening down and slowly building again. This rhythm was partly informed by the booking schedule but also influenced by the availability of devices and passers by becoming interested. On this first night there was another event in a connected space and occasional students moving through on their way to classes. As people handed back their devices some expressed an interest in the story and an interest in the form. Some said thankyou and continued their way. One participant said that the experience would be more impactful if the foyer was dark or a site that was more atmospheric. The relationship of the participants to the foyer was the detail that was most notable on this first night of the presentation.

In a former role, I worked as a producer for the organisation that operates this building. I've spent a significant amount of time in this foyer over the period of ten years. It's a functional space. The lights are bright, and the acoustics can be echoey. On the first night of *Ghost's* season, I was interested in how I observed people relating to the space. In this environment I'm used to seeing people seated, often hunched over, waiting for a show or an event. Clusters of people tend to be small and closed. However, the participants on *Ghost* moved through space in a way that was different. Their eye line was out and moved from up high to down low. The paths they took through the space were disjointed and often double backed. These people appeared more open to interaction with each other. This looked like small smiles or helpful indicators pointing to where the next beacon was. Occasionally someone would check in with another person to see if they "were doing it right" or respond to a question from someone else moving through the foyer who asked them what they were doing. I was interested in how the space felt more open and more social. But the type of social that I was observing wasn't like that of a crowded foyer or music concert, but something different. It was quieter and more unexpected.

For the next few nights, I stayed with the show before handing it over to the centre's front of house team to operate. Attendance would ebb and flow from about five people on one night to thirty or forty another. When handing back the device one woman told me that she was glad she had found something she was able to do with her daughter. Families participating together became a noticeable pattern. One attendee who stepped through the work with her sons also

expressed a similar sentiment. This participant spoke to her experience homeschooling her sons and how she saw this as an opportunity to connect with a place they might not otherwise attend. She returned later in the season with a group of home-schooled students with whom she was in a network. *Ghost* continued for another two weeks.

4.3.2.f Conclusion: *Ghost*

Ghost offers evidence of further insight into TwMLM. While we set out to work with a greater level of sophistication regarding the user's location, constraints of the project guided us back to using the BLE beacons from *Message Bank*. Instead, alternative motion sensors were used to offer further texture to the interaction. Motion and location data were mixed to bind story to the site, and to generate affect. In contrast to *Message Bank*, this experience was intentionally less "game like". As a practitioner, I didn't want this experience to be something you won, lost or felt compelled to move through at a certain pace. I was curious about the extent to which these mechanics were a "crutch" to sustain an audience's attention and wanted to challenge myself and the form to operate without them. The performance was about stillness and stuckness and I wanted audiences to consider these themes consciously but also feel them in an embodied sense.

An early script extract is offered on the following pages. This text is a mix of dialogue and stage directions. In this example, stage directions take the form of notes for the composer or guides for how the interaction will play out. This text offers further evidence of the intentions and tactics outlined in this case study. Through reflection, this performance can be understood as seeking to envelope the user. This enveloping manifested in a more direct approach to dialogue between the user and the ghost, a greater degree of impact in shaping the narrative and a greater range of interaction between the participant and the audio landscape. Despite these intentions to envelope the user, observations point toward participant behaviours that show an opening out towards their environment. These behaviours are teased out further through interviews analysed in Chapter Six.

4.3.2.g Script Extract: Ghost

| | |
|--|--|
| <p>Scene One – The Inciting Incident</p> <p><i>*The sound of people murmuring. They go quiet.</i></p> <p><i>*The piano starts. It falters a little. It starts again.</i></p> <p><i>*A stool is pushed over.</i></p> <p><i>*The sound of footsteps. A door slams.</i></p> <p><i>*The people begin to murmur again. The murmuring increases in volume until there's the sound of a flash.</i></p> | <p>Scene Two – Questions</p> <p><i>*Sound of the presence</i></p> <p>Find a spot in the foyer you feel comfortable.</p> <p>- <i>Button [I found my spot]</i></p> <p>Do you believe in Ghosts?</p> <p>- <i>Button [Yes / No / Probably Not / Maybe? Yeah ... I think I do / Not sure]</i></p> <p>If you were a Ghost, would you haunt people?</p> <p>- <i>Button [Constantly / Only a few, but I'd get them good / I don't think that's for me / No]</i></p> <p>Are there things you wish you had done differently?</p> <p>- <i>Button [OMG Yes / No / I don't think about it / Everyone wishes they'd done something differently]</i></p> <p>Do you feel still or stuck?</p> <p>- <i>Button [Still / Stuck]</i></p> <p>Interesting.</p> <p>Welcome to Ghost.</p> |
|--|--|

| | |
|---|--|
| <p>Scene Three – The Brief</p> <p>A strange presence has been detected in the area.</p> <p>This device tunes into traces the presence leaves behind.</p> <p>Move your hand around gently. See what you can hear.</p> <ul style="list-style-type: none"> - Gyroscopic sensor activated - <i>(Drone sound – volume up and down)</i> <p>Now explore the foyer more widely.</p> <ul style="list-style-type: none"> - Accelerometer sensor activated <p><i>*Faint percussion at different pace</i></p> <ul style="list-style-type: none"> - Compass sensor activated <p><i>*Piano sound – 4 x different arrangements blended</i></p> <ul style="list-style-type: none"> - <i>2 to 3 minutes of free exploration</i> <p><i>*Sound of the presence</i></p> | <p>Scene Four – Collect the Beacons</p> <p>Something has shifted.</p> <p>The traces have become stronger.</p> <p>There are six locations where the traces are clearest.</p> <p>These are marked by white lights throughout the foyer.</p> <p>Place this device close to the white lights to collect the traces.</p> <p><i>Collect each one to journey further.</i></p> <ul style="list-style-type: none"> - <i>6 Traces have been collected.</i> - <i>Once all traces have been collected the scene progresses</i> <p><i>*Sound of traces being collected</i></p> <p><i>*A sound breaks open. The presence arrives.</i></p> |
|---|--|

Figure 20: Script Extract, Ghost (2024)

4.3.3 *Dancing Bear*



Figure 21: Production Still, *Dancing Bear* (2024) - Photo Credit, Sam James – Performer, Kate Worsley

4.3.3.a *Research Focus*

To let go of foundational components and process from *Message Bank*, and to explore enlivening by recentering the live performer and tactics such as improvisation in the performance making process while still working within a mobile media network. The intention of this work is to reassess discoveries made in *Message Bank* through contrast.

4.3.3.b *Synopsis*

A secret document is being smuggled through a public square by a target known as *Dancing Bear*. Over the crackled lined of a WhatsApp call, the voice of the show's guide offers the first instruction... "find a place to hide". *Dancing Bear* is a site responsive theatre event and game. After being given a code name and a handheld device, participants are invited to join a 45-

minute mission that navigates a public square. The mission becomes derailed when a participant, code name - Pancake, crosses a line and begins to pursue *Dancing Bear* causing the mission's omniscient guide, code name - Fortress, to show themselves. Conflict between Pancake and Fortress pulls back the artifice of the mission and leaves Pancake questioning their purpose. Within this conflict is a comment on the deep yearning we feel to be close to one another and the excuses we create to feel this closeness. An internal discovery shifts Pancake's worldview in time for a drifting *Dancing Bear* to reappear, only this time the participants can cooperate more effectively. The document is returned, the mission is complete and the temporary society that is built across the performance disbands until the next mission.

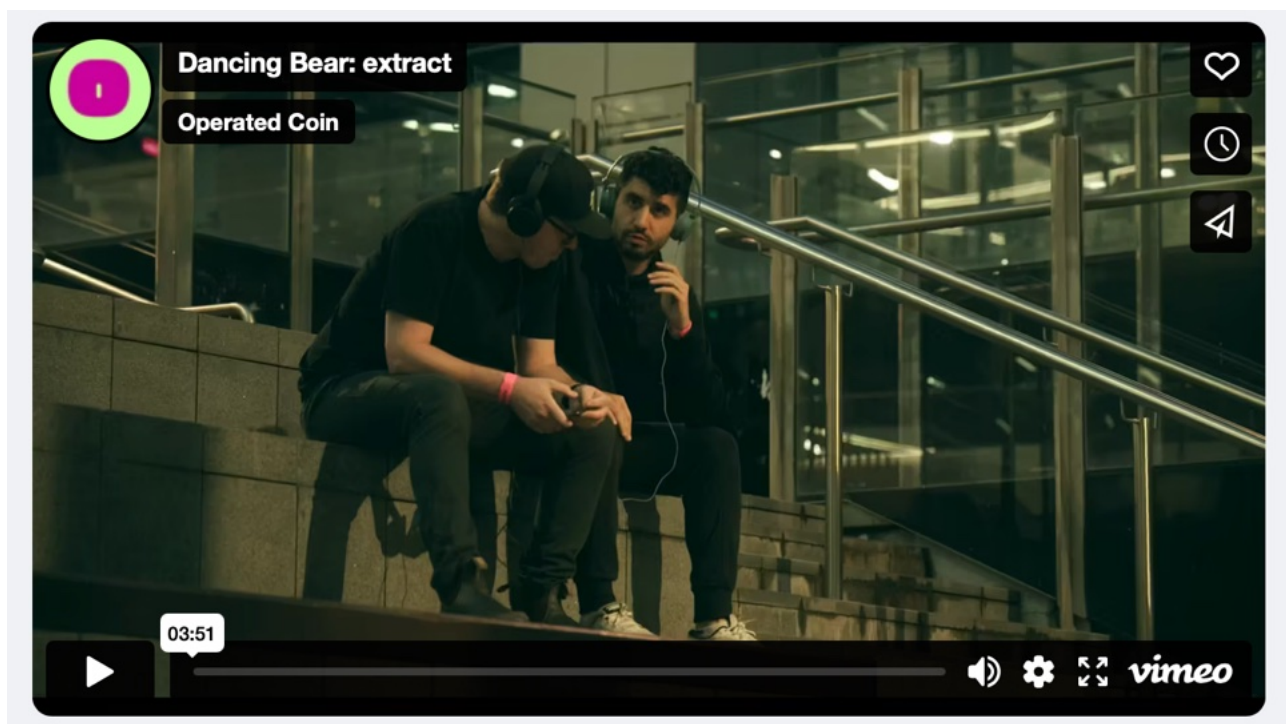


Figure 22: Video Extract, *Dancing Bear* (2024) - Link: <https://vimeo.com/1019320545>

4.3.3.c Process

Dancing Bear was developed over a series of part time workshops, full-time rehearsals and presented to participants of fifteen people at a time over two weeks in Parramatta Square. The making process began with three co-devisors and over time, this team adapted to include a

director, outside eye, creative producer, three performers and two production assistants. The co-devisors and core creative team were the same as *Message Bank* and the work intentionally built from the narrative and thematic work done previously. The material for the show was generated primarily through improvisations on site in Parramatta Square with some text-based material produced at points. The final performance script included a series of scripted sequences in the form of dialogue as well written instructions for improvisations between the performers and audience. The outcome of the creative process was as an improvisational theatre event and game that ran for 45 to 60 minutes. The audience were networked via a teleconference call hosted on WhatsApp.

4.3.3.d Response Notes

Dancing Bear was a response to *Message Bank* more so than an iteration. Instead of seeking to enhance or consolidate discoveries made, it began with points of frustration and perceived missed opportunities to reimagine the team's creative process. The key points that informed this response are noted here.

- **From Trust and Surveillance to Belonging:** While *Message Bank* and *Dancing Bear* shared thematic interest and narrative threads, *Message Bank* explored individual trust and intimacy whereas *Dancing Bear* was more focused on belonging and shared purpose. The team was interested in how communities form around stories. These stories might be stories of shared place, faith or conspiracy for example. *Dancing Bear* set out to create a story that would temporarily bind its audience and ask them to consider whether it mattered if the story was truthful.
- **From Pre-recorded Audio to a Teleconference:** Unlike previous works, *Dancing Bear* featured no pre-recorded media. Audiences were handed a mobile device, headphones and all audio for the performance was accessed via a shared Teleconference call hosted on WhatsApp. This audio was spoken text performed by live performers or the audience themselves.

- **From Script Centred to Improvisation Centred:** On a process level, *Dancing Bear*, was generated through improvisation as opposed to material scripted by an individual writer. In reflections on *Message Bank*, the creative team expressed a desire for greater responsivity in shaping the work as it developed. The process of scripting through to recording and then installing was seen as too rigid and didn't afford opportunities to adapt to new discoveries. Prioritising improvisation was offered as a tactic to address this frustration.
- **From Asynchronized to Synchronized Audience:** Participant journeys through *Message Bank* were observed as individual journeys tentatively shared. Tentative is used here to describe a quality of "knowingness" between audiences that they were experiencing a performance with other people, even if those other people were at different stages. The use of timers or scripted actions were used to temporarily bind the audience. For *Dancing Bear*, the intention was to synchronize the participants in real-time so that they would experience the same events at the same time even if they were remote or dislocated from the wider group.
- **From Individual to Shared Stakes:** This final point shares similar characteristics to the former but shifts the focus towards the theatrical action as opposition to the technical framework. While there was a desire the synchronize the participants more actively, there was also the intention to create a stronger sense of shared purpose and shared stakes. The impact of this meant that the making process was focused on collaborative or cooperative actions rather than actions taken by the individual. Or if it did focus on the individual, this action was shared by a group of real-time witnesses.

4.3.3.e Practitioner Reflections on *Dancing Bear*

Dancing Bear took intentionally different directions to *Message Bank* while retaining core interests such as location, place, people, belonging and trust. These different directions were characterised by a craving for real-time and spontaneous action. A deep level of reflection through action was enabled by having the same creative team across both works. Whereas *Message Bank* was the first time the team had worked together all intentions, decisions and

actions on *Dancing Bear* were considered through prior experience. This experience and new direction led to a series of discoveries and new frustrations in process.

On a process level, tensions emerged between working with the variables of action, environment, and technical assemblage while also structuring the performance through time. The first challenge was identifying a suitable channel to network the performance in real time. Early in the process, teleconferencing platforms such as Zoom were tested. This approach was seen as offering a level of control from the production side to curate a mix of media that was distributed to the synchronized participants. In this scenario, Zoom was analogous to the Bio Box cueing the sound and light properties required to render the scene. However, early tests revealed a level of poor audio quality and a high level of latency which was considered not viable. These conditions shifted throughout different times, days and rehearsals, but didn't appear consistent enough to rely on.

As these networks were tested, rehearsals were focused on generating material through improvisation. While these improvisations yielded rich material, the process of structuring it proved challenging. Attempts to "lock down" sequences found resistance from the team and when scenes were rerun, they were often noted as lacking a quality of liveness for which they were initially identified. While this process had increasingly opened itself out towards the variations and contingency of the square, it presented new challenges of being brought together as a cohesive whole. In response to this, performers expressed the challenge of working with a level of variation that undercut their ability to render a moment. From the changing environment to the improvisation, to the hybrid participants and to the mobile apparatus, our desire to resist the pre-recorded and "rigid" structures of *Message Bank* led to the new challenge of working without a set foundation from which to ground action. Whereas *Message Bank* became too "stuck on tracks", the creative team found the need to create clearer tracks for *Dancing Bear*. These tracks took various forms.

To structure the action of the performance a hybrid script was produced. This included scripted action alongside scores of improvisations or games. The intention was to provide landing points for the actors to work with dialogue while also improvisational sequences that could be contingent to the environment. Notably, the scripted sequences led to further challenges for the performers, but this is covered through an analysis of their focus group in Chapter Six.

On a technical level, the team used WhatsApp as a teleconferencing platform. This proved to be the most reliable network that could be set up in the context but came with the additional requirement of equipping all devices with a SIM. These choices enabled the work to be brought together and presented for fifteen participants at a time. However, it remained a work in progress over the course of the two-week season. As the season progressed there was ongoing discussion and disagreement about the correct ratio of scripted action to improvisational sequences. Edits were made in an ongoing way to reduce some sections of monologue, increase the scope for game play and to simplify some the overarching mechanics of the performance.

Over the two-week season *Dancing Bear* changed more than any other of the Performance Works that were produced. This change was informed by the creative team seeking edits and improvements, the changing conditions of the public square and the changing temperament of the participants themselves. During one sequence on Opening Night a participant chose to intervene in scripted action and performatively steal a key prop in the spirit of role play. This was a level of involvement that hadn't been predicted or planned for, and it significantly shifted the action of the performance. While unsettling for the performers at first, over the course of the season, these instances became key moments where the creative team felt the performance was most successful.

4.3.3.f Conclusion: *Dancing Bear*

This section has offered an introduction to the Performance Work, *Dancing Bear*, framed as a response to *Message Bank*. The work was like *Message Bank*. It connected participants in the same public square through their collective participation in a mission that was secret from those around them. It also drew on mobile media to network its audience but chose not to use tactics of locative media used in earlier works. While location was still a dominant feature, and the task of locating performers and one another was central, this was done through call and response games facilitated on a WhatsApp teleconference. In one sense, the performance simplified the technical set up for the purpose of achieving a more complex real-time interaction with its participants. The making of *Dancing Bear* was characterized by a desire for greater spontaneity and room for contingency. While this was achieved, new tensions emerged regarding how to ensure the newfound room for variation could be shaped into a performance that was

cohesive, manageable and safe for the performers. While the desire for a freer form or open-ended approach to working with performance and mobile media emerged from *Message Bank*, *Dancing Bear* led the creative team to seeking more structure to ground the multiple layers of variability.



Figure 23: Production Still, Climax Scene, Dancing Bear (2024) – Photo Credit, Sam James

4.4 Unexpected Applications: *Green Thumb & Lost. Stories. Found*

4.4.1 Introduction

Unlike previous works, the following two case studies were initially unplanned. These case studies were sparked by the instigating work and offer insights that informed ongoing iteration. During *Message Bank's* season, a local secondary school teacher attending the show as participant saw an opportunity for the performance and creative process to be integrated with programs being run at their school. Similarly, a local contemporary dance producer tasked with the brief of curating a program of cultural events, approached me with the desire to draw from the *Message Bank* model to create a new work. Whereas the previous works came from the inside out, that is from inside this research out towards an initial audience, these works were instigated by the outside and went in. They begin with an external brief and therefore provide an additional perspective. These two case studies adopt a collaborative or service delivery approach. These projects were made in the spirit of co-creation (Sanders & Stappers, 2008, p. 6); however, the term collaborative is used instead to acknowledge that true co-creation would require more time afforded to support the participants to reshape the works from the ground up. Bishop's critique of contemporary participatory artworks and processes supports further caution on a claim to co-creation (Bishop, 2012). Rather, participants in these processes were able to reshape and inform the work, but the foundational components are maintained.

Given this structure, a modified approach has been used in this section. Instead of a providing key points of iteration or response, a background section offers both process descriptions and a synopsis of the work. Practitioner reflections are included and, in the case of *Lost. Stories. Found*, informed by a semi-structured interview with the project's producer who observed the work in action. In the case of *Green Thumb*, the Practitioner Reflections are written from my perspective on site. There is a shift in these reflections from an overarching and summative approach to a contemporaneous description of action. As this research progressed through time so did its developing methodology. This approach to reflection is informed by this shift. In the case of *Lost. Stories. Found*, I was unable to spend significant times on site observing the work. Given this, the project producer provides a perspective through which the practitioner reflection is offered. One research focus is distilled and applied to both case studies.

4.4.2 Research Focus

To explore how the tools and tactics for shaping spatiotemporal relations developed on *Message Bank*, might be applied, iterated or reshaped through a process where authorship is shared with a separate community or partner.

4.4.3 Green Thumb

4.4.3.a Background

Green Thumb was a performance, scavenger hunt and quest to stop the spread of a viral weed growing across a school campus. The performance was co-created with a group of secondary students in years eight and eleven. The students were invited to join the project based on their interest in either STEM or Creative Arts subjects. They worked in weekly workshops that ran for one to two hours over a seven-week period. In this time, they developed the concept and executed the outcome as part of a festival the school hosted for students and their families. The students were shown background to *Message Bank* and stepped through the basic mechanics of the show. They then participated in a process to reimagine the concept. The students expressed an interest in creating a game structure and a suspenseful experience that felt “real” but was also “fantasy”. As the workshops explored themes and issues of interest to the students, a recent lecture the students had received on bad behavior came to gather a series of disparate ideas. The students had been told that schools are like gardens and students that behave poorly are like weeds. The students had mixed ideas about this lecture and questioned how you could determine a weed. This discussion informed the shaping of the performance’s narrative, which asked audiences to track down mysterious weeds growing around the campus. The premise being that as they found each weed, further background offered through text and audio would complicate the notion of what makes a weed a weed and not something else.

The students developed the various materials for the show over the remaining weeks. Students interested in Creative Arts took on responsibility for drafting fictional genesis information for each of the weeds. This included fictional names and characteristics such as “this weed smells terrible but forces you to tell the truth”. These students also performed and recorded extracts that were built into the application. STEM students took on the design and construction

of the weeds using 3D printing. While the design and programming of the application itself was beyond the time afforded in workshops, weekly updates were brought in and shared with the students for feedback. Key iterations from *Message Bank* include:

- **Collecting Interface:** While earlier works had featured a collecting function, where the user had to move to each beacon, this mechanic was made clearer through a visible collection interface.
- **Scanning Sequences:** The application was reframed as a DNA Scanner and additional layers were designed to simulate the process of scanning the genetic material of the weeds.
- **Increased Emphasis on Time:** Following from learnings in *Message Bank* and informed by the intentions of the students for a clearer game-like experience, time became a more dominant feature. The visual indicator of the timer was increased, and the time sequences were shortened making it harder for the audience to navigate the experience before the weeds spread.

The final run time of the experience was about 5 to 10 minutes, and the performance ran continuously for an hour and a half. Responding to the finished experience, one student who participated stated, “It’s actually good”.



Figure 24: Work in Progress Still, 3D Printed Weeds Designed by Students, *Green Thumb* (2023) – Photo Credit, Nick Atkins

4.4.3.b Practitioner Reflections: *Green Thumb*

It's fifteen minutes before the performance *Green Thumb* is scheduled to begin. The beacons are placed around the school campus embedded in weeds the students have designed and manufactured using 3D printing. Ten to fifteen mobile phones are arranged on a small table. I work with students to untangle headphone chords and to make sure there's hand sanitizer for cleaning the devices between use. A student that I don't know loiters around the table. He looks at the materials then leaves. A few minutes later he returns, looks again and stands close by. I catch his eye. The student tells me the phones are going to get stolen. I tell him thanks for the heads up. I tell him we'll keep an eye on them and that they're part of a performance we're running called *Green Thumb*. He says ok. He leaves and comes back a few minutes later. He hangs around the desk for a few more minutes before asking, "Can I have a go?" I tell him of course.

I tell him the performance hasn't started yet, but that he's welcome to do a preview run for us. A student hands him a phone, headphones and offers instructions as to how to interact with the experience. He steps in. After a few minutes of finding the first couple of beacons he

screams across the playground to a friend that he needs to find these weeds. The timer has about ten minutes on it counting down and he heads in the wrong direction for a while. The time goes on and as it gets closer to the deadline another student points him in the direction of his final beacon. The student now runs across the playground screaming “I’m going to puke”. He makes the last beacon in time, finishes the performance and then goes on to recruit several other students to join the performance. While they do, he stands at a distance from them and screams out occasionally where they should look and if they are doing it “wrong”.

The performance continues for about another hour and a half. It’s situated in a quieter corner of the school campus away from a more populated area hosting bands and larger events programmed for the digital art festival the school has organized. The beacons are scattered around gardens, hallways, stairwells, bubblers and pillars. I stand holding a clipboard and lanyard in an area that’s roughly central to where most of the beacons are. I try to keep myself open to signal that I’m available for support. Occasionally some people need an extra instruction to help find the first weed or how to hold the device within proximity to activate the next function. Once the audience has found the first weed, they are almost always able to step through the remainder of the performance without guidance.

I watch individuals and groups move through. Some drop off mid-way, most continue to the end. I watch several people watching other people participate in the performance. They hover around the area a lot like the student hovering around the table with the mobile phones. They watch people with headphones on, and a hand outstretched with a device lean in and around the environment. Like the student at the start, often after a few minutes they will make eye contact with me briefly. Sometimes I say “Hello” and they follow up to ask me what’s going on. Sometimes they approach me more directly. Often this will follow up with them heading to the table to pick up a device and begin the experience or heading away only to return a few minutes later to participate.

In describing these interactions, I’m specifically interested in a few patterns I observed. The first has to do with how participation in the performance became layered and gently expanded and contracted over time. As mentioned, this performance was presented in the context of a larger social event to do with digital art and creativity. Some programming was designed for crowds to gather en masse and was structured around a main stage. *Green Thumb* was a more

discrete performance. Signage was limited and we didn't work hard to directly appeal for people to participate. Participation in the performance tended to unfold through a process where a person observed something which seemed out of place. This could be a collection of phones on a table or people interacting with an environment that was irregular. This led to a question that intended to reconcile the irregularity. "What's going on?" Once this question was answered, the person considered whether they wanted to participate. Once finishing the experience, participants would often continue to observe others stepping through the work for some time. Often those that chose not to participate, would also continue to observe others.

4.4.4 Lost. Stories. Found


4.4.4.a Background

Lost. Stories. Found was an audio installation produced in partnership with FORM Dance Projects to celebrate the reopening of the Parramatta Town Hall. Of all the Performance Works, this is the only instance that is described as an installation rather than a performance. While the form is similar if not the same to other case studies, the process that informed earlier works was consistently questioning how the experience functioned as a performance through time. The collaboration through which this was produced was less so. Rather, it was more heavily informed by a "museum" approach to a historical audio guide. More analysis on this mode is offered in finer detail across Chapter Five.

The brief for this project included a series of key artistic, social and economic intentions. Artistically, FORM Dance expressed the desire to bring "new life" to stories from the past through audio experiences situated in place. Through interactions with *Message Bank*, they perceived a process to deliver on this vision. In addition, community participation and recognition were described as important given the reopening of Town Hall following years of redevelopment. On an economic level, there was an objective to program the physical space of Town Hall with free or low-cost activity for four-hour windows of time after 5pm. While performances were occurring on key nights such as Friday and Saturdays, there were days where the site was available but without scheduled activity. While these objectives sit outside the purpose of the research, they're documented here as evidence of how the motivations that instigated this research began to interact with those coming from external forces. For this

section, process notes, background and reflections will be primarily focused on the artistic intentions and how they interacted with the community participants.

The installation was hosted in a chamber of Town Hall that had been recently renovated. In the same space a performance was being hosted with thematic links on alternate nights. The architecture was a mix of colonial structures, an audience gallery above and a proscenium stage to one side as well as more contemporary layers such as a recently installed lighting rig, a new floor and large doors with swipe card entry. The materials installed inside the space guide the participants away from the type of relationship the proscenium suggests. Wooden pallets were scattered around and built into structures that were part sculpture and part temporary seating bank. Through the centre a curved space was demarcated as a representation of Parramatta River. The space was darkened with lights illuminating key spots where artifacts had been placed. These artefacts included a jar of pickles, woodworking tools, local flora, a boot and an apron. Unseen but close by each to each of these artefacts were small grey boxes hiding BLE beacons and a power chord feeding into the crates. These are the same beacons used for *Message Bank*. Participants entered the installation after being handed a device by front of house. As they selected “begin” on their device they listen to a Welcome to Country offered by a Dharug Elder. Following this they move back and forth between artefacts to hear stories from the recent past of Parramatta narrated by an actor playing William Francis King, a local historical figure from the area known as the Flying Pieman.



[Production note: This figure is not included in this digital copy due to copyright restrictions.]

Figure 25: Promotional Still, Lost. Stories. Found (2024)

4.4.4.b Practitioner Reflections

The reflection notes here take a different form to the earlier works. Due to the constraints of logistics and programming cycles, *Ghost* and *Lost. Stories. Found* were presented over the same time. While the development of the works could be staggered in the lead up, the simultaneous presentation seasons meant that I was unable to spend sustained periods of time with the work while it was live. To gain a deeper sense of the work in action, a follow up semi-structured interview was held with a producer from FORM Dance who was present with the show across its season. This interview ran for an hour and was recorded. The recording was transcribed, key quotes coded and then gathered around four main themes. Those themes are included below. This is small scale version of the longer form interview and analysis process that is demonstrated across Chapter Six, Experiential Insights.

4.4.4.c Spontaneous Participants

*I'd say majority of people were walking by just going oh, yeah, what's going on here?
Particularly parents with kids or grandparents with kids.*

Lost. Stories. Found attracted an audience of between 150 – 200 people. These were people that were moving through the area and chose to participate in the work following signage or an invitation from a volunteer. This is a notable shift from earlier Performance Works which were made for a more intentional participant. These people were often participating as groups and were commonly intergenerational. The producer goes on to speak about the participation of young people in the work specifically.

I could see like young kids sitting there and just listening through the whole story. And yeah, coming in, it was actually, young kids that would come back a few times as well. So yeah, I thought that was really good

4.4.4.d Onboarding and Interaction

A mix of responses was offered regarding the quality of interaction with the work. Some of this concerned specific technical points. For example, one beacon was described as having a very weak signal and one a very strong signal. These points were described as minor and workable if foregrounded by a process of onboarding.

There was a lot of instruction that needed to happen straight off the bat. But once I kind of got that, I realize it seemed to flow. So, you know, little touch and go and clunky in the beginning. People not knowing where to wave and to hold it. But yeah, I found it better that I gave them too much information in the beginning

Here the Producer is referring to the act of moving the mobile device to generate a response from the work. The producer goes on to tie these observations back to the transitory nature of the participants. They describe these people as people that “would have walked in and had absolutely no clue what's going on”.

4.4.4.e Making Experience

The most dominant theme raised during the interview was the Producer’s reflections on what it meant to make the work an experience. This point was first noted in response to a critique raised by a participant.

I did get one complaint that there was no written signage of, yeah, how to do it, like, printed off. So that was something to note that they wanted something written. And then I guess another thing that I thought of, sort of down the track was accessibility, we didn't actually have any text, text advice, and I thought, oh, that would be something. I guess I

would have been against posting exactly what's written because then it started to feel like a museum and I didn't want it to be like a museum. I want it to be an experience.

There are two key points in this quote. The first relates to a critique regarding accessibility. The second relates to the Producer's impulse that led to the form being less accessible. The producer reflects on their intention to pull back on the use of text signage because they wanted it to "be an experience". To be clear, there's no reason this couldn't be achieved while maintaining access through written text, but it's helpful to note how this distills the intention to make an experience that was more ephemeral or performative. An additional question that is raised might be how to address this accessibility critique while maintaining the intention. The Producer goes on further to reflect on ways the work set out to make experience.

I enjoyed the play automatically, again, because I thought that, that tied it into being more of an experience coming at you, or around you, rather than you controlling it.

Here they are describing the choice to have stories triggered automatically when in proximity. The alternate option to this was the to have a button appear when in proximity that then required the audience to click play. This approach was used in *Green Thumb* and *Message Bank*. Going further into this point they also note:

It's pre-recorded. Yeah, but because they're able to choose their own journey. Yeah. So, I'd say that gave it a breath.

Here the use of the term breath is used metaphorically to describe the works capacity to shift with actions of the audience. While pre-recorded material is framed here as if it's assumed that it as a "deadening" impact by nature, but the affordances of choice offer 'breath'.

4.4.4.f Magical Spaces

The final theme concerns space. The Producer offered reflections on the architecture of the space as well as the temporarily installed set materials. Responding to the set, the Producer was interested in how it worked with the interaction to invite participation. Reflecting on this relationship they state:

I have to continue to move to do this... stepping into the set, whatever that magical space is. So that tied, tied in a sense to what we're talking about before about being a performance, more so than an art gallery space ... it's a lot more than a neutral space

Here the Producer begins by reflecting on the need to keep moving to generate the interaction. They describe this motion as venturing into a space which is not neutral but “magical”. They use the word neutral in a similar sense to a gallery space. In contrast to these spaces, the space of the set is one that you venture in to as opposed to observe from a distance. This perspective on space is further illuminated when the Producer considered how they would like to develop the work further if constraints weren't an issue.

I think straight off the bat, it would have been great if we could have used the other spaces in the town hall, like those front rooms... There's also a safe, that's massive, huge safe, that you can go in there that I really wanted to activate and have a dig in, find more stories... And then people having the agency to not just be in that big open space, but to go down hallways and corridors and going out to this room.

Here the Producer points toward expanding the work into more rooms. The rooms that are mentioned are idiosyncratic but also transitory and are contrasted with the open space of the installation. Like the point on set, the Producer's interest appears to be in spaces or relationships to spaces that call for the audience to explore, uncover or interact. In this instance, these spaces are termed as “magical” in contrast to spaces that are described as neutral or gallery like.

4.5 Conclusion

This chapter begins by tracing how a personal experience of attempted identify theft was drawn into an exploration of enlivening and TwMLM to produce *Message Bank*. It ends with the story of two performance works, one in a town hall and one in a school campus, that embodied iterative and responsive learnings developed over twenty-four months and were produced in response to invitations from people interacting with *Message Bank*.

Early assumptions concerning the use of locative media and pre-recorded materials led to challenges shaping and sustaining a narrative experience over time. Key takeaways from *Message Bank* stressed the importance of time in locative media. The production *Ghost* and *Green Thumb* offers a case study for how these learnings were integrated into future work. *Ghost* offers a more sophisticated approach to working with time and begins to draw on the use of additional sensors to create a more dynamic mix of real-time data shaping the experience of the audience. *Green Thumb* offers less in this space, but practitioner reflections point toward developing interesting and understanding of the social dimensions of TwMLM. Layers of audience between participation and observation as well as audiences shifting relationship to environment begin to explore enlivening beyond the structuring of narrative, time and space.

This chapter has taken an exploratory approach. It anchors around an exploration of enlivening and follows break throughs and frustrations that emerge as each Performance Work seeks to tease out further understandings. While it refrains from offering fixed conclusions, it lays the foundation for analytical work to follow. The next chapter will offer this through an analysis of spatiotemporal relations in response to the taxonomy of Descriptive Dimensions. Where this chapter set out to explore, the following chapter seeks to clarify. While these two go hand in hand, this chapter contributes to this thesis by documenting five original Performance Works that explore enlivening in TwMLM.



Figure 26: Production Still, Dancing Bear (2024), Photo Credit, Sam James

5. Shifting Spatiotemporal Relations

5.1 Introduction

This section investigates the Performance Works in finer detail using a taxonomy of descriptive dimensions (Rieser, 2011, pp. 101 - 105) as input and offers a renewed taxonomy as output. It provides a specific focus on space / place, time and data depth dimensions while drawing in remaining dimensions where relevant. The intention here is to balance analysis for the Performance Works through existing frameworks, while retaining an openness to what they have to offer in ways that are new. It begins with a review of arbitrary and meaningful mapping as well as linear and non-linear approaches to space which leads to the introduction of three spatial modes: open exploration, seeking and turning or returning to. It then turns to a focus on fixed and open time parameters which becomes further complicated through a consideration as to how the Performance Works illustrate a changing relationship at an act, scene and beat by beat level. This leads to the introduction of a series of effects as seen played out through the shifting time parameters within Performance Works and a proposal for the introduction of real-time, perceived real-time and non-real time as an additional time axis. The intention here is to distil key moments that are illustrative and feed these back into the renewed taxonomy. While the new taxonomy is an output, the active and ongoing reimagining of the Performance Works is also of value and will inform the research underpinning remaining chapters in this thesis.

Throughout this chapter there are observations tracking the idiosyncrasies of local environments. These include traffic flow around music lessons, public protests and the points where a public square becomes a private commercial space. The rationale to include these is informed by the work of Benford et al. who, in describing performance led research in the wild, points to the value of testing work outside of the laboratory setting where technology can be appropriated into the “everydayness” of experience (Benford et al., 2013, p. 14:16). These details are included as valuable notes from “the wild”. But there is a tension here between offering up a level of detail which captures these idiosyncrasies without becoming lost in minutia in a way that’s unhelpful for other researchers or practitioners not working in the same space, time and way. Scene studies are offered as a way of managing this tension. These sections offer slightly longer form detours into the idiosyncratic context of moments from Performance Works

which are framed by more top level or general descriptions of projects anchored by the taxonomy of descriptive dimensions.

5.1.1 On using Taxonomies

It's worth considering the purpose and motivation of drawing on these taxonomies so the data gathered by laying them across the Performance Works in this thesis feeds meaningfully into a larger inquiry. Rieser notes in response to the taxonomy that he offers up that categories "elide" and "blur" between many works (Rieser, 2011, p. 97). I would extend this by arguing that these categories can even blur within different scenes or sequences within works themselves. My intention in drawing on these taxonomies is not to work towards an authoritative overarching taxonomy which might account for all parameters of TwMLM, but rather to identify trends and tease out deviations that can further shed light on experience within these works.

With respect to the blurring of boundaries on a scene-by-scene basis within works themselves, a return to the work of Stanislavski (Carnicke, 2010; Stanislavsky, 2003) and his approaching to working with play texts offers up a practical method for wrangling with this challenge. Stanislavski's approach to active analysis is a foundational early twentieth century approach to working with play texts. It involves breaking down action through the lens of character motivation until the smallest unit referred to as a beat might be found (Stanislavsky, 2003, p. 105). Working backwards, the largest unit of action is referred to as a character's super-objective. The point of this research is not to account for theories of acting, performance or character in TwMLM. However, Stanislavski's notion of a super objective is a helpful concept when identifying these top-level taxonomies. Descriptions and annotations included below speak to an attempt to capture overarching objectives of the performance and intentions of the practitioner. Where there are areas of greater complexity or sophistication, further detail is dropped into to home in on scene by scene and beat by beat shifts. While there's not the scope to cover every beat, the goal is to offer a mix of macro and micro analysis that best illuminates discoveries made.

I also want to note a tendency of these taxonomies to prioritize form over content. This harks back to the critique of media essentialism evoked by the work of Balme earlier (Balme,

2008). The content, material or substance of a performance is harder to gather succinctly in a spreadsheet. The material embedded in the Performance Works is a messy mix of lived experience, personal imagining and ideas arrived at through collaborative dialogue. Being stuck and unable to move on. Craving intimacy while fearing exposure. Belonging with strangers. These are top level descriptions of the material that sits within the performances categorized below. The former chapter is offered to ground the narratives that played out. This chapter leaps from this narrative context and seeks to get deeper in a scene by scene and moment by moment level. While acknowledging limitations and structuring this material to maintain a consciousness of form and content, the data below is gathered with the goal of enriching these taxonomies so they might continue to expand thought and practice in the area.

5.1.2 Descriptive Dimensions

In the table below a visual scale has been included to indicate how each Performance Work relates to the Descriptive Dimension (Rieser, 2011, p. 101). These indicators are interpretive assessments made by me as a research practitioner. Their value is in how they tease out comparisons more so than a claim to objectivity. These comparisons inform the analysis that follows in this chapter. The categories and terms used in the table presented here are taken directly from the Rieser's approach to the Descriptive Dimensions (Rieser, 2011, p. 101). A further interpretation of those terms has been included here to help the reader. The intention has been to retain the meaning of Rieser's work and in some cases use direct references. Work has been done to adapt Rieser's Descriptive Dimensions into a table format to help gather the works. This means that some sections which would have been framed as headings and subheadings now appear with duplicate categories such as Space / Place and then with more specific subcategories such as linear and non-linear. Occurrences such as this are the outcome of adapting the data to a new format and become streamlined as the chapter progresses. Where this table diverges from Rieser's work is its use of the visual scale. Introducing this scale demonstrates a sensitivity to how these dimensions operate a continuum. This approach is informed by the work of Benford and Giannachi with regards to their work on Mixed Reality Continuums (Benford & Giannachi, 2011, p. 3). This approach foreshadows the structure of this chapter. It begins with two established frameworks for working with TwMLM and by the end synthesizes and amends these into a new structure that aligns more closely with the Performance Works themselves.

Descriptive Dimensions for Mobile Media Design

| | |
|----------------------|--|
| | Surface - - - - - Depth information - - - - - Evocation |
| Immersion | The quality of being held in an imaginary world. A less immersive experience might function in a way that focuses closely on the user's physical environment and be more "informative" than "evocative". A more immersive experience would use data that complemented or in some way went beyond the physical environment. |
| Message Bank | Surface - - - - - Depth information - - - x - Evocation |
| Green Thumb | |
| Ghost | |
| Lost. Stories. Found | |
| Dancing Bear | |
| User Control | None - - - - - Total |
| | How much control do you want the user to have? |
| Message Bank | None - - - x - Total |
| Green Thumb | |
| Ghost | |
| Lost. Stories. Found | |
| Dancing Bear | |
| User Control | Clear Rules - - - - - Unclear Rules |
| | How does the application answer the question, "What am I supposed to do?" Are the rules of engagement made transparent for the user at the start, or must they be experientially acquired? |
| Message Bank | Clear Rules - x - - - Unclear Rules |
| Green Thumb | |
| Ghost | |
| Lost. Stories. Found | |
| Dancing Bear | |
| Space / Place | Arbitrary mapping - - - - - Meaningful mapping |
| | Arbitrary mapping assumes no content related to a specific location. Meaningful mapping describes applications where content is tied to specific locations. |
| Message Bank | Arbitrary mapping - x - - - Meaningful mapping |
| Green Thumb | Arbitrary mapping - x - - - Meaningful mapping |
| Ghost | Arbitrary mapping - - - x - Meaningful mapping |

| | |
|-----------------------|--|
| Lost. Stories. Found | Arbitrary mapping - - - - x Meaningful mapping |
| Dancing Bear | Arbitrary mapping - x - - - Meaningful mapping |
| Space / Place | Linearity - - - - - Non-linearity |
| | At one end of the axis, a user must follow a sequence along a prescribed route, and at the other is expected to wander in a space to find the data in the application. |
| Message Bank | Linearity - - - - x - Non-linearity |
| Green Thumb | |
| Ghost | |
| Lost. Stories. Found | |
| Dancing Bear | |
| Time | Fixed running time - - - - - Open running time |
| | Can the user spend as much time as they like in the application, or does it have a fixed running time? |
| Message Bank | Fixed running time x - - - - Open running time |
| Green Thumb | |
| Ghost | Fixed running time - - - x - Open running time |
| Lost. Stories. Found | Fixed running time - - - - x Open running time |
| Dancing Bear | Fixed running time x - - - - Open running time |
| Time | Time specific - - - - - Time unspecific |
| | Is there a specific time for which the application has been designed? (For example, a day or season.) |
| Message Bank | Time specific - - - x - Time unspecific |
| Green Thumb | |
| Ghost | |
| Lost. Stories. Found | |
| Dancing Bear | |
| Time | Permanent - - - - - One off |
| | Is the experience intended to be a permanent part of the environment or only exist for a limited period? |
| Message Bank | Permanent - - - - x One off |
| Green Thumb | |
| Ghost | |
| Lost. Stories. Found. | |

| | |
|-----------------------|--|
| Dancing Bear | |
| Data Depth | One level of data - - - - - Several levels of data |
| | Some mediascapes run as a single layer, whilst others may have further layers of data available to the user. |
| Message Bank | One level of data - - x - - Several levels of data |
| Green Thumb | One level of data - x - - - Several levels of data |
| Ghost | One level of data - - - x - Several levels of data |
| Lost. Stories. Found. | One level of data x - - - - Several levels of data |
| Dancing Bear | One level of data - x - - - Several levels of data |
| Social | Private - - - - - Public |
| | Is this experience to be shared with friends and family or is it more open to a wider audience such as residents or tourists? |
| Message Bank | Private - - - x - Public |
| Green Thumb | |
| Ghost | |
| Lost. Stories. Found. | |
| Dancing Bear | |
| Social | Solitary - - - x - Shared - - - - - Collaborative |
| | Solitary implies a different route through a different but related experience. Shared implies all users get the same media at the same time. Collaborative experiences require the audience to use the same media. |
| Message Bank | Solitary - - - x - Shared - - - - - Collaborative |
| Green Thumb | |
| Ghost | |
| Lost. Stories. Found. | |
| Dancing Bear | Solitary - - - - - Shared - - - x - Collaborative |
| Producer Expertise | Professional media producer - - - - - Amateur |
| | This is defined by the style of delivery and its seeming authenticity. |
| Message Bank | Professional media producer x - - - - Amateur |
| Green Thumb | |
| Ghost | |
| Lost. Stories. Found. | |
| Dancing Bear | |
| | Augmentation - - - - - New experience / stand alone |

| | |
|-----------------------|---|
| Existing Experience | Does this enhance an existing experience or imply the substantive creation of a new experience which may or may not be linked to place? |
| Message Bank | Augmentation - - - x New experience / stand alone |
| Green Thumb | |
| Ghost | |
| Lost. Stories. Found. | Augmentation x - - - New experience / stand alone |
| Dancing Bear | Augmentation - - - x New experience / stand alone |

Table 3: Performance Works as Descriptive Dimensions for Mobile Media Design

5.2 Spatial Dimensions

5.2.1 From Arbitrary to Site-Responsive Mapping

Arbitrary Mapping refers to the act of binding content to a site despite there being no inherent meaningful connection between the two (Rieser, 2011, p. 102). This description doesn't sit well with the experience on the ground, mapping the Performance Works to location. However, it also captures something constructive in how it sits opposed to the term "meaningful". The two examples referenced in the Performance Works as most spatially arbitrary, are *Message Bank* and *Dancing Bear*. Through these works the mapping process was intended to be *site responsive* as opposed to *site specific*. Site specific is a term used in the taxonomy included later in this chapter. Site responsive is a term introduced here to help distinguish Performance Works which require a specific relationship to place in contrast to those which call for a more general conditions such as a city scape, density of pedestrian traffic and room to explore. The meaning or dramaturgy of the first engages with the specificity of place, whereas the latter responds, shifts and adapts with the site that hosts the performance. While these terms can sync up with the arbitrary and meaningful axis, they further clarify the mix of creative and technical labour at hand in the making of TwMLM.

Site responsive mapping for *Message Bank* meant fastening beacons in accessible locations through Parramatta Square so the audience were compelled to navigate the space. Early on some attention was paid to binding sites in the square to specific scenes. For example, a scene called Bombshell saw an employee at a Gelato Store, Max, confronted by an unidentified

security officer, Agent, and intimidated into sharing the phone number of a colleague. This scene was written by Challito Browne and was partly informed by the presence of a Gelato Store in Parramatta Square. Initially, the beacon which triggered this scene was placed near the Gelato Store. However, as the work developed, the interest in maintaining these connections wasn't sustained. Beacons and their corresponding scenes were moved around in search of combinations that would encourage journeys that were accessible for daily installation and offered a mix of light and shade with respect to the tone of the scenes themselves.

These actions weren't arbitrary, but they didn't prioritise the specificity of the site. Rather, they prioritised the mix of materials as they might be brought into a sequence through motion. Iterations of *Message Bank* went on to be presented in other locations including Utrecht University and UTS, Ultimo. In these environments similar questions were asked during the installation. Where can these beacons be hung? What kind of physical journey will they create for the audience? What is the expected performance envelope and what is the ideal tonal mix that we'd like to unfold within this envelope? A deeper look into a scene study from *Dancing Bear* further clarifies this approach.

| Scene Study: The Exchange Scene | | | | |
|---------------------------------|---------|--------------------|---|---|
| Practice Work | Mode | Scene | Action | Interaction |
| Dancing Bear | Seeking | The Exchange Scene | The audience is seeking to retrieve a document from a recently identified target. | The audience is asked to approach a character / actor and participate in a guided dialogue. |
| Space & Place: Site responsive | | | | |

Table 4: Scene Study - The Exchange Scene

Where *Message Bank* features performance by actors in the form of audio recordings, *Dancing Bear* features performance by actors in closer spatiotemporal proximity. In this work performers and participants are networked on WhatsApp and engaged in action playing out in the same shared space of Parramatta Square. Despite these shifts, the relationship to mapping story and experience to place was similar. The performance was developed and rehearsed in the square itself. Scenes were crafted in response to and for locations. For example, a large bus sculpture which occupies a prominent position in the square became the site at which a key encounter between the audience and an actor plays out. In this encounter the audience is coached to approach the actor and participate in the exchange of a bag carrying secret documents. This is referred to as the Exchange Scene.

The mapping of location for the Exchange Scene was both proactive based on our expressive intentions as a creative team and reactive to the needs of the square. The site was centralized and offered a visually arresting backdrop which helped underscore and amplify the drama of the moment we were seeking to craft. It also sat outside areas which were considered part of the shopping centre or the larger building complexes used by corporations. Gathering people in zones closer to the shopping centre or corporate buildings attracted the attention of security guards in rehearsals and was considered too volatile to rely on in a live performance setting. The governance of these spaces was unclear from the perspective of the creative team. Individuals walked through them daily to access the train station or public square but as soon as our behaviour appeared to deviate from the individual commuter, we discovered that what we perceived to be public space wasn't and required us to move through an approval process with a larger corporate structure. Without the time or personnel to administer this process, we retreated to spaces that fell outside of these zones which led back to the bus statue.

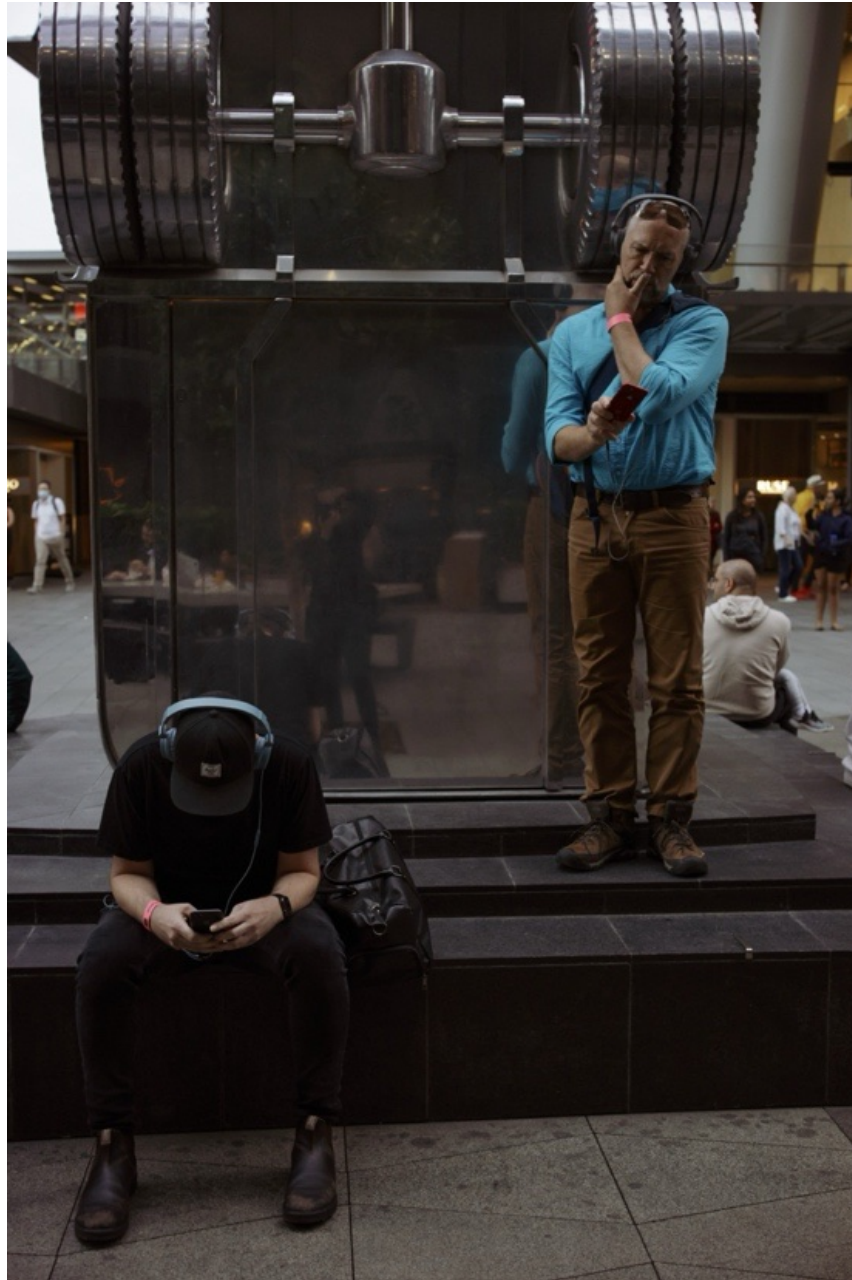


Figure 27: Production Still, *The Exchange Scene*, *Dancing Bear* (2024) - Photo Credit: Sam James

To return to this word arbitrary, this doesn't feel fitting for the decision-making process as the Exchange Scene was developed for *Dancing Bear*. Yet it does still sit opposed to a certain kind of specificity in a way that's worth holding. This was born out later in the season when the performance encountered a large and unexpected event unfolding at the same time and in the same place. At the same time as a scheduled *Dancing Bear* presentation, a performance protest

condemning the Australian Federal Government's actions regarding Israel's attacks on Gaza was playing out surrounding the bus sculpture. The protest activity had been approved by the necessary authorities and had attracted a large presence of police officers. The team quickly identified that it wasn't appropriate and possibly unnecessarily volatile to play out the action we had designed in the same space and time. A bag exchange between covert strangers could now be read as charged in a way that was of high risk.

In negotiation with the authorities in the square, a decision was made to continue the performance but to shift the action towards the other end which was unoccupied. This decision was made within half an hour of the performance going up and there was not time for the actors to rehearse their scenes in new locations. Key anchors were identified as to where action was intended to play out. The Exchange Scene was moved from the bus sculpture to a circular seating space which shared similar properties. It was visible, had a visual shape that was considered of interest and sat outside the semi public-private zones in which we encountered resistance. The audience was briefed of the change, wider circumstances, and stage management systems were in place which could enable the show to be stopped if any action appeared unsafe or became unworkable given the actors were working in locations that had not been rehearsed. The performance played out and while it created some additional variables for the actors to navigate through improvisation, the shape and experience of the show was perceived to be similar if not the same by the creative team.

The Exchange scene and the Gelato scene in *Dancing Bear* and *Message Bank* are examples of experience which is meaningfully mapped to location. However, the use of the word meaningful is based on the effort that was made to shape an audience's journey to these locations as opposed to the intrinsic significance of the locations themselves. To offer a contrast we can draw on two examples, *Ghost* and *Lost. Stories. Found* that fall on the meaningful mapping side of the axis.

5.2.2 From Meaningful to Site-Specific Mapping

The narrative of *Ghost* was tied more explicitly to its presentation site at the The Joan Sutherland Performing Arts Centre, Penrith. In this work the audience encounters a ghost that has become stuck in the location and is trying to move on. Through the events of the encounter, the

ghost comes to discover that this location is where they experienced stage fright as a teenager and never finished a piano recital. This revelation prompts a door to open in the narrative world and the ghost is invited into the concert hall for the chance to play this recital. The audience is asked to stay close and listen. The concert plays out; an invisible audience claps and there is the implication the ghost has now moved on.

The interaction between audience, mobile device and beacons in *Ghost* is like *Message Bank*. Six beacons are mapped throughout the foyer in various locations. Some of these more meaningful than others. For example, at one beacon the ghost is moved along by a stage manager. This moment is situated near the stage door of the building. Others are more arbitrary. For example, a bench near the arts centre's café is where the spirit discovers tissues on the floor in their world, which is not shared with the world of the audience. The final concert scene guides the audience to the real world location of the concert hall entrance. Where this deviates from *Message Bank* is that if the work was taken out of the site, it wouldn't make sense. The narrative is more heavily situated in the context of the venue in which music lessons are conducted and a concert hall is located. This work couldn't be transferred quickly without either adaptation or finding a location that shared similar characteristics. In this sense the mapping process is more meaningful.

Lost. Stories. Found is like *Ghost* in that the content of the experience is tied to its site. It features stories of local history framed through the reopening of Parramatta Town Hall following a series of renovations. This example goes further again in that while there might be a small host of locations that could suit *Ghost*, there is only one site of Parramatta Town Hall in which this practice work makes sense. Before gathering the threads of site responsive and site-specific mapping raised so far, there is another approach or deviation found briefly in *Ghost*, *Message Bank* and more comprehensively in Blast Theory's *Rider Spoke* (Blast Theory, 2007) that's worth noting. This can be understood as mapping for psychic or affective space. The examples so far have focused on the physical world of the audience and narrative but mapping with psychic space allows the practitioner to be untethered from designing for narrative space time coherence and instead be led by a more internal or emotional impulse. For example, in *Ghost* the audience is asked to find a place they feel uncomfortable before the experience progresses. *Rider Spoke* (Blast Theory, 2007) asks the audience to find somewhere that's hidden before asking them to record a story.

Wilken (Wilken, 2014, p. 11) draws on structural analysis to offer a perspective on this interaction. He identifies the call to act through recording a story as a function or a cardinal function of a narrative unit. The doing. Whereas the feeling of seeking out somewhere that makes you uncomfortable could be understood as an indices or indices proper. The being or mood of the narrative. In breaking down narrative in this way Wilken is seeking to better understand how narrative operates in the work of Blast Theory, with a specific interest in how these works engage with themes of alienation and proximity through encounters with strangers. This is briefly introduced here to foreground a deeper dive into these concepts and how they inform the dramaturgy of the Performance Works later. For the moment, the key point to highlight is that site responsive and site-specific mapping can be seen playing out in the Performance Works. This was informed by the imagined landscape of the narrative but at times also the internal state or direction of the audience.

In this section, what is demonstrated is that the axis of arbitrary and meaningful mapping enables these works to be split apart in reflections on key decision making and how they relate to meaning making. However, the use of the term arbitrary has been challenged. The work of *Message Bank* and *Dancing Bear* speaks to a mapping process which is not arbitrary but has rather prioritised the shaping of experience in motion as opposed to generating meaning through the specific site in which a story is triggered.

An alternate axis which substitutes the terms of arbitrary and meaningful with the terms site responsive and site-specific fits more comfortably with these Performance Works. It asks the designer or maker, is the content intended to respond to this location or is it specifically tied? While it's most probably always a combination of both, what's prioritised on this axis triggers a series of further questions as to the meaning of the experience and how it's rendered. A brief introduction to mapping for psychic space is included to demonstrate how site-specific and site responsive mapping has the potential to go beyond accounting for narrative space-time coherence. Having wrangled with how these Performance Works relate to the mapping of location and content, it's now possible to step into further analysis on their approaches to shaping pathways for audiences through the experience. This draws in the remaining space / place axis relating to linearity and non-linearity.

5.2.3 On Spatial Linearity & Non-linearity

Spatial linearity refers to the degree to which an audience is expected to follow a sequence along a prescribed route. Whether its searching for a covert target, artefacts of surveillance, strange weeds or memories of a ghost, each Performance Work features a phase which is primarily non-linear. That is, a phase in which the audience can follow any route to bring forth narrative or data. *Dancing Bear* tests this a little. The non-linear sequence is not anchored by seeking out moments of story tied to stationary beacons but rather a moving target in the form of a person. In this non-linear phase, the audience isn't activating story through proximity so much as collaboratively searching for the next story beat. Although the relationship to narrative is different, the non-linear relationship to space is the same.

A further look at *Lost. Stories. Found*, identified as the most non-linear through the descriptive dimensions, can clarify this further. In this work the audience wanders the location in their own time. They choose what to listen to, when to listen to it and when to step out. Artefacts situated through the room offer anchors to their journey but for the most part they're invited to wander. *Ghost* offers an interesting contrast in that it features scenes which have both greater non-linearity and linearity. I'll first push the limits of a non-linear journey as observed through *Ghost* before noting how it also demonstrates a more linear journey. This will be done through a closer look at two scenes, the Detection Scene and the Notice Board Scene.

| Scene Study: The Detection Scene | | | | |
|--|---------------------|--------------------|---|---|
| Practice Work | Mode | Scene | Action | Interaction |
| Ghost | Open Exploration | Detection Scene | The audience is invited to explore the environment in search of a 'presence.' | Motion data generated by the audience is shaping layers of audio the audience can hear. |
| Space & Place: Site responsive, non-linear | | | | |
| Scene Study: The Notice Board Scene | | | | |
| Practice Work | Mode | Scene | Action | Interaction |
| Ghost | Turn to / Return To | Notice Board Scene | The Ghost asks the audience to return to a memory as it clarifies. | The audience heads to the notice board and places the device in proximity of a beacon. |
| Space & Place: Site specific, linear | | | | |

Table 5: Scene Study - The Detection Scene & The Notice Board Scene

The Detection Scene begins with an instruction for the audience to move the hand with which they're holding the device around in the air. After thirty seconds it asks them to stand up and wander the foyer more widely. At the point of the first instruction a gyroscope is used to link the ongoing real time motion data generated by the device to the volume levels of a drone playing in the background. As the audience is asked to wander the space more broadly a magnetometer is used to further layer audio on top of this drone. Four sounds are situated on north, south, east and west points from the audience's position. These sounds include a whisper, a piano, a crowded audience and another drone. As the audience's orientation shifts between points the sound fades between tracks. This layering is explored later in a section on data depth. For the moment, what I'm pointing towards is how this sequence demonstrates a further step into a non-linear experience. At this stage of the performance the audience is not briefed on the beacons situated in the location. Their invitation to explore the space is framed only by the parameters of the building itself and is informed by an interaction with the sensors shaping their audio experience. The Detection Scene lasted for about three minutes in total. Its resolution occurs with a series of haptic pulses in the device and a message which informs the audience that a presence has been detected.

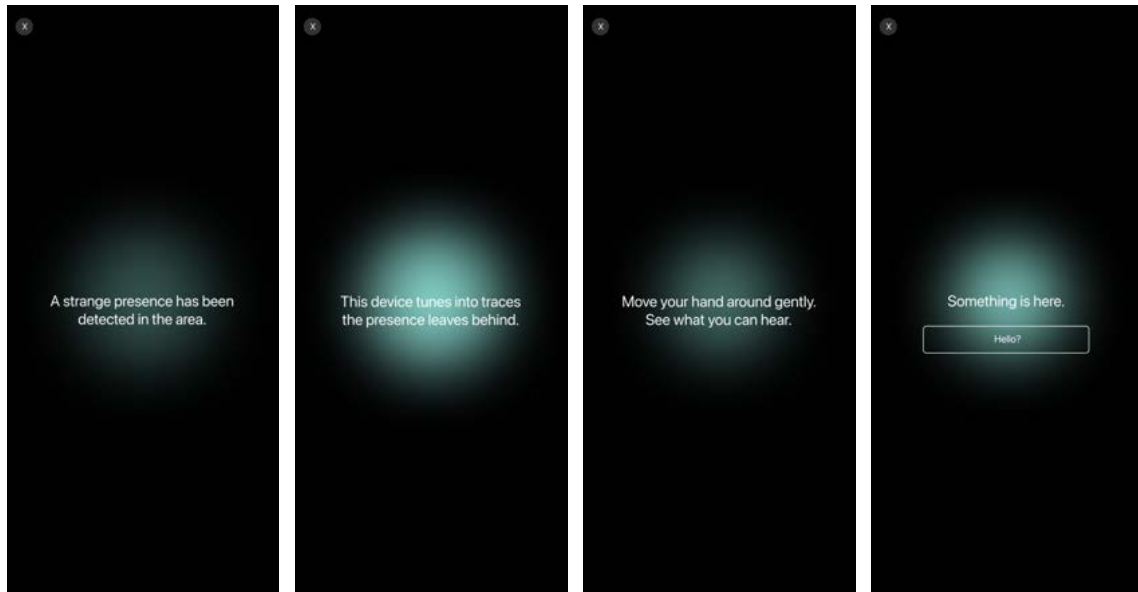


Figure 28: Screenshots taken at intervals from the Detection Scene, Ghost (2024)

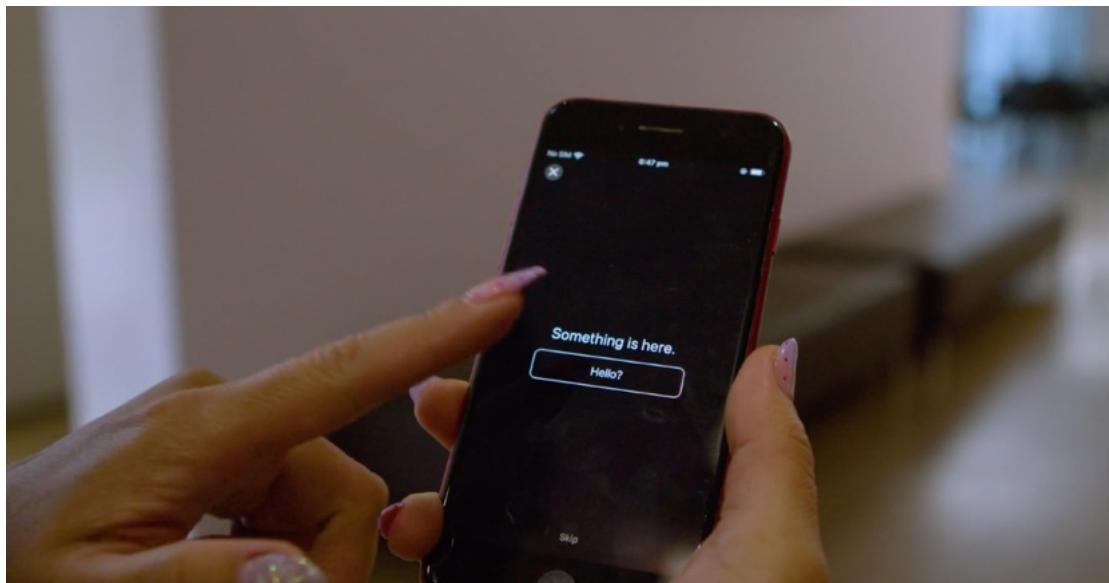


Figure 29: Production Still, The Detection Scene, Ghost (2024)

The Notice Board Scene on the hand other would be the sequence of action which demonstrates the most linear relationship to space and place. This scene occurs towards the end of the performance. After collecting the scattered memories, the ghost becomes frustrated and finds itself in a moment of despair, until a revelation arrives. The audience is asked to return to a

location they have already been, the notice board, and reactivate the beacon. This time the beacon offers a scene that clarifies a memory. The ghost then asks the audience to return to the concert hall where they began the experience. Through this action the ghost comes to realise the time and place they are in is that of a piano recital where they became paralysed by stage fright. This realisation triggers the final Recital Scene which finishes the performance.

With respect to linearity, there are two features of this scene that are illustrative. Of all the Performance Works, this is the only example where the audience is asked to seek out specific locations to unlock the next story beat. Notably it occurs in a second phase that follows an exploration phase. The instruction and action are not framed as “explore” or “find”, but rather “return to”. And furthermore, this “returning to” is linked with a second spot the audience must return to which extends the narrative in linearly fashion and towards a resolution.

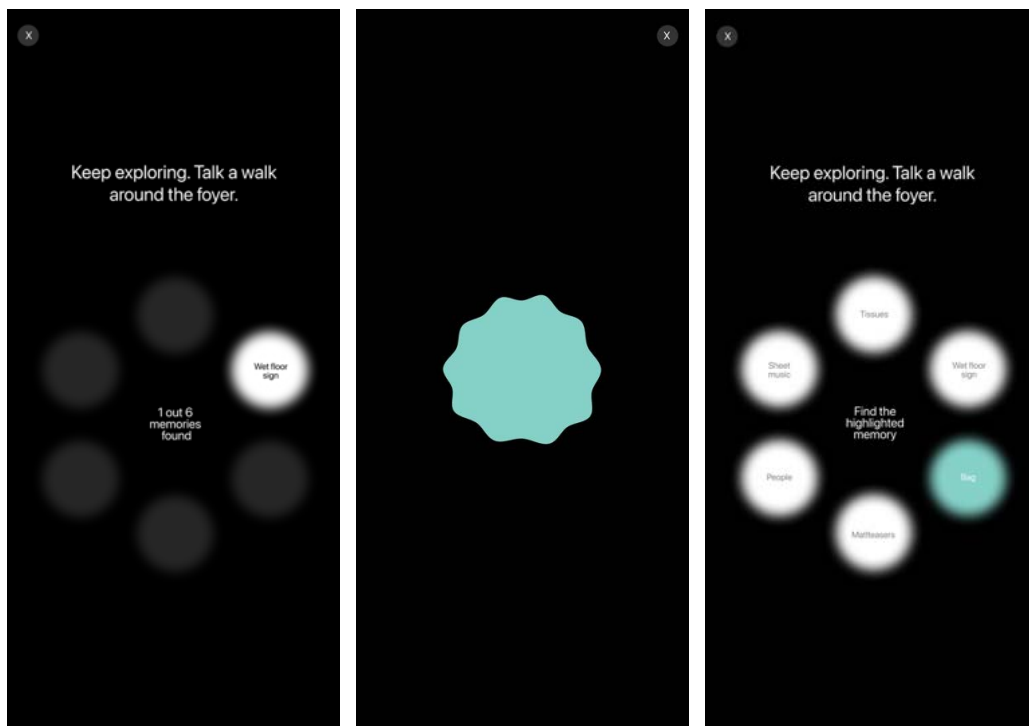


Figure 30: Screenshots taken at various phases from Ghost. The first screen shot is taken from an exploration phase where the audience is seeking out beacons. The second screen shows an intermediary state. The third screen shot is taken from a return to phase. Ghost (2024)

Given *Ghost* is shown to shift between scenes that have a linear and non-linear relationship to space and place, there's value in teasing this out further to consider the role this played in the dramaturgy of the performance. In this example, the shift from non-linearity to linearity aligns with the ghost's understanding of its own predicament. The most non-linear sequence occurs at the top of the performance where the audience is unsure of how to navigate the space and is yet to encounter the ghost. This is followed by an exploration phase where they are tasked with seeking out the beacons. Here the ghost is seeking help and is struggling to make sense of what is described as flashes of memories that surround them. The action for the audience is more directional than the open exploration. They are now looking for beacons hidden throughout the foyer. However, it's still non-linear in that the beacons might be found and activated in any order. This is followed by the "return to" phase which has been shown to be the most linear. In this phase the ghost had made sense of the scattered memories and is actively playing through the sequence in which they are stuck.

This final "return to" phase features narrative convergence and leads to the final action; playing the recital. In referring to narrative convergence here, I'm describing narrative structures designed to lead an audience to a fixed resolution. This doesn't imply one interpretation or understanding but rather a specific story event or outcome. Unlike the memories drawn from past, the action of playing the piano is implied as occurring in the present and is shared by the audience and the ghost. The performance is about reconciling past mistakes and is composed of pre-recorded materials, framed as both past and at times present moments activated by the audience in the present. To reconcile how narrative and space interact through a linear and non-linear descriptive dimension, notions of time and sequence have been necessarily drawn in. These will be investigated further in the following section on time. For the moment, it's worth highlighting three basic modes *Ghost* has been shown to demonstrate with respect to space / place and linearity. They are:

- **Open Exploration:** This is the most non-linear mode in which the audience explores the environment with no boundaries. In the case of *Ghost* this mode features the use of sensors to shape an audio experience in dialogue with the audience's exploration.

- **Seeking:** This is also non-linear but more directional. The audience isn't following a prescribed route but is seeking out specific anchors like beacons. For *Ghost* these beacons look physically like white lights, and their tied content correspond to memories.
- **Turn to / Return to:** This is a linear mode in which the audience is invited to return to specific spots and in a specific sequence. In *Ghost* this corresponded with a linear unfolding of narrative beats where memories become joined to form narrative convergence.



Figure 31: Production Still, Seeking Phase, *Ghost* (2024)

An indication of these phases has been included in the Scene Studies alongside the adapted descriptive dimensions. *Lost. Stories. Found* operates primarily through open exploration and doesn't seek narrative convergence whereas *Green Thumb* and *Message Bank* feature predominately seeking phases and will be shown to seek out narrative convergence by leaning more heavily on linearity of time.

5.2.4 A Detour into Data Depth

Before moving to a summary of spatial dimensions as play through the Performance Works, it's helpful to note the dimensions of Data Depth which has become implicated in some of the dynamics noted above. The descriptive dimensions identify Data Depth as the layers of data available to the user. The description that is offered points to a user that might navigate through an application to access more informative or evocative information relating to a scene or space. For example, while listening to poetry about a site (evocative) the user might click through for further information concerning the history of the site (informative). The capacity to access further information is noted as being the difference between one layer and several layers of data depth. Of all the descriptive dimensions, data depth is the area through which there is the greatest amount of variance across the Performance Works. I'm going to start by listing the layers of data at play across the works. Based on the Performance Works, it's helpful to extend this axis to include the layering of data, the condition of layering as well as the volume of data available. To begin illustrating this, a brief overview of the types of data used in the Performance Works has been included below.

- Text: Instructions. Descriptions both real and imagined.
- Video: Animation.
- Audio: Music. Atmos. Sound effects. Narration. Dialogue.
- Gyroscopic: Motion data generated from XY axis.
- Magnetometer: Directional data based on a compass.
- Location Data: Gathered through signal strength readings from Ble beacons
- Timers: Unseen and seen localised timers cued against sequences.

To continue with the descriptive dimensions approach to layering, it's useful to determine whether the condition of layering is dynamic or fixed. For example, the description offered in the dimensions refers to a state where there are multiple layers of data depth, but the layers are fixed and call on the user to access them. The Discovery Scene is shown to have multiple layers of data depth, but the relationship of these layers is more dynamic. Data from motion sensors,

timers and audio inputs is dynamically interacting to create the scene. Data is being generated in real-time through the performance as well as forming a material which is navigated.

The second area worth noting in the Performance Works is data depth volume. This identifies the extent of data that is being worked with. For example, while *Ghost* and *Message Bank* both involve exploration phases that trigger audio files, the audio files in *Ghost* ran for 15 to 30 seconds whereas those in *Message Bank* ran for 2 to 3 minutes. *Message Bank* has a higher data volume, which in turn leads to a series of further considerations. While “high” and “low” data volume is subjective, when considering the data depth volume in contrasting works it can help explain tactics that developed to account for the volume. In the case of *Message Bank*, the scale of data resulted in further work done to shape the revelation of data over time.

| Scene Study: The Detection Scene | | | | |
|---|------------------|-----------------|---|---|
| Practice Work | Mode | Scene | Action | Interaction |
| Ghost | Open Exploration | Detection Scene | The audience is invited to explore the environment in search of a ‘presence.’ | Motion data generated by the audience is shaping layers of audio the audience can hear. |
| Space & Place: Site responsive, non-linear | | | | |
| Data Depth: Several layers, Dynamic, Low Volume | | | | |

Table 6: Scene Study - The Detection Scene

5.2.5 Summary of Spatial Dimensions through Practice

Having stepped through the Performance Works with respect to the descriptive dimensions of space and place, it’s now possible to consolidate some findings and generate further questions that probe the limits of these dimensions. The axis of arbitrary to meaningful mapping has been further refined as an axis of site-responsive to site specific mapping. The axis of linear to non-linearity has been used to break apart the Performance Works and furthermore to break apart the performance of *Ghost* into a series of three modes; open exploration, seeking and return to, each with differing approaches to linearity. The introduction of these modes illustrates a limitation of the taxonomy itself. It shows a need to shift from how these works might be understood in their totality to how they might be understood as a series of phases, scenes and

sequences that shift in their properties through time. Considering whether *Ghost* is primarily a spatially linear or non-linear experience might yield less insight than an investigation into how non-linear and linear scenes are gathered to support narrative convergence or divergence. This supports the notion of extending the descriptive dimensions to show how they might be applied to annotate an experience through time as opposed to a one-off snapshot. Before this can be approached, a more focused look at the descriptive dimensions of time is needed.

5.3 Temporal Dimensions

5.3.1 *Introduction to Temporal Dimensions through Practice*

In this section, attention is turned toward the descriptive dimensions of time. There is a heavy focus on the specific dimension of fixed and open time. Shaping this axis became a key tactic in the creation of the Performance Works. Like space and place, this will be considered across the Performance Works at a top level but will also involve dropping into sequences and scenes as the dimension shifts or becomes more fluid. This focus will extend the dimension to consider the intersection of audience awareness. Straying into audience awareness begins to overlap or draw in wider dimensions relating to rules and control reinforcing the notion that these dimensions are interdependent. The remaining axes concerning time specificity and permanency are not covered in this section. This isn't to suggest that these dimensions are not relevant, but rather that the Performance Works don't yield specific insights in these areas. Each of the Performance Works adopts a "one off" approach and can be understood as an ephemeral performance more so than a permanent installation. None of the works draw on time specificity such as time of day or a season. For this reason, a heavy focus to the Open and Fixed time parameter is applied.

5.3.2 *On Open & (Perceived) Open Time*

The fixed and open time axis asks whether the audience can determine the amount of time in an experience, or whether this is fixed. It's a direct question, but the choices made here have significant implications. The implications of engaging with these, as well as failing to plan for them, are considered in detail through the section on and in the paper, *Message Bank: Time in*

Location-Based Media (Atkins, Johnston, & Kocaballi, 2024). Unlike this work which focuses on insights generated from within an iterative process of action and feedback, this section starts from a position of reflection on the Performance Works in their totality.

Lost. Stories. Found and *Ghost* illustrate the clearest relationship to open time. These experiences most commonly ran for 15 – 20 minutes. This duration was informed by the audiences’ decisions to navigate the work as well as the volume of data that was embedded. This is to say that there was nothing to stop the audience from spending longer in the experience, apart from the fact that they may exhaust their interest in the material available. And perhaps the venue might have ushered them out if they had stayed past closing time. While these works are primarily temporally open, a collecting function implemented alongside the scenes push this openness towards a more fixed condition. Audio scenes are programmed to be played once and, on completion, a visual tile hosting text on the story disappears. The interface showing five icons now indicates which story has been completed and a counter notes how many stories have been found. These elements encourage the audience to progress through the work towards an end despite there not being a fixed running time.

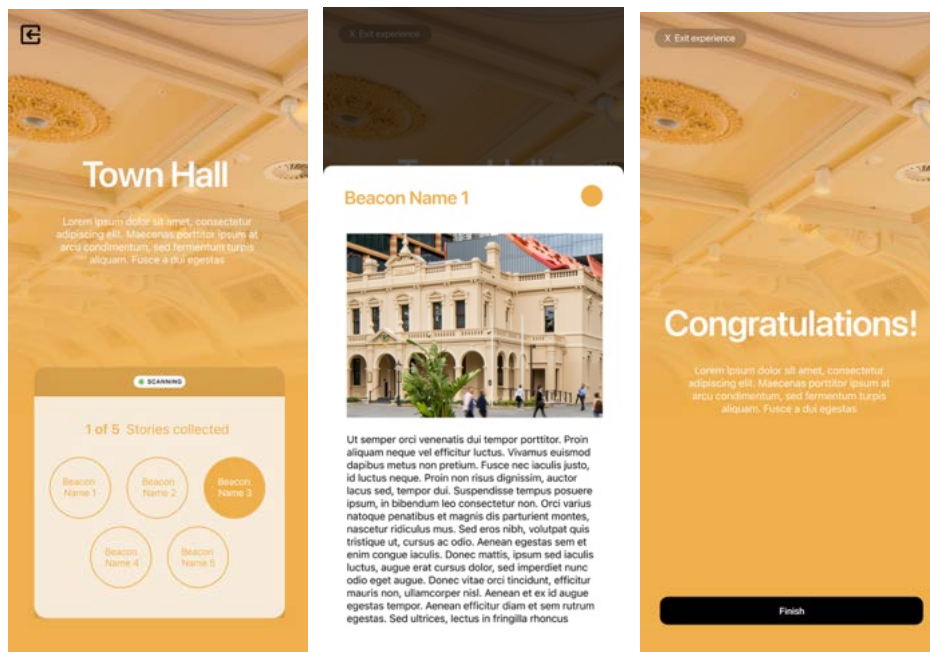


Figure 32: Design Mock Ups, *Lost. Stories. Found* (2024)

This approach to designing in an open time relationship while holding to the intention of narrative progression is noted to acknowledge that it could be rewired to create greater openness. The audio could be programmed to repeat on completion or be streaming on an ongoing basis, so the audience is not instigating the beginning of a scene but rather stepping in to something in progress. The collecting function could be removed. Taking away references to progression and a resolution screen might encourage audiences to relate differently to the material. The potential for greater temporal openness is illustrated and complicated further by the Detection Scene in *Ghost*.

The Detection Scene was raised previously for how it illustrates a non-linear relationship to space. Similarly, from the perspective of the audience, it offers a scene which is open time. The audience is asked to explore the environment as the data generated through their motion interacts with audio materials generating a dynamic sound scape. The audio materials loop repeatedly. They overlap, increasing and decreasing in volume as the audience moves. Unbeknownst to the audience, a timer programmed into the application, finishes the scene after three minutes. Here we have what is a programmatically fixed time scene, a scene that will end after three minutes, framed as an open time scene from the audience perspective. This approach emerged from the iterative development of *Message Bank* and complicates the open and fixed time axis by drawing in questions of rules and control. This can be fed back into the Detection Scene, Scene Study to offer a clear picture of what is occurring.

| Scene Study: The Detection Scene (Additional Dimensions as well as including perceived / hidden states) | | | | |
|---|-----------------------------------|--------------------|---|---|
| Practice Work | Mode | Scene | Action | Interaction |
| Ghost | Open Exploration | Detection Scene | The audience is invited to explore the environment in search of a presence. | Motion data generated by the audience is shaping layers of audio the audience can hear. |
| Space & Place | Site responsive, non-linear | | | |
| Time | Open (perceived) / Fixed (hidden) | | | |

Table 7: Scene Study - The Detection Scene with Additional Dimensions

The gap between the audiences perceived relationship to time and the hidden programmed function is what makes the rules less clear or explicit. It's also what shifts the user from total

control or open exploration to some control. This could be debated and it's worth putting a little more detail around what is meant by user control in this context.

5.3.3 *A Detour into User Control & Rules*

The descriptive dimensions ask the designer to consider how much control they want the audience to have over the navigation of their environment. Experiences where the user is guided along a route are considered in contrast to those where a user can wander freely to navigate data. This description is closely related to spatial linearity and non-linearity. But it's noted that screen-based applications might offer greater user control in generating unique experiences even though the user is on a prescribed route. This stretches the description of control beyond relating to spatial navigation, introducing navigation of data or data depth as an additional landscape. It raises the question; when control is introduced as a dimension, over what material is control being exerted? If the user is controlling their own experience, this could relate to:

- control over narrative - choosing which beacon to listen to in which order such as *Message Bank*,
- control over the conditions in which a scene plays out - sensors shaping audio in the *Detection Scene*,
- or control in how the audience chooses to receive a scene in time and space – where and when they position themselves.

Expanding this point of control slightly further illuminates the nature of user control in the *Performance Works* and its relationship to clarity of rules.

Insights taken from *Experiential Theatres* (Bartley & Lewis, 2023) offer further clarity concerning the notion of control by arguing that the theatre maker or designer cannot give control to the audience member. The audience is always in control. The audience always has agency. However, the designer can conduct / afford or restrict / constrain their agency (Bartley & Lewis, 2023, p. 74). This is a subtle shift but the change in terminology can be helpful. Benford and Giannachi's analysis uses affordances to make visible how design can be used to “transform the role of the spectator into a participant and even a performer” (Benford & Giannachi, 2011, p. 6). This refocus shifts the question from how much control is the user given to what tactics are

being used to conduct or restrict agency and why. This question helps to lead back to the Detection Scene and to what information is given and withheld. The audience is invited to explore the space. Their motion is tied to audio. They come to learn the rules of interaction through testing and time. Their agency is conducted in this sequence in that they have an open time and space structure to explore. The withheld information is the hidden time parameter which restricts their agency by moving the audience to the next scene at a fixed point in time. As the dimension of user or audience control within Performance Works becomes more complex, it's helpful to reassess the value of this descriptive dimension.

User control is a common point of interest in user experience design. A designer developing a new instrument for a musician to use is necessarily interested in the extent to which the musician can control the device. But the Performance Works in this research are not an instrument. They are performances in which the audience participates. This isn't to suggest that control does not play a factor in shaping experience and making meaning. The work of *Experiential Theatres* (Bartley & Lewis, 2023) shows it continues to be an important consideration for practitioners working in the fields of immersive, interactive and digital performance practices. Rather, what I'm suggesting is that decisions that conduct and restrict agency are already deeply embedded in the spatiotemporal dimensions introduced. And to categorise control as a separate indicator is less helpful than seeking to understand how control operates in tandem with other dimensions.

The work here doesn't seek to determine the degree of control the audience has but rather to clarify the conditions through which they navigate the work, and to recognize that control or agency will be an outcome and perceived experience of these conditions. It's here that the perceived and hidden states become helpful. They highlight that the designer can determine whether a scene occurs in open or fixed time, and whether the audience is aware of this. The condition and their awareness of this condition combine to create an experience of agency within the work. In adding the perceived and hidden state to the spatial dimension, the nature and quality of control at play becomes implicated.

5.3.4 Towards Fixed Time

On the other side of the axis, *Message Bank* and *Green Thumb* adopt a more fixed time approach. The Seeking phase in these works is different to *Ghost* and *Lost. Stories. Found* in that it is explicitly time based. In *Message Bank* the audience is offered eighteen minutes of access to the pre-recorded scenes to solve the case. For *Green Thumb*, the audience is given ten minutes to sample the DNA from each of the weeds before the infestation spreads. Timers tracking the audience's journey are represented visually on each of the interfaces. At the end of this time, the audience is either moved along to a reporting scene in the case of *Message Bank* or faces a failure condition screen in the case of *Green Thumb*. While both projects offer instances of open time dynamics, such as moments to stop and meditate before progressing, this paradigm of a time sensitive problem that needs resolving is what shapes the action. Examples of the interface from the first and second version of *Message Bank* are included below. It's noticeable that between iterations the dominance of the timer increased.



Figure 33: Production Still, Application in Action, *Message Bank* (2023) - Photo Credit, Malvina Tan



Figure 34: Design Mock Ups Focused on Time, Message Bank Version 2 presented at MOCO'24 (2024)

In the case of *Message Bank* this fixed time approach is complicated further through the audience's interaction with the character of Dancing Bear. A quick note on terms to help with clarity; the performances of *Message Bank* and *Dancing Bear* are distinct, but they share narrative worlds. This is why there is some overlap with references. A character going by the name of Dancing Bear features in *Message Bank* as well as the performance going by the title, *Dancing Bear*. To help with clarity and to keep these two different experiences distinct, the character of Dancing Bear as featured in *Message Bank* will be referred to as Unknown Agent.

A Scene Study of the Meatball Scene in *Message Bank* can help demonstrate how interactions between the audience and the Unknown Agent set up a more complex dynamic between open and fixed time dimensions.

| Scene Study: Meatball Scene | | | | |
|---|---------|----------------|--|---|
| Practice Work | Phase | Scene | Action | Interaction |
| Message Bank | Seeking | Meatball Scene | The audience is assessing the credibility of a person suspected of using a fraudulent credit card. | The audience receives messages from an Unknown Agent while listening to an audio scene after holding their device within proximity of a Bluetooth beacon and pressing play. |
| Space & Place: Site responsive, on-linear | | | | |
| Time: Fixed (with intermittent Open Time beats) | | | | |

Table 8: Scene Study - Meatball Scene

Interactions between audience and an Unknown Agent are a key point of iterative development noted in *Time in Location-Based Media* (Atkins, Johnston, & Kocaballi, 2024). The interactions will be referred to here as Open Time beats. The fine tuning of these Open Time beats is illustrative of a specific relationship to the fixed and open time axis that’s worth noting. These interactions also point toward further dimensions not listed in the descriptive dimensions. Details from both *Message Bank V.1* and *Message Bank V.2* will be drawn on and will be referred to as *MBV1* and *MBV2* for brevity. In *MBV1* and *MBV2* the interactions between the audience and the Unknown Agent are intended to turn the audience against the agency with whom they’re on probation. In *MBV1* messages took the form of iOS notifications and in *MBV2* these were amplified to completely black out the screen.

The interaction is simple and involves two beats. An arrival beat when the message appears, and response beat when the audience resolves the call to action. For the most part the range of response is highly limited. In *MBV1* this response was limited to clearing the notification. In *MBV2* this was extended slightly to involve multiple response answers. The multiple response approach was first tested through *Ghost* and then fed back into *MBV2*. The arrival beat of these interactions is fixed time and programmed at predetermined intervals. In the case of *MBV1* these are organised across the 18-minute exploration phase. For example, at five minutes into the performance the audience receives a notification:

“Hello, I like the way you move”

Notification from Dancing Bear Agent, MBV1, Exploration Phase

This is followed by a series of messages arranged in varying tempo from fast to slow succession. In the case of *MBV2* arrival beats are programmed in response to audio scenes themselves. For example, when an audience accesses the Message Bank containing the Meatball Scene, an unseen timer begins. At 30-seconds into the scene the arrival beat is triggered, and a message arrives.

“It’s not.”

Notification from Dancing Bear Agent, MBV2, Meatball Scene

The message referenced here is intentionally vague without context. The purpose in its inclusion is to demonstrate a shift between MBV1 and MBV2. Because arrival beats were fixed time and tied to the Seeking Phase of MBV1, the messages themselves were composed in a way that could be read as meaningful across the 18-minute journey despite the many choices audience may have taken over the time leading up receiving it. The audience could be listening to the *Meatball Scene* or one of the other five available at the point of an arrival beat. This meant that while the messages could continue along their own narrative thread, such as seeking to recruit the audience, they couldn’t be brought into meaningful dialogue with scenes beyond broad thematic. The outcomes are that the messages are more generalised. This tests how “loose” the material can be in designing for “loose couplings” (Forsberg, 2013). This was considered workable in MBV1 but when given the chance to produce MBV2, tightening this became a key focus.

In MBV2, arrival beats were tied to timers in the scenes themselves as opposed to the phase timer. This meant a new kind of dialogue could be achieved and further rewriting was done as a result. The message referenced above “it’s not” arrived half a second after the audience heard a character in the *Meatball Scene* claim that their cryptocurrency scheme was about to be

big. This subtle but significant shift brings the Open Beats closer into the world of the audience. It offers more finely tuned exchanges and dramaturgically shifts the position of the character from whom the message is sent. It's now implied the character sending the message is listening to the scene in the same moment as the audience which introduces the notion of real time into the mix. But before dropping into this, it's necessary to briefly cover the response beat at play in these Open Time beat interactions. This is what makes them open. An example of this interaction can be accessed via the link below. It picks up from a moment in *MBV2* where the user is receiving a message of support from their fictional sister Claire and is interrupted by the first transmission from the Unknown Agent.

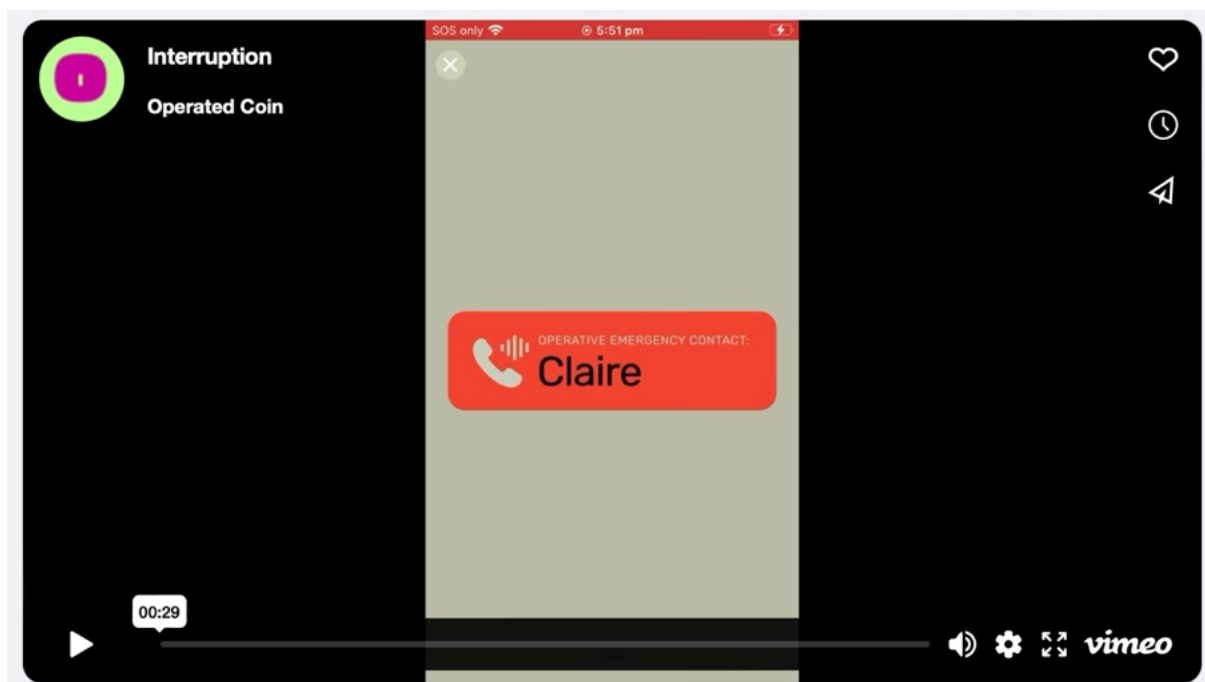


Figure 35: Video Extract, Fixed Dialogues in Message Bank V2 - Link: <https://vimeo.com/986863772>

While the arrival beat has been shown to be fixed time in *MBV1* and *MBV2* the response beat is a mix of open and fixed. The message interrupts an ongoing scene and calls on the audience to act. The audience is open to take as long they want to respond with a few caveats. In both *MBV1* and *MBV2* the timer that is fixed on the objective of the seeking phase, to investigate a series of suspects, continues. Hypothetically, if an audience was to avoid responding to the

arrival beat for an extended period, say ten or fifteen minutes, this timer would end, and they would be progressed to the next scene. However, there is no time fixed to the specific response beat. What this starts to show is a hierarchy of time relationships between beats, scenes and phases which can converge or diverge for different purposes. That hierarchy is stepped through in the figure below. A scene from *Ghost* has also been included to offer a contrast.

| | | | | |
|-------|--------------------|------------------|---------------|----------------|
| MBV1 | Phase: Seeking | Scene: Meatball | Beat: Arrival | Beat: Response |
| Time | Fixed | Fixed | Fixed | Open |
| MV2 | Phase: Seeking | Scene: Meatball | Beat: Arrival | Beat: Response |
| Time | Fixed | Fixed & Open | Fixed | Open |
| Ghost | Phase: Exploration | Scene: Interview | Beat: Arrival | Beat: Response |
| Time | Open | Open | Fixed | Open |

Table 9: Fixed / Open Time Hierarchies

In the case of *MBV1* as the Open Time beat begins, the *Meatball Scene* continues to play whether the audience responds or not. In the case of *MBV2*, as the Open Time beat begins, the *Meatball Scene* pauses and continues only after the audience has completed the response beat. This is why the scene is listed above as both fixed and open. In *MBV2*, the response beat informs the time relationship to the scene but is *informed by* that of the phase. In *MBV1* the beat and scene dynamic are untethered but still contained by the phase. And in the additional example offered from *Ghost*, we have an instance where the response beat is tied to the progression at both a scene and phase level.

As these layers of temporal relationships become split apart into hierarchies, and it's shown how they might converge or diverge in their interdependence, it's helpful to ask, so what? These patterns didn't start from a place of abstract inquiry into temporal conditions of TwMLM but rather from the intention and impulse to render a story and experience. Observations through the Performance Works offer some light on the implications of these dynamics. *MBV1* places the response beat at the lowest point of the hierarchy. By this I mean, the response has the least amount of impact on the experience. As the audiences listens, scenes are mixed with story, music and atmos. Their attention is split with further messages creating a noisy and at times chaotic or stressful state. This could be considered a collage effect.

MBV2 tempers this by linking the fixed or open time state of the scene to the response beat. Pausing the scene and placing its continuation in the hands of the audience offers more space for the message to be read, considered, reflected on and action taken. In MBV2 this was further amplified through a shift in sound. A sparse and mysterious piano theme playing during the scene shifts into a staccato machine-like sound accompanied by the sounds of typing as the dialogue takes over. This state offered greater presence or status to the message. It was not a distraction or an invasion of attention but rather a reversal of direction and a feature moment. This could be considered a spotlight effect.

Finally, the interview scene referenced above from *Ghost* places the response beat at the highest point of the hierarchy. Neither the scene, nor the phase will progress while this beat remains open. This state created the greatest amount of room for the audience to sit within the experience without a time-based condition pushing them forward. This was done for the purpose of inviting the audience into a deeper and more meditative relationship with the work. It's notable that the messages in this case were more open and invited greater introspection. Examples include, "Would you describe yourself as stuck or still?" as well as "find somewhere in the building that makes you feel uncomfortable and let me know when you're there". Those three effects are summarised below.

- **Collage Effect:** Fixed time messages interrupt the audience's experience when scheduled.
- **Spotlight Effect:** Fixed time messages interrupt the audience's experience and freeze the moment within a scene until the audience chooses to progress but don't impact the time within a phase which continues running.
- **Stillness Effect:** Fixed time messages interrupt the audiences experience and freeze the scene and phase until the audience decides to progress.

In locating fixed time dimensions through the Performance Works, the audience awareness of time at a performance, phase and scene level has been shown to be a tool for

narrative convergence in *Message Bank* and *Green Thumb*. A closer look at Open Time beats has shown how, within scenes, temporal shifts from open to fixed and back again has been used as a tactic for shaping experience. The notion of real-time has also been introduced. While not covered in the descriptive dimensions, the relevance of real-time to the Performance Works calls for an additional brief detour.

5.3.4 Detour into Real-Time in Practice

Real time involves the instantaneous or immediate time in which an action is taking place. It's not listed in the descriptive dimensions. There are possibly good reasons for this. On a basic level, it's hard to imagine what non-real time might look like in the context of TwMLM. Locative media art works often draw on prerecorded media which becomes activated through space or place. But to return to the interactions with the Unknown Agent in *MBV1* and *MBV2*, it's worth probing further into what is occurring through the lens of real-time. The arrival beats of these messages are not occurring in real time. They are fixed. However, they are framed as if they are being sent and received in real time. This might be referred to as perceived real time. The success to which this perception is successfully rendered might shift. For example, it's shown how changes between *MBV1* and *MBV2* demonstrate the desire to enhance this perceived real time by offering a more tightly structured dialogue between the messages and audio scenes.

MAX in Meatball Audio Scene: "My new crypto coin is going to be huge."

Notification from Dancing Bear Agent: "It's not."

There is further evidence of this intention in *MBV2*. By moving from the iOS notification format to the full screen "take over" further work is done to amplify the perception of real time. Instead of messages arriving fully written as a notification, additional timers are used to pace out the messages. Letter by letter the message appears on the screen as if being written in real time. These messages are accompanied by haptic pulses to further amplify each letter as it's being composed. Only it's not being composed. It's fully written and programmatically broken apart to be rewritten for the audience as if in real time. To ground this work on real and perceived real

time, it's useful to draw on a counter example which sits opposed. *Lost. Stories. Found* does not create meaning from real or perceived real time. The experience emerges from the audience's interaction with the locative media which is a real-time event. But this event isn't meaningfully tied to the substance of the material. This is like, if not the same, as the open time dimension. It's not that the *Lost. Stories. Found* occurs in a non-real time context but rather through an any or every time context.

5.3.5 Summary of Temporal Dimensions through Practice

This section has offered a close look at Open and Fixed time dimensions through the Performance Works. In doing so, an additional approach which accounts for the user's perception of time state as opposed to the programmed state has been proposed. This leads to a Perceived Open or Perceived Fixed dimension. This approach has drawn in further discussion of User Control and Rules parameters. The perceived and hidden state approach has been offered as a way of streamlining this dimension to account for properties of control and rules at the same time. In doing so, what is stressed is the interdependency of these dimensions as opposed to their distinctness.

In addressing Fixed Time, a close look at Open Time beats has uncovered a tactic used in MBV1 and MBV2 which used a hidden timers to disrupt the Fixed Time dynamic through interactions with the audience. This led to the introduction of three effects referred to as the collage, spotlight and stillness effect observed as outcomes of varying approaches to sequence of Open Time beats in respect to their scenes and wider story modes. A brief final detour into real-time introduced an additional dimension of real-time or perceived real-time to account for the structuring of action at moments within *MBV1* and *MBV2*. With this work done, in combination with the outcomes concerning dimensions of space and place, it's now possible to approach the descriptive dimensions again as streamlined performance scores through time.

5.4 Performance Scores

Included here is the performance score first introduced in Chapter 4. It shows the duration of *Message Bank* as broken into sequences of action and corresponding layers of active

media. It's introduced again here ahead of a series streamlined performance scores. The scores that follow take the same approach but integrate work done through this section concerning descriptive dimensions of times and place. The outcome is a renew time and space matrix which annotates the Performance Works through time.

5.4.1 Performance Score: Message Bank & Renewed Taxonomy of Descriptive Dimensions Scored through Time

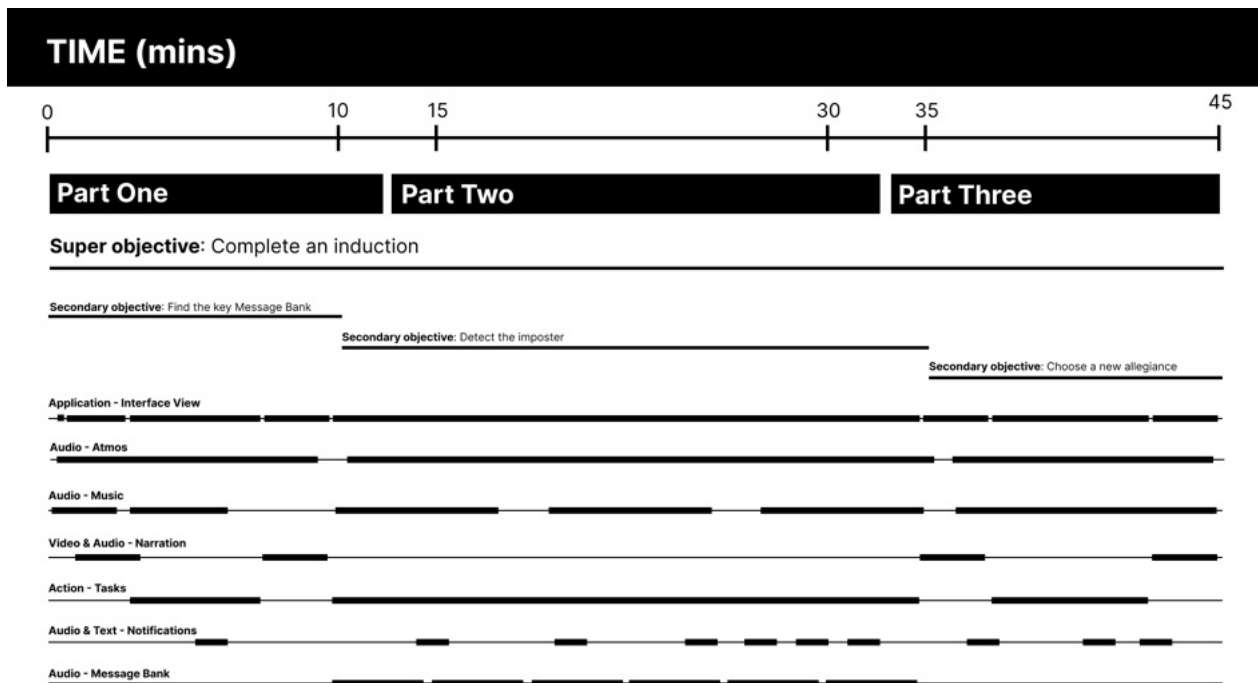


Figure 36: Performance Score, Message Bank (2023)

| Message Bank V.1 | | | | | | | | | | |
|---------------------|--------------|--------------|-----------|--|-----------|-----------|---------|---------|--------------|----|
| Running Time (mins) | 0 | | 15 | | | | 30 | | | 45 |
| Mode | Listening | Seeking | Listening | Seeking | Listening | Listening | Seeking | Seeking | | |
| Scene | Meditation | Key Msg Bank | Briefing | Investigate (Meatball, Bombshell, Dancing Bear etc.) | | | Report | "Hack" | "Allegiance" | |
| Spatial | Linearity | Non-linear | Linear | Non-linear | | | | | Linear | |
| | Specificity | Responsive | | | | | | | | |
| Temporal | Open / Fixed | Fixed | Open | Open | Open | Open | Open | Open | Fixed | |

Message Bank V.1 was presented in Parramatta Square 13/01/23 - 23/01/23 for Sydney Festival

| Green Thumb | | | | | | | | | |
|---------------------|--------------|-------------|------------|------------|-----------|------------|------------|--|--|
| Running Time (mins) | 0 | | 5 | | 10 | | 15 | | |
| Scene | Briefing | Weeds | Alert | The Source | | | | | |
| Mode | Listening | Exploration | | | Listening | Seeking | | | |
| Spatial | Linearity | Non-linear | Non-linear | | | Non-linear | Non-linear | | |
| | Specificity | Responsive | | | | | | | |
| Temporal | Open / Fixed | Fixed Time | | | | | | | |

Green Thumb was presented on campus at Parramatta Marist High School Westmead 08/08/23 for the school's Illuminate Festival

| Ghost | | | | | | | | | |
|---------------------|--------------|-------------|----------------------|------------|-------------|--------------|-----------|------------|----|
| Running Time (mins) | 0 | | 5 | | | 10 | | | 15 |
| Scene | Interview | Detection | "I'm Stuck" | Memories | "I'm ready" | Notice Board | Recital | | |
| Mode | Listening | Exploration | Listening | Seeking | Listening | Return To | Listening | | |
| Spatial | Linearity | Non-linear | Non-linear | Non-linear | Non-linear | Non-linear | Linear | Linear | |
| | Specificity | Responsive | | Specific | | Responsive | | Specific | |
| Temporal | Open / Fixed | Open Time | Open Time (parvised) | Open Time | Open Time | Open Time | Open Time | Fixed Time | |

Ghost was presented at the Joan Sutherland Performing Arts Centre, Penrith 16/02/24 - 01/03/24 as part of Culture Up Late

| Lost. Stories. Found. | | | | | | | | |
|-----------------------|--------------|--------------|------------|--|-------|-------------|-----------|------------|
| Running Time (mins) | 0 | | 5 | | 10 | | 15 | |
| Scene | Welcome | Lost Stories | | | Found | | | |
| Mode | Listening | Seeking | | | | | Listening | |
| Spatial | Linearity | Non-linear | Non-linear | | | Non-linear2 | | |
| | Specificity | Specific | | | | | | |
| Temporal | Open / Fixed | Fixed | Open Time | | | | | Fixed Time |

Lost. Stories. Found was presented in Parramatta Town Hall 28/02/24 - 28/02/20 for FORM Dance Projects

| Dancing Bear | | | | | | | | | |
|---------------------|--------------|------------|----------|--------------------|--|--|---------------|------------|----|
| Running Time (mins) | 0 | | 20 | | | | 40 | | 60 |
| Mode | Seeking | Listening | Seeking | Witnessing | | | Collaborate | | |
| Scene | Hide & Seek | Briefing | Exchange | Pancake Goes Rogue | | | Confrontation | Confession | |
| Spatial | Linearity | Non-linear | | Linear | | | | | |
| | Specificity | Responsive | | | | | | | |
| Temporal | Open / Fixed | Fixed | | | | | | | |

Dancing Bear was presented in Parramatta Square 19/04/24 - 28/04/20

| Message Bank V.2 | | | | | | | | | | |
|---------------------|--------------|------------|--|------|------|-----------|-----------|--------------|-------|----|
| Running Time (mins) | 0 | | 8 | | | | 16 | | | 24 |
| Mode | Seeking | Listening | Seeking | | | Listening | Listening | Seeking | | |
| Scene | Key Msg Bank | Briefing | Investigate (Meatball, Bombshell, Dancing Bear etc.) | | | Report | "Hack" | "Allegiance" | | |
| Spatial | Linearity | Linear | Non-linear | | | | | | | |
| | Specificity | Responsive | | | | | | | | |
| Temporal | Open / Fixed | Fixed | Open | Open | Open | Open | Open | Open | Fixed | |

Message Bank V.2 was presented as part of the International Conference on Motion & Computing, Practice Works Session 31/05/24

Figure 37: Renewed Taxonomy of Performance Works as Descriptive Dimensions Scored Through Time

5.5 Conclusion

This chapter began with the five Performance Works brought into alignment with the taxonomy of descriptive dimensions (Rieser, 2011, p. 101). The dimensions were engaged with through reflections on practice as opposed to concrete authoritative structures. In doing so, several contributions have been made. These include an adaptation of terms such as arbitrary and meaningful to site-responsive and site-specific as well as the addition of a real-time dimension. Attention to the dimensions was streamlined through a heavy focus on spatiotemporal dimensions. Where possible, remaining dimensions were fed in a way that sought to tease out relationships of interdependency and ways of annotating this. For example, instead of tracking a user control dimension, it was noted how identifying a spatiotemporal dimension and annotating whether the dimension was perceived or hidden was a tactic through which the experience of control could be shaped.

Beyond adaptation and extension of the dimensions, a series of Scene Studies and Performance Scores have been introduced which offer ways to consider the dimensions as they play out through time in performance. Focus has been shifted from classifying the Performance Works in their totality to locating the spatiotemporal dimensions at play at a performance, phase, scene and beat by beat level. This is an evolution from the discoveries concerning time in locative media noted in Chapter Four. This evolution is evident is seen in the performance score introduced in Chapter Four, to that which integrates spatiotemporal relations here in Chapter Five. In doing so, attention can be paid to enlivening as an outcome of shifts in these dimensions and not rather the dimensions in themselves. Finally, a series of mockups, production stills and observations of the Performance Works has been included to offer examples of how these dimensions play out in “the wild”. This data helps to ground the dimensions as they become clearer and point towards moments where the performances resist a process of categorization through terms of form.

6. Experiential Insights

6.1 Introduction

This chapter explores the intersection of spatiotemporal relations and relations to self, others and environment in TwMLM through a close look at the experience of participants and practitioners. It complements the previous chapters by moving away from analysis based on process reflection and scene studies, shifting the focus to responses offered from people interacting with the Performance Works themselves. Experiential themes are produced from responses to two specific Performance Works, *Ghost* and *Dancing Bear*. *Ghost* explored themes of stuckness and stillness through the story of a ghost that had become stuck in a foyer. The form was a self-guided site responsive interaction designed for The Joan, Penrith. *Dancing Bear* explored themes of conspiracy and connection through a secret mission that brought together audience as co-conspirators. The performance calls for a real-time synchronous audience and played out in Parramatta Square.

In Chapter Four these works were framed as iterations and responses to the central work *Message Bank*. *Ghost* set out to enhance discoveries made on *Message Bank*, deepening the audience's sense of liveness and presence in a self-guided and asynchronous performance. *Dancing Bear* departed from this approach, reprioritising the real-time performer and audience to explore how this fed into the work and the social ties at play. The process of exploring these works through experiential themes is also an iteration informed by *Message Bank* and an additional contribution of this chapter. It offers a tactic for stepping away from the components of the Performance Works themselves, with the goal of teasing out larger themes that can be found across the different works. While the method of this research is covered in Chapter Three, a finer level of detail is offered below for a greater level of transparency concerning how the data in this chapter has been gathered and analysed.

6.1.2 Method in Finer Detail

In this chapter data is gathered from twelve semi-structured interviews with audience members who attended either *Ghost* or *Dancing Bear*. These interviews each ran for twenty to

thirty minutes. In three instances, these interviews included two people at the same time. These sessions ran like small focus groups and therefore there was some dialogue between audience members as they reflected on their experience together. The twelve participants offering responses had a preexisting relationship with myself as the interviewer as well some knowledge of the overall field of research. They are not experts in performance with mobile and locative media, but are people interested and invested in performing arts as either practitioners or people who regularly attend.

The goal of these interviews and rationale of this approach is not based on removing bias or working towards a consistent codebook of terms that might apply to all related performances but rather to build from this bias and shared knowledge to construct a rich and shared interpretation of their experience. Names have been substituted with a label of P1 (Participant #1) through to P12. While the responses don't include sensitive material, the identity of the respondents doesn't offer further insight into this research and therefore has been removed to prioritise privacy when there is no rationale for disclosure.

In addition to the twelve semi-structured interviews, data is also taken from a two-hour focus group with the creative team that worked on *Dancing Bear* and *Message Bank*. A similar approach has been taken and a label of A1 (Artist 1) through to A5 is provided to help signal the different perspective. Data gathered from these interviews was analysed using a reflexive thematic analysis approach (Braun & Clarke, 2006, 2021; Marija, 2022). Each interview was first coded separately. Following this, data related to *Ghost* and *Dancing Bear* was separated out into two cases in NVivo. This decision was motivated by the desire explore a discrete perspective informed by the specific Performance Work before considering themes that might sit across both. In this second step, nine project specific sub-themes were developed. This included five discrete themes for *Dancing Bear* and four for *Ghost*. They included:

Performance Work: Dancing Bear

- Solidarity through Identification
- Narrowing Focus
- Dangly Moments: Risk, Glitch & Going Rogue
- Live Finds a Way

- Yearning for Feedback

Performance Work: Ghost

- Moving Inwards & Back Again
- Defamiliarizing Place
- Locating Events
- Carrying Presence

Following this, the sub themes were brought together, and three overarching sub-themes were developed. These themes offer a wider analysis that bring the different Performance Works together. The structuring of themes and the sub-themes is provided below.

Theme 1: Listening Alone, Together

- Solidarity through Identification (Dancing Bear)
- Moving Inwards & Back Again (Ghost)
- Narrowing Focus (Dancing Bear)

Theme 2: Reasons to Get Lost

- Defamiliarizing Place (Ghost)
- Dangling Moments (Dancing Bear)
- Locating Events (Ghost)

Theme 3: Co-creating Presence

- Yearning for Feedback (Dancing Bear)
- Carrying Presence (Ghost)
- Live Finds a Way (Dancing Bear)

A reference to the Performance Work from which each sub theme was developed is included above and across the chapter below. This is offered to help clarify the distinction between insights informed by the specific Performance Works and then the works in composite.

A final note should also be made on the nature of reflexivity in the development of themes. While the description above outlines a linear sequence of steps from initial codes, to sub themes and to overarching themes, the process itself was less linear. This description is true at a general level, but it should be acknowledged that in the step between sub themes and overarching themes there was a back and forth in timelines as each theme was developed. Some sub themes were identified early, whereas others were drafted and redrafted as larger themes came into focus. Like the rationale concerning participant selection and scope, this approach was informed by reflexive principals and motivated by seeking the richest interpretation of the data as it came into focus over time.

6.2 Listening Alone, Together

Tension between individual and collective experience is explored in the theme Listening, Alone Together. In some instances, it surfaces as a moving of attention from internal reflections and imagining through to external tasks like identifying co-participants. Other instances focus less so on shifting between states, and offer a perspective of Listening, Alone Together not as an individual or collective experience but both at the same time. Sub themes taken from *Dancing Bear* speak to sharing stakes with co-participants and the solidarity that it fosters as well as intimacy and distancing effects of listening to a live remote performer. Those taken from *Ghost* focus more so on the internal space of reflection or as one audience frames it “the zone”. The sub-themes of Solidarity through Identification, Moving Inwards and Back Again as well as Participation as Proximity are introduced here. They speak to the experience of finding yourself alone in a crowd, only to return as part of the crowd with a renewed perspective.

6.2.1: Solidarity through Identification (*Dancing Bear*)



Figure 38: Production Still, Audience observing action, *Dancing Bear* (2024) - Photo Credit, Sam James

In responses to *Dancing Bear* audience commonly commented on moments of identification with other participants. At times these were describe as both passive and more active interactions. P5 offers a perspective from towards the passive side of this continuum.

“The only thing I knew about the audience was being able to identify them by their headphones... sometimes we would laugh at the same things, or be watching the same things, and whatnot.” P5

P5 describes their relationship to co-participants as strangers made distinct from the other strangers through their use of an identifiable device. In contrast, some participants describe moments of more active identification.

“Another participant and I moved to similar areas, and we didn't speak, but it was the eye contact that we gave each other, [that] reassured me that we were supporting each other. And that we were on the lookout, I was going to be looking out for her, she was going to be looking out for me.” P1

Here P1 is connecting their moment of identification with a social contract. Now that they had identified a co-participant they were “going to look out for her”. Both examples describe non-verbal instances of identification, making eye contact or detecting a distinct set of headphones. Despite the difference, they both connect to a point concerning shared experience or solidarity. The notion of solidarity is clearer in the instance of P1 which points to a feeling of shared purpose, as opposed to P5 which describes a more generalized state of shared experience. This point can be further clarified when contrasted with descriptions of the participant’s relationships to others in the square. P4 describes others who were sharing the space as:

“The people from that world without the headphones.” P4

Whereas audience participants are commonly described through points of identification, the “people from that world without the headphones” are more often described through an act of observation and imagination.

“I was able to create this story about the other people that were there... and neither of us have a connection because we're in different spheres” P2

“They definitely had, like a different filter attached to them.” P6

P5 offers a passive and distanced description of their relationship with audience participants through observation, but the observations of P2 and P6 take this further. For P2 and P6 these people are from a different “world”, “in different spheres” or seen through a “filter”. While the distance created between audience participants led towards instances of identification, this is contrasted with a more observational and imaginative relationship with the incidental people present in the square.

6.2.2: *Moving Inwards and Back Again (Ghost)*

I'm like in this zone and everything else around me. It's like, totally blocked out - P.4

Moving Inwards and Back Again explores the audience's relationship to self. It gathers descriptions of where the audience's attention and imagination were placed and how it shifts from internal to external spaces. This shift was a key point of interest for P4 and P5. P4 describes their experience as being ‘in the zone’.

Yeah, I think it's interesting, because, like, once I put on the headphones right, like, I know that I'm in my zone. So, I think of it as like my personal experience, and I don't realize that there's any other people there, any other people like participating in the experience and when I start seeing people with the headphones, the visual of the headphones, then I realize that... okay, other people are also experiencing it – P.4

Here P4 is describing an individualized experience. They describe placing the headphones on as being a threshold moment taking them from one state to the next. The individualized state is only disrupted when P4 identifies other people wearing the headphones. This is described more so as a disruption rather than moment of solidarity like those in the previous theme. P5 offers a similar perspective but focuses more so on the material of the performance itself.

I think it took me from like operational mode. Get to the venue. Where am I going to park? How do I get in? How do I get the phone? Whereas all that sort of logistical stuff to internal you know, resets. Okay, some cool music. The headphones are surround, not surround, sound... You are encompassed in this little experience now, and so the, the questions allow you to sort of reflect inwards, you know. Okay, so I'm not... I'm not trying to get anywhere. I'm here now – P.5

Here P5 is responding to the first sequence of *Ghost* which offered a series of questions for the user to respond. They ranged from direct questions such as “Do you believe in ghosts?” through to more abstract or provocative questions like “Do you think you’re stuck or still?”. P5 describes these questions as provoking a shift of their attention inwards. They also describe this as a kind of syncing up with the present moment. Instead of thinking about where they are going or how they will get there, they are “here now”.

Like P4, P5 also notes the physical material of the headphones and the sound environment as setting up a threshold. P5 adds further detail pointing towards the “surround sound” as having an encompassing effect. The surround sound P5 is referring to is the use of binaural audio deployed in the experiences sound design. P4’s “zone” and P5’s encompassed space are similar descriptions of a journey guiding its audience towards internal action and out again. For P4, their focused moved back out through an awareness of others. P5’s was provoked by technical glitches.

I have to say, unfortunately, with the phone dying a few times, my focus was a bit interrupted. P5

Journeys inward toward reflection and imagination and then out towards external environment surfaced frequently but with differing perspective.

Once I began the experience, and I'd closed my eyes, the story was taking me to other spaces that I've been. P2

When the story started talking about the recital itself in the concert, having been in some of those places before, I pictured myself, or the... the spirit, that ghost being in there, or backstage, and then the curtains open, and she presented onto the stage. I had a more localized experience. P1

P1 and P2 offered responses as a small focus group as opposed to P4 and P5 who responded through one-on-one interviews. Their exchange is similar to the perspective of P4 and P5 but offers a contrast of grafting an imagined environment onto immediate one versus staying present with the immediate space in was P1 describes as a “localized experience”.

6.2.3: Participation as Proximity (*Dancing Bear*)



Figure 39: Production Still, Climax scene, *Dancing Bear* (2024) - Photo Credit, Sam James

Participation as Proximity concerns a shift in performance modes observed in *Dancing Bear* as described by audience. The structure of *Dancing Bear* can be broken into two halves. The first was driven by interactions facilitated by a remote performer, the second was anchored around a semi-structured improvised conflict between two performers sharing the same time and place as the audience while still connected via teleconference.

“I felt like in the beginning, we were... working together to find the dude. But then, yeah, towards the end, it was almost when that shift happened of when ... I physically could see the actors, that it was almost like the other participants sort of dissipated” P8

As the remote performers presence transitions from remote to embodied, P8 speaks to a shifting type of focus. The other participants are described as dissipating. This is contrasted with a more peripheral awareness of the environment. In this peripheral state, P8 is more aware or “tuned in” to their co-participants. P3 describes a similar relationship but uses distance as a metaphor.

“There are other times, maybe, where I felt less of a well, I don't know... why did I feel more of a participant? Maybe because I was so close to the action. But then when I felt more of... as an observer or observing action... that was further away.” P3

Here, P3 is reflecting on their role in the performance and drawing an association between closeness and participation. P3 uses closeness to describe a physical relationship but also an experiential one. At first P3 considers whether their physical proximity is what made them feel close to the action. However, they compare this to the second half of the performance where they describe their role as that of an observer. While they were still physically close, they describe a feeling of being further away. While not described in terms focus or distance, A1 offers a perspective on the sequences being described by P3 and P8 here. A1 focuses in on this shift based on its scripted form.

“I think that the challenge was when I suddenly found myself in a slightly more, like with a scripted section, with what was essentially a monologue, probably those instincts kicked in where I wanted to know that it was landing” A1

The feeling of “wanting to know it was landing” is picked up in a later sub-theme on Yearning for Feedback. The inclusion of A1’s perspective at this point is to note that as the performance become more ‘scripted’ the actors also note a distancing effect. In contrast as the performance adopted more participatory modes responses point toward feelings of proximity.

6.3 Reasons to Get Lost

This theme focuses on the joy of becoming lost in a familiar place and how it operates as a tactic of forming social ties across the Performance Works. The word “lost” here, is used in multiple ways. Sub-themes taken from *Ghost* focus on relationships to place and navigation. Lost in this sense, refers to defamiliarizing the audience’s relationship to a familiar place. It also draws in the sub theme of Locating Events, which gathers data around how audiences seek to locate and reconcile the world of the performance with that of their real-world environment. This includes descriptions of contingent space formed when a reconciliation isn’t possible. These moments are labelled Dislocating Events. Sub themes taken from *Dancing Bear* focus less so on place but rather the rules of performance and the risk of failure. Lost refers to the act of ‘going rogue’ whether intentionally or unintentionally including the shared solidarity and spontaneity it fosters between participants. The act of becoming lost within limits is offered as a key enlivening tactic.

6.3.1: Defamiliarizing Place (*Ghost*)

When responding to their experience of *Ghost*, audiences commonly reported a shift or a desired shift in their perspective of place.

“I felt like I was viewing the foyer that I kind of walk around in a new way. And I enjoyed like, a new way of viewing it.” P.9

P6 and P7 offer similar responses but further detail concerning their relationship to detail.

“I noticed things I hadn’t noticed before. So physically, I hadn’t noticed the ceiling in that foyer. And I don’t know why I looked up. But now next time I go into that foyer, I’ll be more aware of that physical space.” P6

“I started noticing random things like the tiles on the stairs, the handrails, like the window, the windows at the top. I’ve never looked at them in all the time. So yeah, definitely made me more aware of the environment.” P7

The performance of *Ghost* invited the audience to identify a series of beacons located throughout the foyer. These beacons weren't intentionally hidden in a way that would make the experience challenging, but they were placed in a mix of locations. Some were high, low and down corridors. To identify them, the audience was required to move around and to look in locations that might be less common. Key thoroughfares and venue signage was irrelevant. A small glow of white light showing from behind a bench or door become a more telling indicator for locating a beacon. The responses here suggest this action shifted the audience's relationship to what was familiar place. This shift could be understood through the notion of defamiliarization.

Defamiliarization is a term used by Mumford (Mumford, 2018, p. 60) to describe a tactic deployed by the theatre practitioner Bertolt Brecht. Mumford offers the term as a possible translation of the German word *Verfremdung* originally used by Brecht. The term is sometimes translated as Alienation. This translation is critiqued by Mumford, who argues it places the emphasis on alienating an audience whereas Brecht's use of *Verfremdung* or Defamiliarization was to intended to address the problems of alienation as understood through a Marxist lens. The purpose of this brief detour into this term defamiliarization, is to ground its use here and draw in the work of Brecht which will be picked up in Chapter Seven. What is key to note at this point is that Brecht uses defamiliarization as a tactic of making the familiar unfamiliar for a social purpose. This might be to illustrate hierarchical power dynamics between people of different classes for example. What is being described above is not an example of defamiliarization for the purpose of social critique. However, it opens a question as to how this shift in perspective in place, making the familiar unfamiliar, might be a tactic for fostering social ties between people and place. The responses provided don't offer a clear perspective on this, however P6's response does go further to link their defamiliarized perspective to a renewed awareness of others.

"There were kids coming and going for like, music lessons, or whatever. So my thought was, wow, isn't it nice that I've come here for one purpose, and at the same time, that space is used for other stuff as well." P6

Here we see the shift in P6's perspective. It moves towards a greater awareness of the social space they are sharing. In some instances, the distancing effect the performance constitutes guides the audience to a greater sensitivity to their social and environment context. Returning to P3's description of escaping the environment through imagination.

"Oh, I'm really familiar with the environment. Yeah, that I was in. Been in there lots of times. But once I began the experience, and I'd closed my eyes, the story was taking me to other spaces that I've been in. And, for example, I thought of the State Theatre, and the grandeur of the State Theatre and the stage there." P3

P3 complicates the earlier responses. As opposed to describing a more sensitive relationship to place arrived at through defamiliarization, they offer a more escapist approach. P3 isn't "tuned" in to their environment, but transported somewhere else. P5 adopts a more critical approach, but also describes thinking, or in this case, wishing for alternate places.

"The show is so atmospheric that I would love to see it in a venue that had that level of atmosphere. The Joan is not atmospheric venue really like you know, or you know, possibly could you go... I'd like to go into a darkened concert hall." P5

Whereas the earlier responses focus on the impact of the work transforming their relationship to place, these later responses focus more so on how the experience made them think of other places. This theme shows the capacity of the *Ghost* to defamiliarize place for audiences, but that it could also be made more intentional if it's to be understood through Brechtian terms.

6.3.2: Dangly Moments - Glitch, Risk & Going Rogue (Dancing Bear)



Figure 40: Production Still, An audience goes rogue, *Dancing Bear* (2024) - Photo Credit, Sam James

Glitch, here, refers to points of failure in the performance as perceived by the audience. The prospect of glitch and “going rogue” was described across multiple audience interviews. The relationship to this was mixed. P11 describes an encounter with glitch in response to a specific moment they had dropped out of the teleconference but were unaware.

“My tech had fallen out, so I came across as a rogue... The feeling of not having done it properly was really quite impactful for the rest of my experience.” P11

P11 describes being perceived as rogue as a negative experience. P2 offers a similar perspective when speaking about the concern they would be unable to use the devices “correctly” resulting in a glitch in the larger performance. While not a technical glitch, P2’s response builds from P11’s

to show that the fear of going rogue can be as impactful as going rogue itself. P2 goes on to describe frustration at the actions being taken by another a participant they identified as not following the rules of the performance and disrupting the intended narrative. These two cases speak to a sensitivity to the prospect of glitch or failure. They show the impact of both real and perceived glitch as impacting the experience of the audience.

Participants also described a strong a sense of responsibility for the success of the overall event. Responding to the prospect of glitch P5 states:

“I’m a people pleaser. And I also want to make things work.” P5

In contrast to the fear of being perceived as rogue, some participants speak positively to the experience of observing glitch. P5 describes watching P11 experience glitch as:

“I heard everything the whole time. It was actually kind of funny when [P11] dropped out, she just started going rogue and do[ing] her own thing.” P5

The actions of P11 are described by P5 as a positive moment which felt live, spontaneous and made the performance memorable. Notably P5 stresses they “heard everything” before describing this moment. Their joy in the moment of glitch is offered from the ‘safe’ distance of having ‘heard everything’. The experience of being within the glitch is described as negatively by P11, whereas the chance to observe this play out is described positively by P5.

P4 offers up the term “dangly moments” to describe instances where they felt a heightened sense of risk or possibility. When asked to explain this term, P4 describes an instance where they had been sent a photo of the target but were unclear of what to do if they were to encounter the target.

“There was a moment in between... not very long, but a moment in between, where that instruction wasn't clear yet and ohh, my God! ... That's what I meant by the dangly moment, which makes it really exciting.” P4

P4 points to moments where the rules, or lack of rules, opened a space where there was a degree of uncertainty. The description of ‘dangly moments’ has a positive association in P4’s account. This resonates with P5’s observations of participants going rogue. While P2 and P11 offer more negative associated with the fear or risk and being perceived as going rogue, their experiences are also tied to these ‘dangly moments’ where the rules of the performance become temporarily unclear.

6.3.3: Locating Events (Ghost)

Moments where sounds, objects or actions from the real world environment intersect with the landscape of the performance were a reoccurring point of interest for audiences. These moments have been well documented in research on locative media performance. They have been referred to as “Magic Moments” (Reid et al., p. 290; Rieser, 2011, p. 100) which describes instances where the augmented world and the real world appear to sync up. “Loose Couplings” is also similar concept (Rossitto et al., 2016, p. 245). This approach shifts the focus slightly and describes a tactic of designing for these moments. While this theme overlaps with these ideas, the title of Locating Events has been developed through an engagement with the specific data gathered in *Ghost*. It’s offered here to consider how it might reinforce or extend the descriptions of Magic Moments and Loose Couplings already established. Through *Ghost*, Locating Events surfaced as instances of liveness and disorientation. An example of this is offered by P7.

The other one that was really vivid for me, was the station where you, you went into the corridor, and there’s a notice board. Now in my head, I thought, ah, there’s going to be something physically on that notice board. So, I was kind of listening and kind of looking. But at the same time to my left, someone came out one of the doors in the function centre,

and I turned and it was a gentleman and a primary school aged kid, and I went, Oh, is that part of the show? No, it's not. But that's Oh, that was interesting. P7

This quote from P7 offers three stages of a Locating Event. The first is identifying a connection. In the narrative of *Ghost*, the character describes the action of seeing their name listed on a notice board. The fact that the real-world environment of the performance featured a physical notice board implies a connection for P7 that they follow to seek out more detail. Here, I'll refer to this action as grounding the connection. It's the second stage of a Locating Event. This step is also picked up by P3.

"Going to the board, going to where the board had names. I found that quite powerful. Because initially I was looking, am I, am I going to find a clue here. And then I realized that it was a historical thing. That this person that was speaking to me, their name wasn't going to be on the board. But this was how time moves on. And they're forgotten, this person who has forgotten. And there's a whole new set of experiences that are that of other people." P3

Both P7 and P3 identify a connection and then seek to ground the connection only to reach a point where there appears to be no more material to uncover. This is step three and is referred to here as the point of no connection. P7's perspective offers an additional layer here. While seeking to ground the connection, they describe the stage door opening and two people emerging. For P7 this triggers a secondary locating event.

"Oh, is that part of the show?" P7

However, it follows the same pattern and is the initial step before arriving at a point of no connection.

“No, it’s not. But that’s, oh, that was interesting.” P7

Both P3 and P7 describe the point of no connection as offering provocative or reflective space. For P3 this guides them to a reflection on the relationship between past and present occupants of this space. P7 doesn’t offer this level of detail but points towards the uncertainty as ‘interesting’. While these three stages offer up a sequential perspective on a Locating Event, there is an earlier step or foundational layer for a Locating Event to occur. This is the priming lens of the performance itself. To identify a connection, there must be the assumption that a connection might occur. This is not so much a step as it is a state and it overlaps with the earlier theme of Defamiliarizing Place, in that it’s through this reorganized perspective that a Locating Event can occur.

6.4 Co-creating Presence

This theme focuses on presence as something that is co-created between participants. Here, presence is observed as being sought out and generated by both performers and audience. For sub-themes taken from *Dancing Bear*, this shows up in unexpected ways the audience found connection with one another and the performers. Perspectives from the performers also shed light on the disorienting effect a lack of feedback produced and how this created an obstacle to the sense of their own presence in performance. For sub themes on *Ghost* this looks different. Responses here describe the audience as carrying presence through their actions. The self-guided approach led towards an “always on” approach to omnipresence so long as the audience was active and participating.

6.3.1: Yearning for Feedback (Dancing Bear)



Figure 41: Production Still, Actor performing a scripted sequence, *Dancing Bear* (2024) - Photo Credit, Sam James - Performer, Kate Worsley

The creative team spoke frequently to a yearning for greater feedback. This is echoed in audience interviews although the desire for feedback is less explicit and is often described more so as positive associations of presence. A1 describe challenges due to a lack of feedback as:

“the first time I've really done a show where I'm a live performer, but I couldn't access the entire audience... and sense their reaction and sense, you know, ... you adjust pace, you just naturally do all those things when you're in a traditional theatre, and suddenly, I was performing, but because the boundaries were kind of gone, I couldn't sense any of those things. And so, I suppose, what does that do to you as a performer?” A1

A1 and A2 express a desire for a greater sense of where the audience was physically but also on an emotional or energetic level. This desire is tied to their capacity to alter performance in a way that is responsive to the moment. In the quote above, this point leads A1 to question “What does

that do to you as a performer?” A1 is questioning the fundamental role of a performer and its relevance if disconnected from feedback. Responding to this, A1 and A2 describe shifting their relationship to the task from performance for theatre to performance for TV or film. A2 describes imagining the audience as ‘people on set’ who were observing their work as they were ‘hitting their marks’ and performing to camera. Here we see an imaginative leap taken by A2 to reconcile a new relationship with their audience. The audience is still present, but they’re imagined as co-creators in a moment of performance as opposed to the intended recipients.

While audiences don’t speak explicitly to the theme of yearning for feedback, echoes emerge in how they describe the presence of the actor. Audiences often describe their initial relationship to the character of A2 as cold, removed or distant. Some associated this with the distancing effect of a teleconference whereas others associated this with the character itself. In contrast, audiences frequently spoke to a shift in the quality of this relationship when the actor transitioned from presence via teleconference, to a presence through both teleconference and embodied co-presence in the square itself.

“The voice, just the auditory, just hearing the voice, it didn't sort of... he's here, but removed, but when we actually had that visual contact, it sort of, built that connection.”

P2

While this isn’t described as feedback, audiences speak to a warmer or strong sense of connection with the actor after this shift occurred. Responses from A1 and A2 complicate this further by revealing further challenges in working with feedback while in a hybrid mode. Both A1 and A2 describe performing remotely as sitting more comfortably in a mode of performance that was like that of TV or film. However, moments where they could see the audience but felt disconnected from a sense of feedback were described as the most challenging. For A1 this challenged was heightened even further if a sequence was heavily scripted as opposed to improvised.

"I think that the challenge was when I suddenly found myself in a slightly more... scripted section, with what was essentially a monologue... those instincts kicked in where I wanted to know that it was landing" A1

6.3.2: Carrying Presence (*Ghost*)

"She was with me, or alongside of me, like, for the whole period of time." P3

When describing their relationship to the central character in *Ghost*, P3, P4 and P7 describe an 'always on' state of presence. These responses also begin to implicate the audiences' own actions in producing this presence. This dynamic is framed here through the theme 'carrying presence'. In the quote above, P3 points towards both spatial and temporal qualities. P3 describes the character as being present across the full duration of the performance and stresses a proximity as being "with me" or "alongside me". P3 goes into further detail to describe the quality of this relationship.

"I built up this relationship with someone I felt was vulnerable... I also felt like that was a real experience. And that person, that voice, was speaking from an experience, not something that was invented like it was a genuine presence or an event that had happened." P3

There are two key points in this extended description. The second point refers to a suspension of disbelief. P3 describes the presence as producing a sense of realism. It was a 'genuine' presence. While this is relevant, it's the preceding point relating to vulnerability that is possible more revealing. P3 is both listening to the character but is also implicated in the story through their actions. They are responsible for 'carrying' the character. The vulnerability P3 is describing could relate to both their perception of the character, but also the circumstances which

tie P3's actions to the fate of the character. While P3 doesn't connect these points, a case could be made that the genuine presence is informed by this dynamic. P7 offers a similar perspective but stresses the now-ness of the presence.

"She was speaking in the moment and said she was reflecting on what had happened to her. Yeah. But she was in... she was in the present with me. Yeah. So she was in my head talking about what had happened to her in the past. But she was in the prison." P7

Like to P3, P7 stresses an ongoing closeness to the character. In this case the character is located in "my head". Here further emphasis is placed on sharing the same moment. They exist in the now of the performance. This now-ness differentiates the approach to presence from similar listening experiences and is picked up on by P4.

"Yeah, I guess with a podcast, I am in the zone. But I still feel like more of a passive listener." [Referring to Ghost] "I have to pay attention, and I have to make an action. That's why I feel more in the zone. I think... I think that's the difference." P4

P4 uses the term "the zone" to refer to a heightened state of experience. This is picked up on in an earlier theme but in this context, what's meaningful is how P4 ties their role to their experience. The responsibility 'to make an action' is identified as differentiating this type of listening from that of a podcast. P3 and P7's responses can be linked to this point to offer a perspective of the audience's actions feeding the "now-ness" of the presence and the vulnerability introduced earlier. While these responses speak to a spatial closeness and a temporal state of now-ness with the audience, they also introduce speak to the role of the audience as implicated in this presence.

6.3.3: Live Finds a Way



Figure 42: Production Still, Audience interacting with chat function, *Dancing Bear* (2024) - Photo Credit, Sam James

While a teleconference was the primary channel across which action for *Dancing Bear* played out, the associated chat function emerged as a key point of interest for the creative team and as a mode of participation for audiences. The theme, *Live Finds a Way*, gathers moments where interviewees encountered presence in ways that weren't expected by the creative team. The organized or scripted use of the chat function was tied explicitly to sharing a series of images of the target the audience was asked to pursue. However, interviews reveal a series of additional interactions occurring through this channel.

"I think the chat was kind of an unexpected delight about the show." A3

These interactions featured status updates between participants, technical support, jokes, commentary, photos taken in real-time and direct messaging between individual participants.

This creative team noticed this behavior early on across the shows season and began to integrate the channel into the onboarding process. A2 offers a further observation on this engagement digging deeper into how it speaks to the nature of relationships across the performance itself.

“I was like, oh, people are engaging this on all sorts of ways. Like, someone might be sitting at the other end of the square, just texting, and that might be enough for them. So, you're not going to have a traditional, you know, relationship with them.” A2

Audience interviewees offer mixed perspectives on the relationship to this channel. P2 speaks to a sense of surprise and connection found through the chat.

“I was contacted... there was a welcome to me, I received a welcome. And from that moment, I felt I'm really, I'm, I'm a part of something. I'm a member.” P2

P2 speaks to a sense of inclusion and participation that was heightened through an encounter via chat. P6 takes this further, paralleling these interactions with that of the organized performers.

“They're texting their talking in, in a sort of participatory way. So, so therefore they're playing alongside the sort of professional players” P6

The description of a second layer of performance, a back channel or a parallel performance surfaced through observations from both audiences and the creative team. While audiences don't frequently comment on their motivations for this interaction, P6 offers one perspective:

“There was a little bit of an anxious feeling for me that I had to participate there to show that I was still alive, and I was engaged and interested. So that's, that's an adrenaline feeling... that comes from, you know a compulsion to participate.” P6

P6’s description of a ‘compulsion to participate’ isn’t echoed across other respondents but the desire to show ‘I was still alive’ resonates with data gathered across the earlier theme, Yearning for Feedback.

6.5 Conclusion

This chapter has introduced a series of experiential themes concerning the Performance Works *Ghost* and *Dancing Bear*. Using a reflexive thematic analysis process, a set of sub-themes was distilled offering discrete perspectives for each work. In the case of *Ghost*, insights point toward an experience which made a familiar place unfamiliar (or defamiliarized) and moved the audience’s attention from their internal reflections to their external environments. Descriptions of locating events and the audience as carrying presence reveal the audience as playing a role in the co-creation of the work. Here, the mobile and locative media system invites the participant to be both performer and audience, “tuning” into their environment through their actions taken.

For *Dancing Bear*, insights focused less so on the physical environment and more on the quality of relationships between participants, performers and passersby. Sharing secrets and playing a role as a participant is described as fostering solidarity between people and a feeling of closeness to action. The fear of “going rogue” was shown to lead to negative experiences in some cases but also tied to a sense of spontaneity in others. In some cases, failure or the fear of failure, was also shown to foster a sense of closeness. People “knew they were in this together”. A lack of feedback accessible by performer and the unexpected ways audience sought to express presence tells a story of presence as something that is sought out and shared between participants.

While the data offers a range of stories concerning experience, this chapter has anchored these on three key themes at the intersection of spatiotemporal relations and social ties in

TwMLM. The first focuses on the tension between individual and collective experience. The second outlines tactics of disruption and becoming intentionally lost. It explores glitch, going rogue and defamiliarization as ways to renew a perspective on place on people. The third considers the notion of presence. Instead of focusing on presence as inherent with a performer or as something to be amplified, it approaches presence as something that is co-created between participants. While these themes don't suggest that these Performance Works fostered social ties, they tell a story of social ties in flux. Perspectives are refreshed. Moments of identification occur. People are allowed, or invited, to become momentarily lost and in doing so reconnect with their environment. Parts of this chapter were presented at ISEA '25 and published as a conference paper (Atkins et al., 2025).

Before finishing this chapter, it is beneficial to reconnect this material to how liveness has been approached. This research has taken four recurring components of liveness including spontaneity, presence, feedback and community as a foundation for thinking and practice. These components are informed by existing research in the field (Auslander, 2023, p. 16). In this chapter, these components have been teased out in action and experience. Spontaneity has surfaced through Theme 2: Reasons to Get Lost with a focus on glitch, risk and going rogue. Presence and feedback have both been explored through Theme 3: Co-creating Presence. This theme has shown how audience and artist responses bound these components closely together. Finally, the experience of community is unpacked through Theme 1: Listening, Alone Together. Community in these works was shown to form and dissolve through moments of identification and alienation. These themes each speak to moments where experiences are heightened or changed. The picture that is drawn is not of an ongoing state of liveness but of a continuous enlivening that is produced between performance, participant and mediated assemblage.

7. Discussion & Future Work

7.1 Introduction

This research began with a description of enlivening as an extension of Auslander's liveness (Auslander, 2023), and understood as a state that is continuously and collectively produced between performance and participant within mediated assemblages. The Performance Works have explored this approach to liveness through TwMLM. A creative impulse guided this exploration and a process of performance making as mode of inquiry. The research aims expanded this impulse into a wider exploration of TwMLM, with a focus on the shifting nature of spatiotemporal relations and how they shape relations to self, others and environment. The initial intention of the Performance Works was to create a performance that could be shaped by the slightest touch of the audience, and to understand the significance of this relationship for theatre making more broadly. The hypothesis was that if a level of sensitivity through interaction could be achieved, and a dramaturgical framework that brought together the story that was being told with this type of interaction, the output would be an experience that was intimate and novel. Through this work there was a type of liveness that was being chased. This liveness could be found between space, sensitivity and a tactile approach to telling story.

The specific fluid and ongoing interaction envisioned at the start of this research is still an ongoing point of exploration, however in seeking this out and responding to the obstacles the process generated, each Performance Work has revealed insights about the technical and dramaturgical implications of telling making theatre in this way. These insights have clarified an understanding of that initial impulse, as well as the unexpected benefits of TwMLM. A key shift in this research has been a move from chasing liveness to designing for enlivening. Instead of thinking about liveness as something to be amplified, captured, protected or presented, this research has approached enlivening as something which can be instigated by the practitioner but is collectively produced between an array of people, places and technical systems. In this discussion, findings from the preceding chapters are gathered around three higher level enlivening tactics. They include:

- enlivening as shaping contingency
- enlivening as locations per second
- enlivening as audience sync

These tactics round out this research process and offer a methodological link back to Chapter Three which describes positivists and post positivists as social engineers, interpretivists as storytellers, and critical theorists as catalysts of social change (Pickard, 2007, p. 15). While a definition of enlivening is offered at the outset, here three higher level tactics are explored in the spirit of an interpretivist paradigm and informed by data generated through the Performance Works. These tactics speak to instances of enlivening as observed in the sequences of time and space relations, the sensitivity of interaction and story as well as the shifting of audiences from individual to collective states.

7.2 Enlivening as Shaping Contingency

Tensions between open, non-linear and fixed, linear relationships to time and space were introduced across Chapter Five. These tensions were explored through tactics deployed in the Performance Works and documented via scene studies. This section regroups these tactics and considers them in tandem with one of the three experiential themes offered in Chapter Six, *Reasons for Getting Lost*. While these themes are drawn from differing perspectives and points of process, the notion of contingency offers a way to bring them together. Contingency is a concept drawn on extensively with regards to performance and performativity. Contingency can be approached through Massumi's framing of the event as having the potential to unfold beyond pre-determined structures, emphasizing emergence, intensity and affect. (Massumi, 2002, pp. 23-26). Similarly, Manning's work on incipient action explore the conditions that allow for unexpected shifts in experience (Manning, 2009, pp. 13-14). Contingency has also been introduced earlier in Chapter Two through the work of Fan (Fan, 2017, p. 5) and their

observation of contingency as a counter to forces of standardization and rationalization. Contingency will be used here to help connect some of the “how” shared in Chapter Five to the “why” in Chapter Six. In doing so, an interest in shaping contingency, as well as points of departure and points of alienation, is offered as a feature of the developing dramaturgy in this research. This will be demonstrated through the ongoing iteration of the Performance Works and how it informed the creation of a demo version of *Message Bank* for SXSW, Sydney in 2024. Before progressing, it is helpful to reiterate the spatiotemporal tactics introduced in Chapter Five. They include:

Spatial Tactics

- **Open Exploration:** This is the most non-linear mode in which the audience is invited to explore the environment with no boundaries. In the case of *Ghost* this mode features the use of sensors to shape an audio experience in dialogue with the audience’s exploration.
- **Seeking:** This is also non-linear but more directional. The audience is not following a prescribed route but is seeking out specific anchors like beacons. For *Ghost* these beacons looked like white lights, and the narrative material bound to them took the form of memories.
- **Turn to / Return to:** This is a linear mode in which the audience is invited to return to specific spots and in a specific sequence. In *Ghost*, this looked like a linear unfolding of narrative beats where memories become joined to form narrative convergence.

Temporal Tactics

- **Collage:** This is a tactic of layering material over time. For example, in *Message Bank* fixed time messages interrupt the audience’s experience at scheduled

intervals but continue to play on top of other material, such as dialogue, audio material or both.

- **Spotlight:** In contrast to Collage, a Spotlight tactic involves fixed time events pausing the flow of action, creating a temporarily open time event, while still sitting within a larger fixed time structure. For example, in a later iteration of *Message Bank*, messages interrupt the audience's experience and freeze the moment within a scene, including materials like dialogue, until the audience chooses to progress. However, there is a timer tied to the action of solving the problem that sits outside of this pause. It offers a larger fixed time structure in which a temporarily open time beat occurs.
- **Stillness:** This tactic stops a fixed time action and makes it fully open time. For example, in *Ghost*, fixed time messages interrupt the audience's experience and freeze the scene and phase until the audience decides to progress.

Each shapes the scope within which something unexpected or undetermined can happen. They shape contingency. An earlier insight taken from Chapter Five concerning the distinction between real-time and perceived real-time offers an extra dimension here. Across the Performance Works there is what could be termed real contingency, such as the nature of traffic flow or the choices of the audience, and the perceived contingency, such as the audience's awareness of the structures in which they were participating. This is a distinction between the real forces, or the perceived forces, through which spontaneity emerges. This observation teases out a subtle difference between Massumi and Manning's approach. Massumi approaches contingency as a force that determines the potential for the unexpected (Massumi, 2002, pp. 23-26). Manning focuses more closely on contingency as incipient action, or that which affords unexpected shifts in experience (Manning, 2009, pp. 13-14). This brings up a consideration of the difference between the material or structures the practitioner places intentionally beyond their control; in contrast to that which the audience perceives to be out of their control but is in fact structured. These can be described as layers of perceived and real contingency or what will be shown as layers of getting intentionally lost.

In applying contingency to the spatiotemporal relations noted here, there is also a parallel with a description Breel offers when exploring agency in Experiential Theatres (Bartley & Lewis, 2023, p. 74). Breel makes the case that agency is not something that can be given to an audience. However, a performance can restrict and conduct agency through the way its shaped. Agency, as described by Breel, dovetails with the descriptions of contingency provided. Agency and contingency could be understood as two attempts to describe a relationship to experience and control but from differing perspectives. One approaches this from the experience of the individual audience member or user, whereas the other approaches this from the perspective of the practitioners' decisions making. While the focus here is on contingency rather than agency, it's notable that these terms have significant overlap. Like Breel's approach, contingency in the Performance Works is not something that can be removed, but rather the tactics listed above speak to how it is afforded or constrained. The spatial tactic of *Open Exploration* and the temporal tactic of *Collage* are the approaches that afforded contingency the most. They gave the audience more control over the progression of the narrative. Whereas *Turn To* and *Stillness* constrained contingency by guiding the audience toward a linear relationship to space or holding the progression of the performance until an action was taken. The spatiotemporal relations can be structured on a spectrum from those that afford the most contingency through to those that constrain.

The theme, *Reasons for Getting Lost*, focuses on moments of dislocation and defamiliarization for audiences. While in some instances this was an unintended consequence from a technical glitch or a lack of clarity regarding rules, *Reasons for Getting Lost* reconsiders these moments as methods for resensitizing or reawakening audiences perceptual awareness of themselves and their environment. Here, audiences describe moments where they seek out another person to check "Am I doing this right?" or sit and observe a place like a transitory foyer in a new way. To connect this back to contingency, this offers an evolution of the concept as including the scope within which the performance allows the audience to become lost. Here, contingency is not so much a force that determines whether the unexpected might occur but is the amount of room that's provided for this to happen. While the level of comfort audiences express in response to these contingent spaces varies, it's often associated with what makes the experience memorable or live. This approach to contingency helps bridge insights from *Reasons for Getting Lost* and the shifting spatiotemporal relations observed in Chapter Five. Here we see

expressed a defamiliarizing tactic deployed to resensitize people to themselves and their environment alongside a spectrum of spatiotemporal relations which afford or constrain contingency.

Before following this through to its manifestation in recent and future work, a reference to audience comfort noted above can be further clarified. To do this, points of departure and points of alienation are offered as labels to help frame an envelope of contingency. As noted in *Reasons for Getting Lost*, there is a limit to the amount of contingent space an audience is willing to navigate before deciding to exit or distance themselves from the experience. This is especially overt in one instance where an audience described a technical glitch which impacted their experience significantly and led them to choosing to “pull back” from the experience. While they remained in the work through to the end, their description points to a shift in their relationship from participant to observer. This instance of dislocation could be described as a point of alienation. It dislocated the audience from the action without being an intentional shift in their relationship to the work.

Alternatively, there is also evidence of instances where the opening out of contingent space enabled the audience to become defamiliarized (dangly moments) in a way that brought joy, spontaneity and renewed connection. These are moments which create distance without alienating the audience from the performance itself. These could be referred to as points of departure. Points of departure are necessary breaks from the familiar pattern of the environment required to be able to arrive at a new point of perspective or a new relational experience. Without contingent space, a point of departure cannot occur. With too much contingent space an audience reaches a point of alienation. The Performance Works speak to ongoing efforts to navigate this through shifting spatiotemporal relations and narrative structuring. This is the work of shaping contingency. While acknowledging that one audience’s point of departure may be another audience’s point of alienation, it is helpful to identify these in the shaping of contingent spaces.

An interest in contingency is not what instigated this research; however, the concept has surfaced as a line of future inquiry and as a link back towards earlier references such as the work of the Situationists and Psychogeography more widely. This can be observed in a later adaptation of *Message Bank* produced for a demo presentation at SXSW, Sydney '24. Here the performance was presented in the context of a panel designed to share outcomes from this research. The

context was suited to a demo of the performance, something that lasted 2 - 3 minutes, rather than a longer form work such as the original 45-minute work or its later 25-minute adaptation for MOCO'24 (Atkins, Johnston, Kocaballi, et al., 2024). In response to this, a short work titled *Voxstep* was developed.

This work took narrative elements from *Message Bank* and extracted the chase scene that occurred at the climax, packaging this as a single unit of action. Given the scale, the choice was made to let go of the beacons used initially to map the experience to location. The work was solely self-guided and contained to the mobile device itself. A question-and-answer sequence was made to welcome the audience. This feature was taken from work done on *Ghost*. Rather than guiding the audience through a brief meditation as in the original, the goal of this sequence was to prime the audience to become lost. It asked a series of questions such as whether the audience was wearing comfortable shoes, whether they were good with maps and whether they had any run ins with law enforcement. Following this sequence, a voice guided the audience on a two-to-three-minute escape from their location. The audience was invited to swiftly exit their room and to begin walking in an unexpected direction to throw off the scent of anyone following.

As they walk, they hear the voice of a person that has had to leave their “old life” and become a fugitive. After a few minutes the user is invited to find a wall to lean against, make themselves as innocuous as possible and consider whether they'd like to continue along the journey. The final text reads, “let’s get lost together”. While this experience is a heavily simplified and abridged version of the central Performance Work, it is offered here as a demonstration of how this work has becoming increasingly concerned with intentionally shaping contingency. *Voxstep* simplifies the technical set up and places the audience in a fixed time experience but with a non-linear relationship to space and offers a simple call to action; to become lost with someone they don't know.

Before closing this section on shaping contingency, there is one additional tension that has reoccurred. This is the tension between individual and collective experience. This tension is explored more deeply in a later section of this chapter, enlivening as audience sync. But this tension has a specific link back to points of departure, points of alienation and the *Voxstep* demo. Beyond the simplified narrative approach to *Voxstep*, what is also significant about this version is how it shifted from an experience that was intended to be self-guided while within a group to an

experience which is fully self-guided. In terms of points of departure and points of alienation, this brings forth questions concerning how these points of experience might be encountered by the individual and by the collective. Future research could investigate how to expand the space for contingency through clear points of departure, but also how these points might be designed for the individual or for the collective. How might a group collectively agree to become lost together and what kind of contingent space might that create?

7.3 Enlivening as Locations Per Second

A relationship between motion, experience and story is a key characteristic of TwMLM. This research began with the assumption that this relationship would be fluid and ongoing. That is, that in the Performance Works there would be the perception of a real time relationship between motion and the action of the performance. The goal was to set up technical systems that afforded this relationship and to explore the dramaturgical implications. Through the documentation of the Performance Works in Chapter Four, this assumption came under scrutiny and led to a series of compromises. Some of these compromises are further outlined in this section. They reveal a series of attempts to produce this interaction and how these attempts fueled new reflections on this relationship. Instead of working with the assumption of a fluid and ongoing interaction between motion, experience and story, the notion of locations per second is offered here to shift the focus toward the rate of this interaction. By clarifying the frequency of locations per second, it's possible to shed light on what compromises were made and why. In addition, the theme of *Co-Creating Presence* from Chapter Six, is drawn in to offer links between locations per second and how it connects to enlivening as collectively produced. This work is then tied to a future project which seeks to increase the rate of locations per second in the production of a new performance, *Garden of Sound*.

Frames per second is phrase is taken from film and video technology. In its original context, this refers to the number of individual frames or images displayed in one second to create the illusion of motion. Following this logic, locations per second explores the relationship between motion, experience and story as if the interaction described was like that of a handheld flip book. When the flip book is flipped at a certain frequency, still images come together to

appear in motion. If you take the flip book and slow the frequency you will produce an increasingly stilted illusion of motion until you arrive at a still image. This might be understood as a deadening effect. The use of deadening here doesn't imply a qualitative assessment such as bad or poor quality, but a contrast to the images in motion. If we move the other direction from still image to a series of images increasingly presented in quick succession, this could be described as having an enlivening effect. This approach can be transferred to interactions observed through Performance Works as locations per second.

For most of the Performance Works in Chapter Four, locations are parsed and bound together with an environment, action, prerecorded and live media assets to produce performances interpreted by audience to form story and experience. In the Performance Works, the audience's position is being constantly interpreted. However, for the sake of this exploration, focus is applied to the rate at which location is interpreted and tied to a change in the performance state. Performance state refers to a shift in action or conditions. This might be a scene changing from playing to not playing, or the volume or pitch of a score shifting in response to the changed location. The frequency of locations per second therefore determines the frequency of shifts in performance state.

There are various means through which a locations per second interaction can be produced such as motion capture, infra-red sensors or ultrawide band technology. Despite these options, time, technical, budgetary and environmental constraints guided this research toward working with Bluetooth beacons as a mode of location tracking. Why? The beacons offer a crude approximation of proximity when contrasted with the precision of motion capture. However, they were a low-cost option that could be installed across a large public environment, could be interacted with by multiple audiences simultaneously and maintain a semi-reliable output despite varying conditions. The term semi-reliable acknowledges the stochastic nature of Bluetooth signal strength readings (RSSI) which were used to assess proximity. More on this is outlined below. At the time of production, other options for generating the interaction required smaller and more controlled environments or access to an array of newly released mobile devices. The beacons were a compromise that brought together basic elements of the envisioned interaction, environment and social context. Some of these affordances and constraints are noted below.

Key Affordances of Bluetooth Beacons:

- Can interact with commonly available mobile devices (at the time of production)
- Can be installed across a large public site
- Semi-reliable signal output despite varying conditions (e.g., weather changes or density of traffic in the area)
- Low latency (near-instant responsiveness)
- Low cost

Key Constraints of Bluetooth Beacons

- Stochastic signal strength readings (RSSI)
- Limited range of signal reach

Before reconsidering this compromise and what increasing the locations per second might afford, it's helpful to touch on the choice not to use GPS for location tracking. As shown, GPS and the use of geofencing is a common technique used in the production of locative media artworks such *Trace* (Rueb, 1999), *Wira* (Barclay et al., 2018) and *Rider Spoke* (Blast Theory, 2007). GPS refers to Global Positioning System, a satellite-based navigation system (National Coordination Office for Space-Based Positioning, n.d.). Geofencing can use multiple technologies to define a virtual boundary and detect entry, exit or dwell events with respect to that boundary (Google Developers, n.d.). Geofencing through GPS was a technique explored early stages of developing *Message Bank*. However, early tests with geofences proved ineffective for several reasons.

The physical scale of the geofence and the consistency of its application had what could be referred to as deadening effects. Deadening effects are those that slow down a performance or create a stilted flow of action. Placing geofences as close together as possible while maintaining a distinction between the two, required the user to walk a distance which was longer than desired for the work. There was also a lack of identification and consistency when the threshold was crossed. An audio file could be triggered as the user entered the geofence, but the threshold felt arbitrary. It wasn't linked to a visible real-world anchor, and it couldn't be repeated clearly. For

example, the barrier would shift slightly and this change in trigger point diluted the weight or resonance of the trigger.

Key Affordances of Geofences

- Can interact with commonly available mobile devices
- Can be programmed across a large public site
- Semi-reliable signal output despite varying conditions (e.g. weather changes or density of traffic in the area)
- Low cost (free)

Key Constraints of Geofences

- Accuracy is limited to 10 – 50m*. Alsaqer et al. found that accurate triggering below 20m was unreliable, with average trigger distances of 7–26m in high-accuracy modes and 35 to 100m in adaptive, battery-saving modes (Alsaqer et al., 2015).
- Lack of clarity around threshold point makes it less clear how the trigger interacts with the ‘real world’ environment
- Latency issues: delay of a few seconds when entering or exiting a zone

**While high-precision GPS systems can achieve much finer accuracy, geofencing deployed via commonly available mobile devices during this production period was significantly less precise. This accuracy can be further degraded in dense urban environments, indoor settings, or during adverse weather conditions.*

The constraints concerning latency and distance between geofences had the impact of limiting locations per second. In contrast, the reduced latency and positioning of Bluetooth beacons closer together increased locations per second. As the frequency of locations per second increases and decreases in tandem with the affordances and constraints of the positioning systems deployed, what can be observed is a series of deadening and enlivening effects.

Working with this metaphor of locations per second, as well as the properties of enlivening and deadening effects, it's possible to draw in the experiential theme of co-creating presence gathered in Chapter Six. Presence in performance is often described as the felt sense of

being with others. Erika Fischer-Lichte frames presence as observed within an autopoietic feedback loop between performer and audience (Fischer-Lichte & Jain, 2008, p. 58), while Auslander emphasizes that presence is not inherently tied to physical co-presence but is constructed by structures of engagement (Auslander, 2023). Across the Performance Works, presence emerged less as a trait possessed by any one actor and more as something co-created between performance and participant within mediated assemblages. This resonates with Auslander's description. This notion of co-creating presence reflects a shift from presence as static or embodied solely in a performer to presence as distributed, emergent, and felt in motion. This is the kind of presence that had the effect on some audience as being "in the zone" or "playing alongside the sort of professional players". This perspective on presence complements the approach to locations per second offered here.

Locations per second point toward the mechanism of interaction that is at work. *Co-creating Presence* highlights the role the audience plays in producing this interaction. The choice to increase or decrease the rate of locations per second has the potential to produce enlivening or deadening effects. That is, speeding up the unravelling of the story or slowing down to offer more stagnant beats. By implicating the audience in this interaction, presence shifts from centralized in the performer to distributed. The instigating impulse was to create an ongoing and fluid interaction between the audience's motion, experience and story. This work was seeking to produce an illusion like a flip book that generates illusion as images are passed through in rapid succession. However, early on, barriers to this illusion were found through an inability to generate the required rate of locations per seconds. While this was not fully resolved, Bluetooth beacons afforded small instances of the illusion. In doing so, a closer exploration of locations per second occurred and how these shifting rates led to varying approaches to crafting scenes and story. Given these barriers and discoveries, future directions of this research could consider how these discoveries might be applied if a more advanced system could produce higher frequencies of locations per second.

The bulk of work this thesis has not extended to a project working with locations per second that triggers change at a rate of seconds or milliseconds. Most frequently changing states are triggered between minutes. There is a small exception for the detection scene in *Ghost*. However, this work is continuing and is being tested through the current work in progress,

Garden of Sound. The goal of this work is to produce an audio garden that can be explored by young people. The project is envisioned as both an installation and performance. That is, something can be explored by audiences but also played by performers in conversation with audiences. To achieve this a new system of spatial tracking has been implemented. This system includes mapping the garden using a game engine and then feeding into the game engine motion data captured by a camera with inbuilt detection and tracking of audience members. Unlike the beacons which offered a low rate of locations per second, this system affords a perceptually continuous relationship between user and the computer-generated sounds. This is the ongoing and fluid interaction that was envisioned at the outset of this research.

In producing this, a series of alternative compromises had to be made. For *Garden of Sound*, the sound produced by exploring the garden isn't individualized for each user but rather shared externally through the same set of speakers. This creates a tension between the number of users that can navigate the garden, while still being able to identify the specific components of the garden activated by their presence. Like shaping contingency, the tension between the individual and collective experience resurfaces through the notion of locations per second. In *Garden of Sound* a commitment to a real-time rate of interaction has led to a reduction in scale of the number of participants at any one time. This could be solved through a more sophisticated system of headphones and a networked performance environment, but this has not yet been achieved.



Figure 34: Production Still, Garden of Sound (2025) - Photo Credit, Sam James

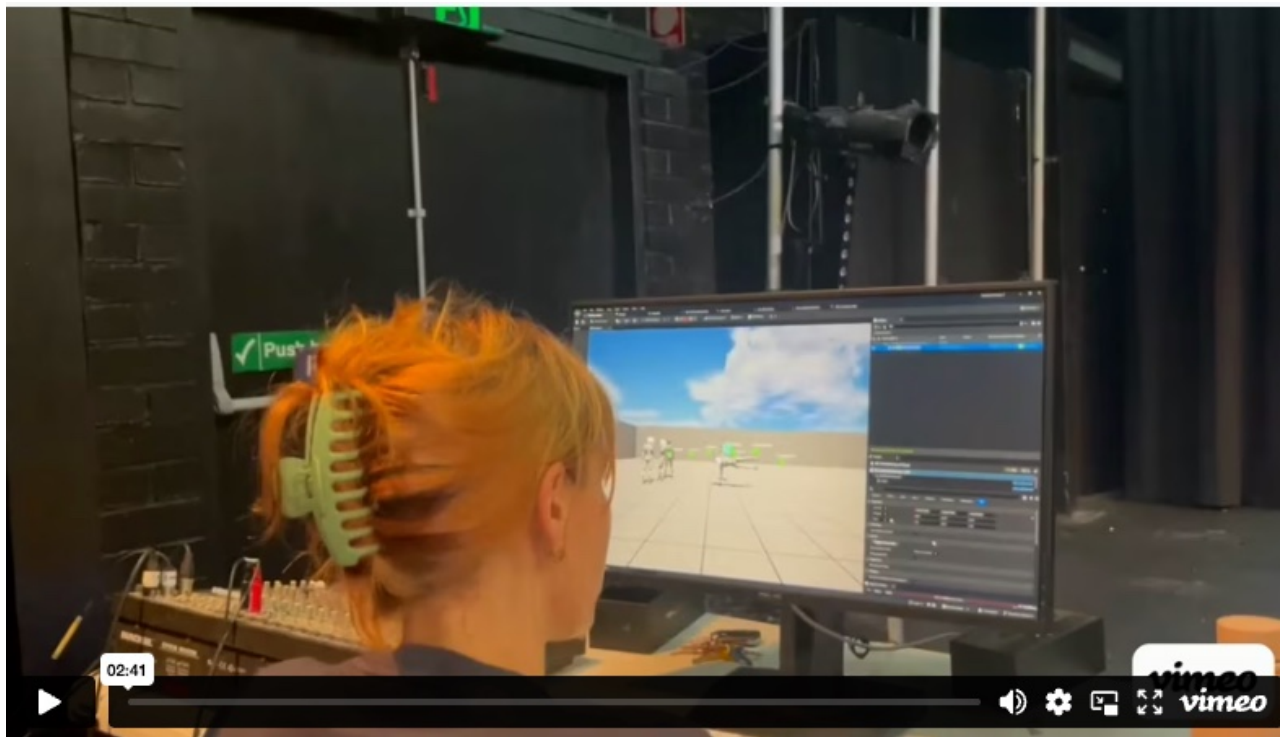


Figure 35: Video Extract, Garden of Sound (2025) Work in Progress – Link: <https://vimeo.com/1062949333?share=copy>

7.4 Enlivening as Audience Sync

This final story is informed by reflections generated in the Performance Works with regards to different audience modes, specifically ambient and synchronized audiences. This was not an explicit intention of the research at the outset but has become a key point of reflection and interest. Shifts between the Performance Works *Message Bank* and *Dancing Bear*, as well as practitioner reflections from *Ghost* and *Green Thumb* offer relevant insights here. These can also be connected to insights drawn from the theme, *Listening, Alone Together*, which gathers audience and practitioner responses concerning the tension between individual and collective experience. This material is revisited here to note how enlivening in TwMLM can be observed through the layering of ambient and synchronized audiences as well as the moments these layers blend and break apart.

“Magic moments” (Reid et al., p. 290; Rieser, 2011, p. 100) and “loose couplings” (Rossitto et al., 2016, p. 256) have been phrases used by scholars and practitioners to describe moments in mobile and locative media art works where the world of the performance and the world that exists beyond temporarily sync up. The structured layers designed by the theatre maker and those layers that emerge in the contingent space converge temporarily. These are commonly described as satisfying or significant to the meaning making process. Moments such as these were observed and further explored as locating and dislocating events in the theme *Reasons for Getting Lost* introduced in Chapter Six. So far, the syncing described here refers to a mix of material such as audio, action and environment. But this syncing could be more focused to consider the relational dynamics of audiences as they shift from ambient, asynchronous and synchronous states. To step through these shifts a brief taxonomy of audience modes is introduced here. This taxonomy maps out a spectrum of audience modes that were observed across the Performance Works. It is followed by a further look at why some of these shifts occurred as well as where moments of enlivening through sync can be explored.

Audiences Modes Observed Across the Performance Works

- **Non-participant:** These are individuals who share proximity with the performance but are not aware and do not consciously participate.

- **Incidental Audience:** These are audiences who don't intend to attend or participate in the experience but come into proximity. These audiences might then choose to participate and become ambient or synchronized audience, or they might choose to not to enter the performance. The incidental audience is a temporary state. It's worth distinguishing this from the non-participant. The non-participant has no awareness of the event, whereas the incidental audience becomes aware of the performance, even if they choose not to take part.
- **Ambient Audience:** These are audiences experiencing the performance in the same place but with a split time relationship. While they are co-present in the same time, they are engaged in a different sequencing of events. They share the same "real world" time but not the same performance time. This was one of the most common relationships formed across the Performance Works and is the dominant mode in *Message Bank*, *Green Thumb* and *Ghost*. There is a spectrum of ambient audiences. For example, at times in *Ghost* a user might have participated in the experience on their own but with the awareness people had come before them and would come after. At other times a user might be participating alongside fourteen other people, and while their experience is in close time and space proximity with others, the run time of the performance is not.
- **Asynchronous Audience:** These are individual audiences experiencing a work in their own time and place. Later iterations of *Message Bank* took this approach. It sought to ground the audience in a performance in the here and now despite not being tied to shared time or space with other audience.
- **Distributed Audience:** These are audiences who are experiencing a work at the same time but not space. This was the least common relationship formed across the Performance Works. It was partially used in *Dancing Bear* although the extent to which the audience was distributed shifted throughout the work. A distributed audience is more clearly understood through examples such as watching a real

time cricket match that is televised or listening to a political rally broadcast via radio.

- **Synchronized Audience:** These are audiences who are experiencing the performance at the same time, same place and are aware of these conditions. This was the primary mode of *Dancing Bear* although it also drew on a distributed audience relationship at times.

Moving from an ambient and asynchronous mode to a synchronous mode was a key shift between *Message Bank* and *Dancing Bear*. The audience experience of *Message Bank* is described in Chapter Four as being an “individual journey tentatively shared”. A frustration with this tentativeness is described as a reason why *Dancing Bear* set out to link its audiences through a real-time network hosted on Whatsapp. Reflections from this shift point toward an experience which prioritized shared stakes as well as a sense of solidarity. Audience describe being “in this together” (P1) or noting shared moments such as “sometimes we would laugh at the same things” (P5). The performance was successful in reacting to the frustrations of *Message Bank* and cultivating a type of togetherness between its audience through shifting back towards real time synchronicity. However, the individual journey tentatively shared, continued to be a feature of later works such *Ghost* and *Green Thumb*. In addition, this journey may offer richer perspectives on enlivening as afforded by TwMLM.

Two extracts taken from Practitioner Reflections on *Ghost* and *Green Thumb* are included here. They speak to this emerging interest in the relationship between ambient and synchronous audiences.

“The participants on *Ghost* moved through the space in a way that was different. Their eye line moved from up high to down low. It was less directional. The paths they took through the space were disjointed and often double backed. These people appeared more open to interaction with one another. This looked like small smiles or helpful indicators pointing to where the next beacon was. Occasionally someone would check in with

another person see if they were doing it right or respond to a question from someone else moving through the foyer who asked them what they were doing.”

Practitioner Reflections on *Ghost*

“I watch several people watching other people participate in the performance. They hover around the area a lot like the student hovering around the table with mobile phones. They watch people with headphones on and a hand outstretched with a device lean in and around the environment. Like the student at the start, often after a few minutes, they will make eye contact with me briefly or someone else participating in the work.”

Practitioner Reflections on *Green Thumb*

The reflections above capture instances of ambient, asynchronous and synchronous audiences. Moreso, they capture moments where the line between these layers blur and break. For *Green Thumb*, this is a divide between audiences observing action and those in action. For *Ghost*, these are audiences in action but on different timelines. A shared knowingness of the experience or a curiosity for what is playing out creates a bubble that holds them together. Once inside this bubble, the potential for direct interactions seems more possible or probable. These interactions are described here as moments of sync. They are moments where laughter is shared, help is offered, answers are provided and then they are gone. Audiences return to their timeline until the next moment of sync occurs. While *Message Bank* spoke to the challenge of making theatre from asynchronous connections, it’s notable that these later works reveal an emerging interest in how the performances ground themselves more in this state while opening out to moments of sync. In these works, ambient and asynchronous relationships are cultivated and make the moments of sync more significant.

Responding to the use of smartphone networks in *Body of Knowledge* (Hersch, 2021), Trott describes the audiences “active individualization [being] simultaneously collectivized” (Trott, 2021, p. 249). This resonates with the description of enlivening as ambient and moments of sync. Trott’s observations align more closely with *Dancing Bear* and are picked up again in

the following section, which focuses further on future directions. Works such as these take synchronicity as an assumed starting point. But what does this look like without this connection? Or with a connection that has a lower rate of locations per second? *Ghost* and *Green Thumb* don't begin with the assumption of a synchronized audience. They temporarily draw audiences into sync before sending them back on their way. While the relationship to synchronized timelines is different to that being described by Trott, this drawing together before breaking apart harks back to this active individualization and simultaneous collectivity. However, this is not simultaneous, but rather a sequence of coming together and apart.

7.5 Enlivening Tactics

Through this research my intention was to understand a liveness I had experienced in works like *Rider Spoke* by Blast Theory and *Temping* by Wolf359. These encounters involved riding a bike alone in a city and playing a temp worker alone in an office. They were individualised. But they also drew me into a collective experience. Voices recorded by past participants or scenes designed to simulate small talk occurring in the office next door were drawn into the present through systems of cues and feedback loops enacted by actions I had taken as audience. Trott's description of active individualization and simultaneous collectivisation observed in performance with mobile networks (Trott, 2021) continues to resonate here. The enlivening tactics offered above each encounter this tension in some way. But how does this tension impact the shaping of contingent space, the sensitivity of interaction, the layering of audience types and why does it matter? These questions take me back to the intentions this work began with and to the renewed intentions it has produced.

The increasing individualisation and atomisation of experience is an anxiety that has emerged through this work. In previous generations Hosokawa pushes back on these anxieties (Hosokawa, 1984) whereas the Situationist International seek to actively engage and to disrupt them. The unified milieu offers as a positive vision that stands in resistance to the deadening impacts of the modernist city. This vision has attracted to the attention and optimism of mobile and locative artists. Given the Performance Works were produced several generations later, it's notable how these anxieties persist and to what extent these tactics maintain relevance. What

might the unified milieu look like now? Observations presented here of school students navigating their campus in unexpected ways and of audiences re-exploring familiar locations with a new perspective offer a possible vision of this. These moments are small and emergent but are shown to open out shifting relations to self, others and environment. They are moments when social ties are brought into flux. These performances open out to moments of collectivisation. They don't insist or enforce these moments but afford the conditions for them to occur. This has been a growing focus of this research and is a point of future exploration.

There are simpler ways to produce collectivising experience without having to hand a person a phone, ask them to download an application or step into an experience where they might be uncertain of the rules or destination. If anything, mobile and locative media affords individualisation, and centring these tools in the creation of theatre events only makes it more challenging to produce instances of collectivisation. However, the tension found here has emerged not as a constraint to be mitigated or circumvented, but one intentionally teased out. Ideas taken from postdigital performance and Brecht's tactic of defamiliarization can help to offer a case for why and for future research.

Postdigital performance seeks to "think digitally in order to resist, or at least understand the systems of computational control" (Causey, 2016, p. 432). A postdigital perspective is one offered from a context of ubiquitous computing. Where the SI were concerned with the control exerted by the efficiencies of the modernist city, postdigital performance is more concerned with computational control. Both the Situationist International and postdigital performance seek to work *with* the language of the controlling force and subvert this for artistic purposes. Future work could explore how these structures, such as maps and code intended to rationalise, might be further used to produce events that intentionally dislocate the user or produce spontaneity. Ties to this approach can be made to Brecht's approach to defamiliarization or *Verfremdung* introduced earlier. Using *Verfremdung*, Brecht intended to make visible the social forces that would be otherwise concealed by the illusion of the theatrical event. Brecht approaches *Verfremdung* "as a political intervention into the blindingly familiar" (Mumford, 2018, p. 61). Like the *dérive*, *Verfremdung* is an attempt to defamiliarize or make the familiar strange so that the social forces are revealed. While this research has not placed an emphasis on social forces in a Brechtian Marxist sense, it has done so with an emphasis on social ties.

The tactics introduced in the previous section have documented a body of actions taken through this research and associated learnings produced. The tension between moments of collectivisation from within individualisation has emerged through this work. The section has explored the potential for enlivening tactics to work through TwMLM to produce; contingent space, a sensitivity to location and an opening out to layers of co-presence, affording an exploration of collectivisation from within individualisation.

7.6 Conclusion

In this chapter three enlivening tactics have been introduced. They include enlivening as shaping contingency, enlivening as locations per second and enlivening as audience syncing. Through this research enlivening has been offered as a concept through which to describe a relationship to liveness in TwMLM. The descriptions offered here do not claim to be an exhaustive list for how enlivening might be understood or observed in TwMLM, but they speak to three tactics that have come to dominate this research. These tactics are built on data drawn from five Performance Works, Practitioner Reflections, analysis of shifting time and space relationship as well as insights taken from audience and artists involved with the Performance Works. They show enlivening in TwMLM as offering departure points to make familiar environments unfamiliar, establishing a sense connection between action, interaction and story and offering possible and probable moments of temporary sync between otherwise asynchronous and ambient audiences. Hosowoka argued that “Autonomy is not always synonymous with isolation, individualisation, separation from reality; rather, in paradox, it is indispensable for the process of self-unification” (Hosokawa, 1984, p. 170). These enlivening tactics tie back to these early thoughts on mobile media while extending them to describe an experience of finding yourself alone only to return as part of the crowd with a renewed perspective.

8. Conclusion

This research began with three questions. How does theatre with mobile and locative media reshape spatiotemporal relations in performance? How do these shifting spatiotemporal relations influence audience relationships to self, others, and environment? What dramaturgical tactics can support the creation of enlivening experiences in theatre with mobile and locative media? These questions grew from my own interests as a theatre maker, through an engagement with existing literature and from an interest in how theatre might continue to meaningfully connect audiences with experience in a postdigital context (Causey, 2016). The significance of this research was captured in part by the work of Masura on Digital Theatre who argues “the future, like Theatre, is continuously becoming. Theatre must meet its new audience where they live, but we must never give up the core ideas which make the art form speak the truth of human experience” (Masura, 2020, p. 1). A continuous becoming in the form on enlivening has been a thread throughout this research. It has been point of connection to previous literature (Auslander, 2023), a tactical approach for working in TwMLM and a conceptual gathering ground for reflections and analysis. Given the material that has been introduced, it is now possible to observe what this thread has drawn together.

The literature review offered in Chapter Two mapped out a scope for this research including antecedents to TwMLM as well as relevant practitioners and theories. Digital performance (Dixon, 2007), digital theatre (Masura, 2020) and networked performance (Baker, 2013) was shown to inform what can be understood as TwMLM. This specific form of theatre and performance practice was traced from pre digital origins through the work of the Situationists (Matthews, 2021) and Hosokawa (Hosokawa, 1984) through to more contemporary practitioners such as Blast Theory (Blast Theory, n.d), Rimini Protokoll (Rimini Protokoll, n.d), Teri Rueb (Rueb, 1999), Paula Levine (Levine, 2003), Camille Baker (Baker, 2008), Leah Barclay (Barclay et al., 2018) and Claudia Chidiac (Chidiac, 2022b). To make sense of the meaning making process at play in these works. theories of liveness (Auslander, 2023), alienation (Wilken, 2014), defamiliarization (Mumford, 2018) and social ties (Latour, 2023) were gathered around the notion of enlivening. Enlivening was offered as an approach to liveness as

collectively produced by performance and participant within mediated assemblages. It is a continuous becoming or dependent arising (Rāhula, 1967).

An exploration of enlivening kickstarted a body of creative practice that was produced over approximately twenty-four months with iterations and unexpected applications continuing at the time this thesis is written. This body of creative practice is documented in Chapter Four. Most heavily featured is *Message Bank* produced for Sydney Festival in 2023. This self-guided TwMLM event featured synchronous and ambient audiences and offered a 45-minute narrative experience concerned with identity, paranoia and the fear of public exposure. The work done on *Message Bank* was iterated in later works such as *Ghost* and responded to through the work *Dancing Bear*. This involved further refinements of storytelling tactics including how story beats were mapped to location and activated through actions of the audience. In addition, works such as *Lost. Stories. Found* and *Green Thumb* trace the development of these ideas into unexpected contexts such as a school campus and town hall. While these works are in and of themselves outputs of this research, Chapter Four also includes a performance score of *Message Bank* as an additional output. This score illuminates the structuring of *Message Bank* and shifts the focus from its initial mobile and locative media set up, to how this set up plays out over time.

Chapter Five and Six gathers findings from these Performance Works through analysis. Chapter Five does this through scene studies and a taxonomy of descriptive dimensions. In doing so, a series of spatiotemporal tactics at play in *Message Bank* and *Ghost* are identified. They include the spatial tactics of open exploration, seeking, turn to and the temporal tactics of collage, spotlight and stillness. Through this analysis, a reflection on descriptive dimensions of mobile media performance (Rieser, 2011) is offered, and a renewed taxonomy of descriptive dimensions is developed. This taxonomy is streamlined, focusing more heavily on properties of time, space and how they interrelate to draw in other dimensions such as user control and immersion. This analysis and the renewed time and space matrix provides a contribution to the first question, how does theatre with mobile and locative media reshape spatiotemporal relations in performance.

Chapter Six takes a different methodological approach, gathering themes through a reflexive thematic analysis of semi-structured interviews with artists and practitioners. These interviews respond to two later projects taken from the Performance Works, *Ghost* and *Dancing*

Bear. This analysis produced nine sub themes and three overarching themes that bring the works together. The sub themes and overarching themes are both mapped to trace how these themes were arrived at from each discrete work, while also offering a larger overarching insight found from bringing them together. These themes included:

Theme 1: Listening Alone, Together

- Solidarity through Identification (Dancing Bear)
- Moving Inwards & Back Again (Ghost)
- Narrowing Focus (Dancing Bear)

Theme 2: Reasons to Get Lost

- Defamiliarizing Place (Ghost)
- Dangly Moments (Dancing Bear)
- Locating Events (Ghost)

Theme 3: Co-creating Presence

- Yearning for Feedback (Dancing Bear)
- Carrying Presence (Ghost)
- Live Finds a Way (Dancing Bear)

These themes brought forward a collection of perspectives concerning how *Ghost* and *Dancing Bear* impact relationships to self, others and environment. An oscillation between individual and collective experience was shown in *Listening, Alone Together*. A disruption and defamiliarization of environment were captured in *Reasons to Get Lost*. An approach to presence as being collectively sought out and produced was traced in *Co-Creating Presence*. Together these themes tell a story of dislocating and relocating from habitual relationships to environment. The disruption or the intentional breaking of familiar patterns in these works can be seen as guiding the participant to “remain open to the fact that the voyage itself is more important than the destination” and in doing so, becoming able to “tune in” to the tone, quality and “excitations” of the city to use terms drawn from the work of the Situationists (Matthews, 2021, p. 20). The work done in this chapter and the themes outlined contributes to the second stated question of

this research, how do these shifting spatiotemporal relations influence audience relationships to self, others, and environment.

Finally, Chapter Seven draws insights from Chapters Four, Five and Six together to offer three overarching higher level enlivening tactics in TwMLM. These include enlivening as shaping contingency, enlivening as locations per second and enlivening as ambient and synchronized audiences. The first returns to insights on time, space and disruption and makes a case for how enlivening is found at points of departure and is limited by points of alienation. The second focuses more so on the interaction playing out between story, participant and location itself. It focuses on the metaphor of locations per second and how speeding up or slowing it down may create enlivening or deadening effects. In this story, the performance itself is likened to the illusion produced by a handheld flip book. The final tactic returns to the layering of audiences in TwMLM. It offers a perspective of enlivening as moments of temporary sync between ambient and asynchronous audiences. Unlike theatre events that work with the synchronous audience as an assumed starting point, these works offer these moments as fleeting and tentative and, in doing so, resensitize the participant to the closeness or intimacy of synchronicity.

When brought together, the three tactics gather a body of insights from throughout this research and offer a response to the third question posed by this thesis, what dramaturgical tactics can support the creation of enlivening experiences in TwMLM. These tactics speak to a continuous becoming through defamiliarization to place, through sensitivity of interaction and through temporary syncing with others. While mobile and locative media brings forth discrete affordances and constraints through which this is found, these tactics continue to resonate with Hosokawa's observation of the pedestrian passing the busker as "shar[ing] the ongoing flux of time and consciousness, and thus feel[ing] a recovery of the lost links of social life" (Hosokawa, 1984, p. 167). For Hosokawa, these tactics recovered social ties. For the Situationists they opened out the participant to the excitations of the city and the unified milieu. For the Performance Works, it is the continuous becoming or dependent arising of enlivening that offers a dramaturgical perspective for making sense of how shifting approaches to time and space in mobile and locative media interact with audience relations to self, others and environment.

This thesis makes three contributions to the field of TwMLM, digital performance and digital theatre. Firstly, it offers a renewed time-space taxonomy for analyzing TwMLM, articulating how spatiotemporal tactics operate in performance to shape experience. Second, it provides thematic insights into how these shifting spatiotemporal relations influence audience perceptions of self and environment advancing understanding of the nature of disrupted and reconfigured social spaces in TwMLM. Third, it proposes the concept of enlivening as a dramaturgical framework for practitioners working at the intersection of performance and mobile media. Here, enlivening is shown to foreground contingency, co-creation and sensitivity to synchronicity. Together, these contributions support a shift from liveness to enlivening as a collectively generated, relational condition within performance.

9. Publications

Atkins, N., Johnston, A., Kocaballi, B. (2025, August 2025). *Dancing Bear: Social Ties in Performance with Mobile Media* ISEA2025: 30th International Symposium on Electronic Art, Seoul National University (SNU), Seoul, South Korea

Atkins, N., Johnston, A., & Kocaballi, B. (2024). *Message Bank: Time in Location-Based Media* Proceedings of the 2024 International Symposium on Electronic Art (ISEA2024), Brisbane, Australia.

Atkins, N., Johnston, A., Kocaballi, B., & Karreman, L. (2024). *Message Bank: Abstract & Performance*. MOCO2024: International Conference on Motion & Computing, Utrecht, Amsterdam.

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