Staging Storyworlds:

Transmedia Theatre and Designing Audience Experience

By

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CONTENTS

CONTENTS ii
LIST OF FIGURES vi
LIST OF TABLES viii
GLOSSARY ix
ABSTRACT x
DECLARATION xii
ACKNOWLEDGEMENTS xiii
CHAPTER 1: INTRODUCTION 1
A. Background and Motivation 1
B. Research Questions 7
C. Research Aim and Objectives 8
D. Research Implications 8
CHAPTER 2: CONTEXTUAL REVIEW 9
A. Introduction 9
B. Theoretical Framework 9
C. Practical/Design Framework 16
D. Transmedia Theatre Definition and Scope 21
CHAPTER 3: RESEARCH METHOD 31
A. Introduction 31
B. Stage 1: Building a Conceptual Framework 33
C. Stage 2: Prototype Exploration, Cultural Probes and Audience Research 34
I. Prototype Exploration 34
II. Cultural Probes 35
III. Audience Research 38
D. Stage 3: Refined Experience Design and Implementation 39
E. Ethical Considerations and Limitations 40
F. Research Timeline (Proposed and Final) 40
G. Research Outcomes 41

CHAPTER 4: RESEARCH STAGE 1 – CONCEPTUAL FRAMEWORK (CASE STUDY ANALYSES AND ONTOLOGICAL KNOWLEDGE BASE) 42
A. Introduction 42
B. Case Study: Hunting-and-Gathering – pvi collective's *terrorist training school* and *terrorist training school: recruit* 43
C. Case Study: Gaming Interaction – Blast Theory's *2097: We Made Ourselves Over* 47
D. Case Study: Social Media – Royal Shakespeare Company's *Midsummer Night's Dreaming* 54
E. Case Study: Digital User-Generated (DUG) Dramaturgy – UCLA HyperMedia Studio's *The Illiad Project* 59
F. Case Study: Discussion/Evaluation 66
G. Knowledge Base: Creation and Output 75
H. Knowledge Base: Tables and Parameters 75
I. Knowledge Base: Limitations and Discussion 80
CHAPTER 5: STAGE 2 – SLINGSBY THEATRE'S *MAN COVETS BIRD* 82
A. Introduction 82
B. Company and Collaboration 82
C. Prototype Ideation and Construction 84
I. Designing the Paratexts 84
II. Designing the Application 87
D. Participant Recruitment and Ethics 88
E. The Digital Cultural Probe Procedure 89
F. Digital Artefacts: DigiStage Activities 92
G. Results, Findings, and Evaluation 93
I. Survey Responses 94
II. Web Analytics 98
III. Discussion of Results and Key Findings 99
IV. DigiStage and Transmedia Theatre in Drama Education 102
CHAPTER 6: CONTEXTUAL REVIEW – THE COVID-19 PANDEMIC 106
A. Introduction 106
B. Background 106
C. The Impact of COVID-19 on Theatre and Performance 108
D. The Impact of COVID-19 on This Research 118
CHAPTER 7: STAGE 3 – Q THEATRE'S *OUR HOUSE* 122
A. Introduction 122

B. Company and Collaboration 123
C. Transmedia Ideation and Construction 125
I. Designing the Performance and Internal Paratexts 126
II. Designing the External Paratexts 141
D. Participant Recruitment and Ethics 148
E. Creative Output: Performance, Internal Paratexts and External Paratexts 148
F. Digital Artefacts: Our House on Lorikeet PWA and Facebook Event 152
G. Audience Research and Artist Interview Procedures 152
H. Results, Findings, and Evaluation 153
I. Survey Responses 153
II. Focus Group Discussions 157
III. Q Theatre's Post-Event Survey 161
IV. Discussion of Results and Key Findings 162
CHAPTER 8: ANALYSIS AND DISCUSSION 166
A. Introduction 166
B. Transmedia Theatre: An Evolving Definition 166
I. Cohesiveness 167
II. Liveness 168
III. Intermediality 168
IV. Digital (and) Interactivity 170
V. Intentionality 172
C. Transmedia Theatre and the UX Design of Digital Performance 172
I. Theatre-Making as an Iterative Process 174
II. Usability Testing and Dramaturgy 176
III. Transmedia Storyworld Onboarding 179
IV. The Synthesis and Division of Transmedia Labor 183
D. Creative Output: New Methods of Storytelling 184
I. Dramaturgically Driven Digital Platform Design 184
II. YouTube Live as a Tool for Embedded Telematics 187
III. Transmedia Theatre Portal as 'Killer App' 189
CHAPTER 9: CONCLUSION 191
A. Research Limitations 191
B. Summary of Findings 193

C. Future Research 196
BIBLIOGRAPHY (ARTWORK, MEDIA AND PERFORMANCES) 198
BIBLIOGRAPHY (LITERATURE) 200
APPENDICES 214

LIST OF FIGURES

Fig. 1. Diagram of 'exo-performance' participation as relating to the performance event 2
Fig. 2. Diagram of transmedia theatre as live performance and digital media forming a cohesive storyworld 5
Fig. 3. Diagram of overlapping theoretical frameworks of transmedia theatre 11
Fig. 4. Diagram showing the relationship between intermediality and Jenkins' transmedia 15
Fig. 5. Examples of archive materials from M@ggie's Love Bytes (1995) in M@ggie's Memories 25
Fig. 6. The workout video in tts: recruit (2002), the DVD accompaniment to pvi collective's tts (2002) ... 27
Fig. 7. The questionnaire in the mobile app for Blast Theory's Karen (2016) 29
Fig. 8. Sketch of the Google Plus stream for Royal Shakespeare Company's Midsummer Night's Dreaming (2013) 29
Fig. 9. Diagram of the research stages as an iterative design process 32
Fig. 10. Service Design Lab Singapore's Facebook-based cultural probes 37
Fig. 11. Proposed flow diagram of the digital cultural probe mobile app 38
Fig. 12. A video uploaded by pvi collective's official page on the platform Vimeo introduces the tts: recruit DVD (2002) and previews some of the activities involved 46
Fig. 13. Screenshots from one of the 2097: We Made Ourselves Over (2017) interactive episodes, showing dialogue and multiple-choice question 49
Fig. 14. Diagram showing the accessibility levels of the different texts in 2097: We Made Ourselves Over 53
Fig. 15. Diagram showing the flow of data collection and output in The Iliad Project (2001) 62
Fig. 16. Dynamic renderings of test maps for two different test audiences in The Illiad Project 64
Fig. 17. The ontological knowledge base on Airtable 75
Fig. 18. Sketches for the transmedia activities on DigiStage, including short stories, microblog entries, and picture submission 86
Fig. 19. Diagram of the digital cultural probe testing process for DigiStage 91
Fig. 20. Graph of usage data of DigiStage cultural probe participants 98
Fig. 21. Graph of user behavior of DigiStage cultural probe participants 99
Fig. 22. One of the pages in the Wonderland storyworld in Theater in Place (2020), showing a pre-recorded video on YouTube and an interactive puzzle 114
Fig. 23. A promotional image for Alice, A Virtual Theme Park (2020) by Creation Theatre 115
Fig. 24. Interactions between viewer(s), pre-recorded video and live guide on Isklander: Plymouth Point (2021) by Swamp Motel 120
Fig. 25. Promotional images for Mozilla Hubs (top) and Gather.Town (bottom), which were considered as options for the Our House digital performance 128
Fig. 26. The disco ball lighting and split-screen effects in Our House's group scenes 132
Fig. 27. The illustration of the façade of 75 Lorikeet Lane 134
Fig. 28. The illustration for Haz's Room (top) and a screenshot from the livestream (bottom) 135
Fig. 29. The illustrated groundplan of 75 Lorikeet Lane 136

Fig. 30. The mobile User Interface of the Our House on Lorikeet PWA: the Entrance page (left), Hallway (center left and center right), and a page for one of the Rooms with the livestream media player and live chat (right) 139
Fig. 31. The flow diagram of the Our House on Lorikeet PWA 140
Fig. 32. Diagram showing the different external paratexts and how they related to one another, as well as their modalities and platforms 143
Fig. 33. The Facebook Event page for Nigel's birthday party, a gateway to the Our House external paratexts 144
Fig. 34. Screenshot of the community playlist on Spotify 145
Fig. 35. The dress-up guide for Nigel's Birthday Party, rendered in the same style as the rest of the illustrated storyworld of Our House 146
Fig. 36. The post-performance blog paratext on the Our House on Lorikeet PWA, provided privately for research participants 147
Fig. 37. Google Web Analytics data for Our House performances on 24 September (top) and 25 September (bottom) 150
Fig. 38. Live chat comments from Our House, including speculation on what happened and the whereabouts of Nigel 151
Fig. 39. A mock-up of what the introductory paragraph on Q Theatre's website might look like as part of storyworld onboarding 181
Fig. 40. Livestream Theatre's livestream of a Zoom performance of Addams Family Values (2020) 188

LIST OF TABLES

Table 1. Possible usability testing elements, tasks and measurements in Our House 179

GLOSSARY

CYOA: Choose Your Own Adventure

DUG Dramaturgy: Digital User-Generated Dramaturgy, a mode of interactivity where user contribution through digital paratexts determine or affect the dramaturgy of the core theatre performance

HCI: Human-Computer Interaction

Intermediality: the relationship between different media

Storyworld: the fictional (or semi-fictional) world contained in a work of storytelling

Transmedia Activity/ies: transmedia paratexts (see next entry), disseminated to research participants as part of the cultural probe research method

Transmedia Paratext(s): the accompanying text(s) in a transmedia piece

Transmedia Storytelling: the application of Henry Jenkins' transmedia principle on storytelling, where a cohesive narrative is told across multiple texts and media

UI: User Interface

UX: User Experience

ABSTRACT

Nowadays, in what has been referred to as an experience economy, theatre companies have increasingly explored new methods to engage audiences. One method, which these exegesis and creative artefact focus on, is transmedia theatre, which applies Henry Jenkins' transmedia storytelling principles from *Convergence Culture* (2006) to theatre performance. Employing a mixed methodology of Research through Design (RtD), cultural probes, and audience research, this doctoral research seeks to explore the experience design of transmedia theatre.

Drawing on theoretical frameworks of narrativity, interactivity, and intermediality, among others, transmedia theatre is initially defined in this research as a work of storytelling with theatre performance at the core and digital media as paratexts. The first stage of the research involves building a conceptual framework through case studies of past examples of transmedia theatre, leading to the construction of an ontological knowledge base. This framework becomes the basis for a subsequent design exploration, for which collaboration with local theatre companies was sought. The next stage involves prototype creation and testing for Slingsby Theatre's staging of *Man Covets Bird* (2019). The research participation of secondary students leads to new insights on the potential of transmedia theatre in drama education, while the overall findings are applied to the subsequent stage.

After the second stage, due to the advent of the COVID-19 pandemic, another contextual review is performed to investigate the shifting paradigms in digital storytelling and theatre performance. The third stage involves another round of prototype testing, followed by refinement and a public performance, during which a collaboration with Q Theatre on *Our House* (2021) is conducted under social distancing rules. The resulting performance produces new insights on internal paratexts, audience expectations and post-pandemic storytelling.

The overall findings of the research include, first, an evolving definition of transmedia theatre, with an emphasis on intentionality. Next, the application of UX design principles in the experience design of transmedia theatre translates to the re-framing of theatre-making as an iterative design process, the need for usability testing as part of the dramaturgical procedure, the importance of transmedia storyworld onboarding, and the re-thinking of transmedia labor. Finally, the performance of *Our House* as the creative output of the research reveals the potentials of dramaturgically driven digital platorm design, YouTube as a tool for embedded telematics, and the transmedia theatre portal.

DECLARATION

I declare that this thesis presents work carried out by myself and does not incorporate without acknowledgment any material previously submitted for a degree or diploma in any university; to the best of my knowledge it does not contain any materials previously published or written by another person except where due reference is made in the text; and all substantive contributions by others to the work presented, including jointly authored publications, is clearly acknowledged.



Adisti Anindita Regar

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CHAPTER 1: INTRODUCTION

A. Background and Motivation

The interplay between design and storytelling has underlined my academic and career journey, leading up to this stage of doctoral research. After a science-focused secondary schooling in Singapore, I did a complete about-turn and decided to study filmmaking in the United States. While writing and creating stories have never been my forte, I wanted to help tell them through visual design. I aimed to become a production designer, taking scenic and costume design classes from the Theatre department. Indeed, my first academic exposure to the principles of transmedia storytelling was in my role as Production Designer for the web series *The Book of Jer3miah* (2009). Done in conjunction with a New Media class,[1] the series incorporated a live ARG (alternate reality game) experience. After completing my bachelor's degree in Media Arts Studies and Humanities, with a minor in Visual Arts, I worked in television, film, and theatre, largely as a designer and occasional editor. Upon returning to my hometown of Jakarta, Indonesia, I managed an augmented reality-focused television graphics company while also teaching Film Production classes at a local university as a part-time lecturer.

Once I decided to pursue further schooling, my recent professional experience in interactive television broadcasts drove me to study Interaction Design and Electronic Arts at University of Sydney, a Master by Coursework program. In the course, I studied the principles of Human-Computer Interaction (HCI) and user-centered design. This shifted my perspective on design in visual storytelling towards one which does not just facilitate the artists' expression, but also considers the human users, be it the artists themselves and the audience. Early on in my graduate studies, however, I decided that the performing arts was where my true interests lie,

[1] The class, taught by Jeff Parkin at Brigham Young University, was based on, among others, Henry Jenkins' *Convergence Culture* (2006) and recent transmedia works.

and I continued to take courses in the Theatre department. When the time came to conduct our capstone research project, I decided to focus on digital participatory theatre. During this research, I encountered storytelling modalities which take place outside of the performance event (previously termed 'exo-performance' participation, Fig. *1*). These modalities regularly involve different digital media such as film, video games and websites, separate from the theatre performance itself. The project generated interesting insights on the audience-as-user, but lacked a focus on design and storytelling. As I contemplated on how to proceed with higher degree research, a professor pointed out that exo-performance participation overlaps with (or is perhaps a subset of) transmedia storytelling. This reminded me of my encounter with transmedia a decade prior, and motivated me to investigate how experience design, transmedia storytelling and theatre performance could interact.

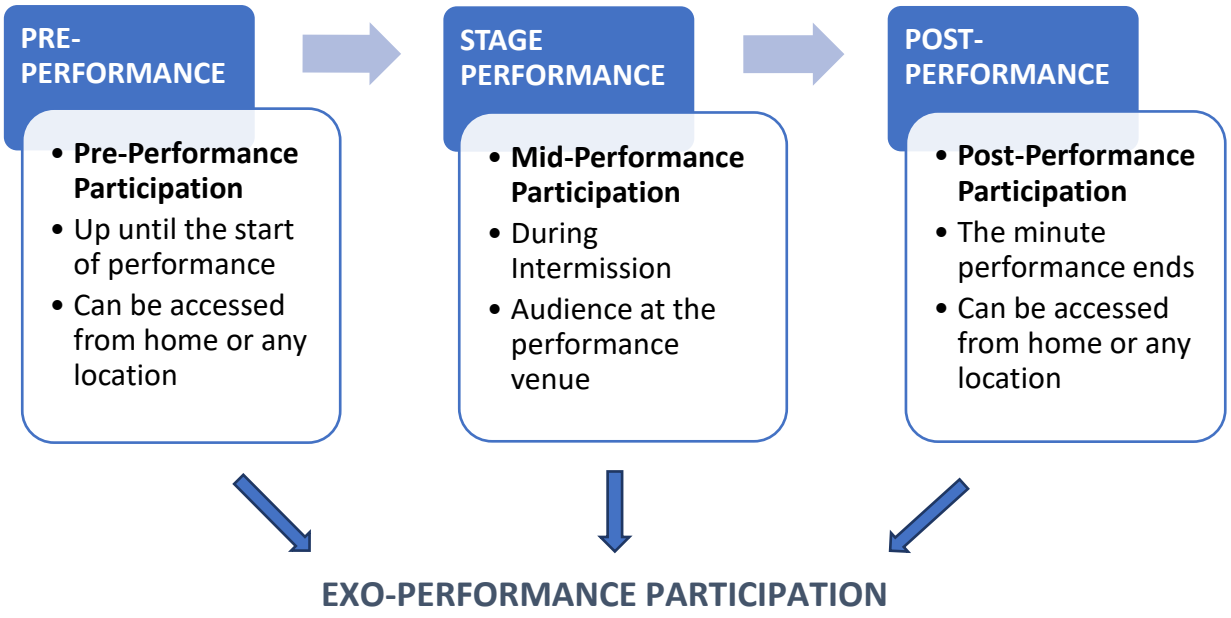

Fig. 1. Diagram of 'exo-performance' participation as relating to the performance event

With myself as the Chief Investigator (hereafter referred to as CI), this PhD research combines my academic and professional experience in design, combined with a focus on transmedia storytelling, where **a cohesive narrative is told across multiple texts and media**, arguably

forming a **storyworld** in a single transmedia piece.[2] [3] This study will focus specifically on the narrative potential of using various digital media alongside live performance. This situates the project within the study of transmedia storytelling rather than digital participatory theatre—although the latter topic forms an important consideration in the former. The new designation (under transmedia storytelling) is of great relevance because, as Henry Jenkins mentions in *Convergence Culture*, audiences are constantly looking for richer, deeper engagement, which can be fulfilled through immersion in the transmedia storyworld.[4] Jenkins offers the example of the *Matrix* franchise, but more recent franchise-based storyworlds such as the Marvel cinematic universe, the *Star Wars* universe and the *Harry Potter* universe (all of which have a continuous narrative spread across a variety of texts and media), confirm the ongoing relevance of transmedia storytelling and world-building in attracting and retaining audiences. This idea of a storyworld is foregrounded in Janet Murray's *Hamlet and the Holodeck* (originally published in 1997), which posits that the digital age has "[merged] the previously disparate technologies of communication and representation into a single medium."[5] She surmises that audiences' need for variation in representation can only be satisfied by a medium like the computer, which allows storytelling to be more "multiform and participatory."[6] This media convergence applies to theatre, as well. While summarizing the link between art and media (particularly in the domain of theatre), Chiel Kattenbelt explains that twentieth century new media resulted in new forms of representation.[7] In the article, he describes digital technologies as the new interruption technique in theatre, seeking to break the spatial and temporal boundaries of

[2] Henry Jenkins, *Convergence Culture: Where Old and New Media Collide* (New York: New York University Press, 2006).
[3] It is notable that Jenkins has never used the term 'storyworld' in *Convergence Culture*, but scholars who have subsequently responded to his work has used the term as a shorthand for the summative fictional world constructed through the different texts in transmedia storytelling.
[4] Jenkins, *Convergence Culture: Where Old and New Media Collide*.
[5] Janet H. Murray, *Hamlet on the Holodeck: The Future of Narrative in Cyberspace* (Cambridge: The MIT Press, 2017), 35.
[6] Murray, *Hamlet on the Holodeck: The Future of Narrative in Cyberspace*, 53.
[7] Chiel Kattenbelt, "Intermediality in Theatre and Performance: Definitions, Perceptions and Medial Relationships," *Cultura, Lenguaje y Representación* 6 (2008), https://doi.org/10.6035/CLR.

performance while still maintaining narrative cohesion.[8] He stresses the importance of research into how these new technologies can bring new modes of experience and expression.[9]

Scholars in different fields have given different definitions for the term 'transmedia'—Kattenbelt describes 'transmediality' as "the change [or transposition] from one medium to another,"[10] a broader definition which nearly overlaps with Jay David Bolter and Richard Grusin's concept of remediation—the representation of the content or form of one, usually older, medium in another, newer medium.[11] Henry Jenkins' *Convergence Culture*, however, offers the definition of 'transmedia' used in this research, outlining the essential characteristics that make up transmedia storytelling.[12] In the realm of theatre, the application of Jenkins' transmedia storytelling and its narrative potentials to involve live performance is a largely unexplored domain. This application, which will be referred to in this exegesis as 'transmedia theatre', is the objective of this project.

This proposal's contextual review will attempt a more comprehensive definition of 'transmedia theatre', but in simple terms, it is **a work of cohesive, interactive narrative that spreads over a live performance and other accompanying (digital) media** (Fig. *2*). So far, examples that fit into Jenkins' definition are scarce because, while transmedia works that involve live performance do exist, they are seldom deliberately conceived as such. For example, the 2016 theatrical work *Harry Potter and the Cursed Child* is a live performance that is ostensibly part of the *Harry Potter* media franchise. However, like the video games, e-books, interactive websites, and other texts in the franchise, the play was not conceived from the start as a companion piece to the core texts, but rather afterthoughts prompted by the success of the novels and films. In such cases, the interrelated texts often lack consideration for the narrative and technological affordances of theatre as a medium, as well as how they interact with the affordances of other media, in their design and execution. This research aims to subvert this

[8] Kattenbelt, "Intermediality in Theatre and Performance: Definitions, Perceptions and Medial Relationships," 26.
[9] Kattenbelt, "Intermediality in Theatre and Performance: Definitions, Perceptions and Medial Relationships," 27.
[10] Kattenbelt, "Intermediality in Theatre and Performance: Definitions, Perceptions and Medial Relationships," 23.
[11] Jay David Bolter and Richard Grusin, *Remediation: Understanding New Media* (Cambridge: The MIT Press, 2000).
[12] Jenkins, *Convergence Culture: Where Old and New Media Collide*.

blindspot by taking into account the relationship between theatre and different texts or media. Research into transmedia theatre, which inherently uses digital media outside these spatial and temporal boundaries, is an opportunity to explore a different dimension of Kattenbelt's aforementioned new media application in performance—a new method of representation and storytelling designed to enhance audience experience.

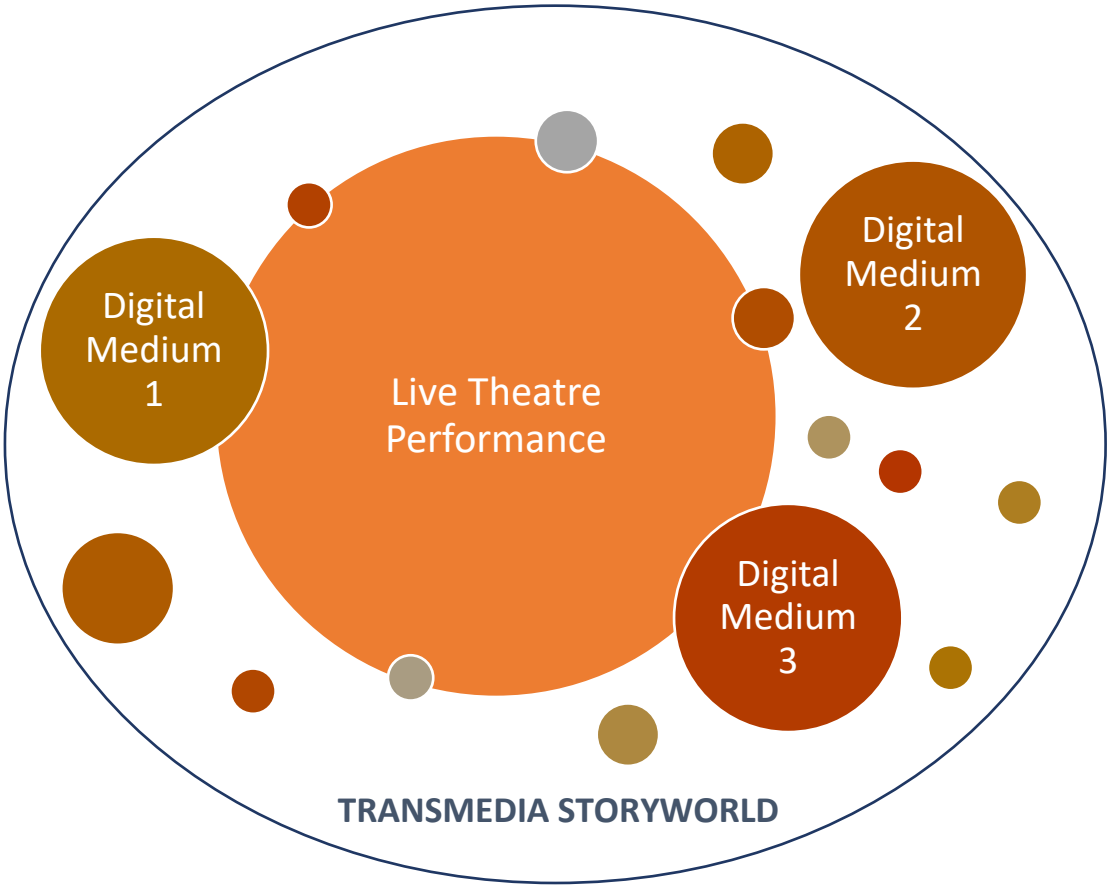

Fig. 2. Diagram of transmedia theatre as live performance and digital media forming a cohesive storyworld

As mentioned earlier, the CI's primary approach is that of a designer, looking into how design principles can support storytelling to engage the audience. Therefore, this project approaches transmedia theatre through practice-led research in the form of audience experience design, which applies user experience (UX) design from the field of HCI on theatre and media

audiences. The initial theoretical framework is built through case studies and knowledge base construction, insights from which will inform design process, creative output, and finally an exegesis. Given the intrinsic link between Jenkins' concept of transmedia and audiences' "entertainment experience,"[13] artists and production companies that adopt transmedia storytelling as a production method are therefore designing an experience for their audiences. This design, ideally, fulfills the theatre-makers' creative and commercial goals while providing their viewers with a satisfying immersive experience. In their article for the journal *Interactions*, Steve Benford and Gabriella Giannachi look at works that combine live performance and interactive digital media (such as works by UK-based artists' group Blast Theory).[14] Using the interactive works by Blast Theory as examples, they identify UX (user experience) design in scripts, set design, media design, and other creative elements determined by the artists. *Uncle Roy All Around You*, for example, uses these elements to create multiple 'canonical trajectories' for participants to choose from in a location-based game format. This notion of UX design extends beyond usability, "to encompass the emotional and aesthetic dimensions of experience,"[15] an important consideration for this research.

User (or audience) experience design is rarely discussed in theatre scholarship, but the importance of audience experience (not *of* theatre, but *in* theatre) has been brought up in conjunction to audience participation. In his paper, Matthew Reason relates Joseph Pine and Jared Gilmore's theory of a new 'experience economy'—where consumers pay to *do* and *experience* something rather than to *receive* goods and services—to live theatre and the importance of "asking the audience."[16] Thomas H. Davenport and John C. Beck explain 'experience economy' as the organization-side (or business-side) of their concept of 'attention economy.' The latter argues that for information consumers, attention is a scarce resource

[13] Jenkins, *Convergence Culture: Where Old and New Media Collide*, 21.
[14] Steve Benford and Gabriella Giannachi, "Interaction as Performance," *Interactions* 19, no. 3 (2012), https://doi.org/10.1145/2168931.2168941.
[15] Benford and Giannachi, "Interaction as Performance," 43.
[16] Matthew Reason, "Asking the Audience: Audience Research and the Experience of Theatre," *About Performance*, no. 10 (2010), https://doi.org/10.3316/informit.767306737561035.

which organizations compete for.[17] It is important, therefore, to ensure that experience providers offer rich, engaging experiences that their consumers perceive as worth their attention. This is particularly true when applied to Jenkins' transmedia, which expects active participation of viewers.[18] To connect all the threads of the Marvel cinematic universe up to the movie *Avengers: Infinity War* (2018), for example, requires nine days' worth of media viewing, including movies, TV shows, web series and short films.[19] Designing for this experience economy is therefore paramount in creating transmedia works, and requires knowledge of audience expectations and how the media involved can fulfill them, which will be discussed in the next section.

B. Research Questions

1. What is 'transmedia theatre'? How does transmedia theatre relate to digital media and convergence, participatory theatre, and intermediality?
2. What are the different ways to integrate live theatre and digital media in transmedia storytelling? How do different technological and narrative affordances affect storytelling?
3. How do we design a digital transmedia experience for theatre audiences? How can methods of experience design and audience research be employed in the design process?

[17] Thomas H. Davenport and John C. Beck, *The Attention Economy: Understanding the New Currency of Business* (Boston: Harvard Business School, 2005).
[18] Jenkins, *Convergence Culture: Where Old and New Media Collide*, 21.
[19] Jack Shepherd, "Marvel Cinematics Universe Timeline: How to Watch Every MCU Movie and TV Show in Chronological Order," *The Independent* (December 19 2021). https://www.independent.co.uk/arts-entertainment/films/news/mcu-timeline-watch-order-marvel-spiderman-b1978984.html.

C. Research Aim and Objectives

The aim of this research is to discover the ways different media and their affordances can be designed through transmedia storytelling to engage theatre audiences and enrich their viewing experience.

The objectives of this research include:

1. The compilation and analysis of past transmedia theatre examples, resulting in case studies and an ontological knowledge base of digital transmedia modalities
2. The design and implementation of a transmedia storytelling experience in an actual staged performance, forming the artistic work of the project
3. The evaluation of the analytical and design process in the form of a written exegesis and accompanying documentation of the practical outcomes

D. Research Implications

Based on the stated questions, aims and objectives, this research is meant to be exploratory, investigating the merits of approaching transmedia storytelling and theatre performance from a user experience design perspective. While the theoretical framework and ontological inquiry may add to existing scholarly discourse, their main purpose is to foreground design process. The insights and findings gained from the iterative design procedure, audience research, and creative output, will hopefully inspire and guide future creative and research endeavors in the field of transmedia theatre.

CHAPTER 2: CONTEXTUAL REVIEW

A. Introduction

This chapter provides contextual background for the research, exploring both scholarly literature available on transmedia storytelling, theatre performance and digital media, as well as existing works and circumstances that inform the experience design of transmedia theatre. To begin, preliminary literature review was conducted to identify relevant theoretical frameworks on which the research would be built, such as writings on convergence, narrativity and interactivity, intermediality in performance, and experience design. From these writings, an initial definition and scope of transmedia theatre works were constructed for this research. This provided a basis for choosing relevant examples of transmedia theatre and analyzing how they were designed, in order to formulate a method for designing future experiences. A subsequent contextual review analysis, written in the aftermath of the COVID-19 pandemic, can be found in Chapter 6.

B. Theoretical Framework

While the term 'transmedia theatre' implies a simple application of transmedia principles to theatrical performance, given the historical development of media and theatre in the last century, it is imperative to contextualize the term within digital media and convergence, interactive or participatory theatre, as well as intermediality in performance (Fig. *3*). Although media scholars like Marie-Laure Ryan and Jared Gardner have argued that transmediality predates digital media, [20] [21] as pointed out in the introduction, both Janet Murray and Henry

[20] Marie-Laure Ryan, "Transmedia Storytelling: Industry Buzzword or New Narrative Experience?," *Storyworlds: A Journal of Narrative Studies* 7, no. 2 (2015), https://doi.org/10.5250/storyworlds.7.2.0001.

Jenkins imply that transmedia storytelling is a direct result of media convergence, made possible by the introduction of new technologies. Jenkins points to Murray's discussion of the "encyclopedic capacity" of digital media as the characteristic which allows world-building in transmedia storytelling.[22] Later on, Murray disagrees with the term 'transmedia' and proposes a single, all-encompassing digital medium.[23] Nevertheless, she reinforces that the encyclopedic and spatial affordances, along with procedural and participatory affordances of digital media, provide the design opportunities for this emerging storytelling convention. The idea of convergence is both reinforced and transformed by the advent (and later, widespread distribution) of the internet.[24] By the late 1990s, the internet had been hailed for ushering a digital revolution, allowing new modes of communication and, by extension, storytelling.[25]

The link between transmedia storytelling and viewer participation is similarly presented in *Convergence Culture*, which mentions active viewing as opposed to passive spectatorship. "To fully experience any fictional [transmedial] world, consumers must assume the role of hunters and gatherers, chasing down bits of the story across media channels, comparing notes with each other via online discussion groups, and collaborating," Jenkins postulates.[26] The book goes through the participatory phenomena of reality television (which employs what he dubs "asynchronous participation),"[27] fan fiction and user-generated content, video games and interactive websites, as examples of transmedial storytelling. Jenkins also identifies the

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[21] Jared Gardner, "Transmedial Narratives in the Age of Mixed Media," *Narrative Culture* 4, no. 1 (2017), https://doi.org/10.13110/narrcult.4.1.0076.
[22] Jenkins, *Convergence Culture: Where Old and New Media Collide*, 116.
[23] Janet H. Murray, "Transcending Transmedia: Emerging Story Telling Structures for the Emerging Convergence Platforms" (Proceedings of the 10th European Conference on Interactive TV and Video, Berlin, Germany, Association for Computing Machinery, 2012).
[24] Jens F. Jensen, "Communication Research After the Mediasaurus?: Digital convergence, Digital Divergence," *Nordicom Review* 19, no. 1 (1998).
[25] Throughout this exegesis, the term 'digital' is often used to refer to media that is not only digital (expressed in 0s and 1s), but also online (accessible via the internet). It is no coincidence that all examples of transmedia theatre in this exegesis have been created in the post-internet era, although not all of them require the use of internet technologies.
[26] Jenkins, *Convergence Culture: Where Old and New Media Collide*, 21.
[27] Jenkins, *Convergence Culture: Where Old and New Media Collide*, 59.

importance of not just drawing together a community based on shared interests, but also giving them something to do ("cultural activators").[28]

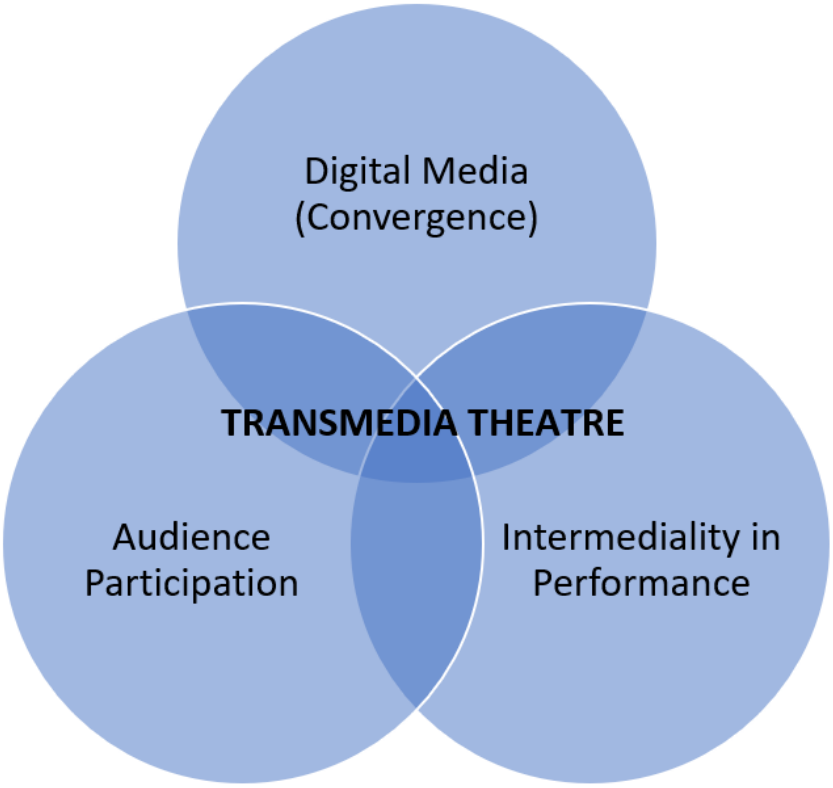

Fig. 3. Diagram of overlapping theoretical frameworks of transmedia theatre

This growing emphasis on active viewing in media parallels the ongoing discussion surrounding audience participation in theatre. One notable starting point of the discussion would be Augusto Boal's proposal in *Theatre of the Oppressed* that the traditional spectator of Aristotelian theatre is oppressed or dehumanized, suggesting an alternative of the active 'spect-actor'.[29] This notion of passive spectatorship prompts Jacques Ranciere to respond in *The Emancipated Spectator* that the act of viewing itself—of interpreting—is emancipated, while

[28] Henry Jenkins, "Revenge of the Origami Unicorn: The Remaining Four Principles of Transmedia Storytelling," *Confessions of an Aca-Fan*, 2009, http://henryjenkins.org/blog/2009/12/revenge_of_the_origami_unicorn.html.
[29] Augusto Boal, *Theater of the Oppressed*, trans. Charles A. Leal McBride, Maria-Odilia Leal McBride, and Emily Fryer (London: Pluto, 1979).

active participation would in fact distract audiences with the illusion of agency.[30] Commenting on Rancière's argument as based on past determinism, Helen Freshwater makes a case that many theatrical works now simply require active interpretation by the spectator.[31] Gareth White similarly criticizes Ranciere's view as discounting the affective response of applied theatre, citing Erika Fischer-Lichte's concept of the autopoietic feedback loop created by the activity of the spectators. Participatory theatre can magnify this feedback system by inviting the audience "to take an active choice-making part in the performance."[32]

In his essay on audience participation and research, Matthew Reason agrees with Freshwater and White, proposing instead "a serious focus on reception processes, and an analysis of the manners in which actual audiences engage with different kinds of audience-performer relationships to produce different kinds of experiences."[33] The implication of Reason's proposal means doing away with the binary of 'active' or 'passive' audiences, and taking into account all manners of engagement between audience and performance (as a broader entity beyond performers) involving the reception and interpretation of messages. At first glance, this is at odds with Jenkins' idea of "active viewing", but the aforementioned hunting-and-gathering of information, as well as other modes of participation that Jenkins puts forward, arguably fall under Reason's definition of audience-performance engagement and could be examined outside of such binary terms.

Audience participation is inevitably linked to digital media, as proposed by Murray in both *Hamlet on the Holodeck* and *Inventing the Medium*,[34] where immersion and agency are pleasures offered by digital environments. 'Immersion' implies "[doing] the things that the new environment makes possible", while 'agency' is the "satisfying power to take meaningful action

[30] Jacques Rancière, *The Emancipated Spectator*, trans. Gregory Elliott (London: Verso, 2009).
[31] Helen Freshwater, *Theatre & Audience* (Basingstoke: Palgrave Macmillan, 2009).
[32] Gareth White, *Audience Participation in Theatre: Aesthetics of the Invitation* (London: Palgrave Macmillan UK, 2013).
[33] Matthew Reason, "*Participations* on Participation: Researching the 'Active' Theatre Audience," *Participations: Journal of Audience & Reception Studies* 12, no. 1 (2015), https://www.participations.org/Volume%2012/Issue%201/17.pdf.
[34] Janet H. Murray, *Inventing the Medium: Principles of Interaction Design as a Cultural Practice* (Cambridge: Cambridge: The MIT Press, 2011).

and see the results of our decisions and choices."[35] Relating this notion of agency back to Gareth White's invitation to participate, the use of digital media (and, with the advent of the internet, online media) as a participatory medium has the potential to affect the feedback system in performance. In the section of *Digital Performance* which discusses interactivity, Steve Dixon suggests that digital performance could realize Boal's idea of the 'spect-actor' through the availability of said agency.[36] He lists four categories of audience interaction: 'Navigation', 'Participation', 'Conversation' and 'Collaboration', relating to the technological affordances and levels of agency offered by different participatory modalities in theatre practice. In her essay on interactive narrative, however, Ryan points out that Murray's Holodeck dream of total agency and immersion is thus far beyond our grasp—higher degrees of agency (through interactivity) are achieved at the expense of narrative consistency necessary for story immersion.[37]

In transmedia theatre, it is also important to note that interactivity does not merely involve the relationship between the audience and a single performance, but between the audience and the different media involved in the overall narrative. Ryan outlines three types of audience interactivity in transmedia storytelling: external interactivity, internal interactivity, and productive interactivity.[38] The first involves the audience making choices between the texts presented (including the performance as core text), encapsulating the application of Murray's idea of agency on transmedia, as well as Jenkins' principal of transmedia hunting-and-gathering. Internal interactivity occurs when "the user's mode of participation is narrowly scripted by the system." Corresponding roughly to Dixon's 'navigation' and 'participation' modes of interactivity above, it is marked by the lack of permanent traces of effects resulting from the actions of the users. In contrast, in productive interactivity, the users' actions leave traces on the system, making the interaction visible to others. It is further divided into two

[35] Murray, *Hamlet on the Holodeck: The Future of Narrative in Cyberspace*, 99, 126.
[36] Steve Dixon, ""Performing" Interactivity," in *Digital Performance: A History of New Media in Theater, Dance, Performance Art, and Installation* (Cambridge: The MIT Press, 2007).
[37] Marie-Laure Ryan, "From Narrative Games to Playable Stories: Toward a Poetics of Interactive Narrative," *Storyworlds: A Journal of Narrative Studies* 1 (2009), https://doi.org/10.1353/stw.0.0003.
[38] Ryan, "Transmedia Storytelling: Industry Buzzword or New Narrative Experience?," 11-12.

subcategories—top-down productive interactivity is controlled by the system (such as comment features on websites), or bottom-up productive interactivity which is user-controlled and generated (such as fan fiction). While this does not directly correspond to Dixon's categories, the concepts of communication and collaboration are certainly part of the increased agency of the audience as users. These categories of interaction will help inform the different digital interactive modalities involved in the design, as seen in the later chapters of this exegesis.

Finally, aside from Chiel Kattenbelt's aforementioned discussion on transmediality, the concepts of intermediality (the relationship between different media) and intertextuality are largely missing in the discussion of transmedia storytelling. Benjamin Beil and Hanns Christian Schmidt point this out in their paper, dubbing it the "intermedial blindspot" which prevents the optimum design for harmonic digital media convergence.[39] Using the television show *The Walking Dead* and its accompanying games as a transmedial work, Beil and Schmidt highlight the importance of the properties of each media involved and how they contribute to the unfolding of the narrative as a whole. In *Convergence Culture*, Jenkins uses Lisa Gitelman's definition of media as not just delivery technologies, but also the set of social and cultural practices surrounding them which exist in a larger communication system. Jenkins writes, perhaps in a nod to remediation, that "old media are not being displaced. Rather, their functions and status are shifted by the introduction of new technologies."[40] If live theatre as one 'old' medium in a transmedial work is both a delivery system and a cultural system for performance, intermediality is essential in understanding how it relates to the delivery and cultural systems of new digital technologies.

The key text in the discussion of intermediality in theatre is by Freda Chapple and Chiel Kattenbelt, who in *Intermediality in Theatre and Performance*, "locate intermediality at a meeting point in-between the performers, the observers, and the confluence of media involved

[39] Benjamin Beil and Hanns Schmidt, "The World of The Walking Dead – Transmediality and Transmedial Intermediality," *Acta Universitatis Sapientiae, Film and Media Studies* 10, no. 1 (2015), https://doi.org/10.1515/ausfm-2015-0027.
[40] Jenkins, *Convergence Culture: Where Old and New Media Collide*, 14.

in a performance at a particular moment in time."[41] Chapple and Kattenbelt list Christopher Balme and Jens Schröter's understandings, which involve the transposition from one medium to another of subject matter, aesthetic conventions, and even the medium itself (remediation). Essays in the book address the question of theatre as media (or a hypermedium), the use of other media in performance, and the remediation of theatre to other media, applying Jay David Bolter and Richard Grusin's concepts of transparency, immediacy and hypermediacy.[42] One could see the parallel application between these concepts and Murray and Ryan's discussion of immersion and interactivity. When applied to a transmedial work, intermediality would therefore address the relationship between the different media in the piece, while Jenkins' transmedia is concerned with the relationship between the media and the audience (Fig. *4*).

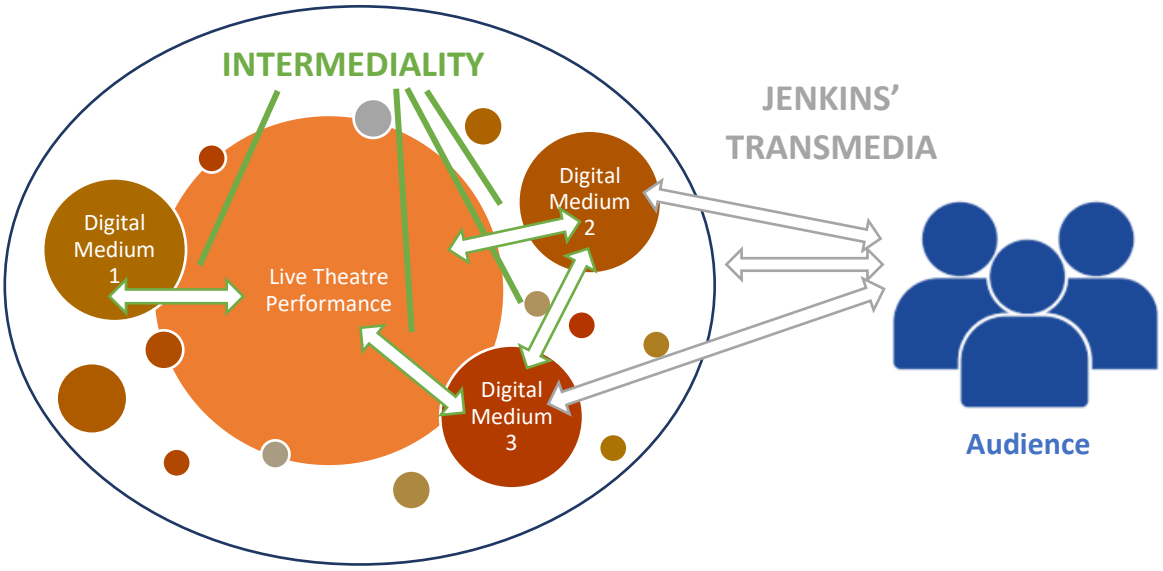

Fig. 4. Diagram showing the relationship between intermediality and Jenkins' transmedia

Mapping Intermediality in Performance, a collection of essays by Kattenbelt and other contributors, followed the publication of *Intermediality*. In it, Kattenbelt shifts the definition of intermediality from the spaces "in-between" media to a "both-and" approach, focusing on the

[41] Freda Chapple and Chiel Kattenbelt, eds., *Intermediality in Theatre and Performance* (Amsterdam: Rodopi, 2006), 12.
[42] Bolter and Grusin, *Remediation: Understanding New Media*, 20-44.

liminalities rather than the boundaries of media.[43] It discusses the changes in spatial and temporal configurations of performance due to emerging technologies, which is particularly relevant to transmedia storytelling with live theatre at the center. The questions of engagement, presence, and immersion—all of which are renegotiated and reconfigured in digital systems involved in transmedia theatre—are also addressed. Within these discussions of intermediality, contributors expand Boal's 'spect-actor' to 'experiencer', suggesting a deeper engagement through multiple senses and/or perspectives.[44] Subsequently, ideas of presence "exist increasingly as transitional spaces between the live and the digital more than as an absolute ontological condition."[45] Immersion is therefore dependent on the experiencer's ability to control his or her perspective of the image (or text), and is both interactive and performative. For this research, these concepts will help evaluate the different digital transmedia modalities involved in the design and how they relate to live theatre performance at the core of the work.

C. Practical/Design Framework

In contemplating how to design an audience experience of transmedia theatre, several practical frameworks need to be considered: transmedia narrative design, and interaction design as applied to digital and/or interactive performances. First of all, since Jenkins' *Convergence Culture* set apart and popularized transmedia storytelling, there have been a handful of guides published for writers and creators on constructing transmedia narratives. While the approaches vary from text to text, the overall focus seems to be on how the form facilitates storytelling and artistic expression. These texts demonstrate that experience design has to be conducted alongside a narrative design effort.

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[43] Chiel Kattenbelt et al., eds., *Mapping Intermediality in Performance* (Amsterdam: Amsterdam University Press, 2010), 17.
[44] Russell Fewster, "Nodes: Modes of Experience, Presence," in *Mapping Intermediality in Performance*, ed. Chiel Kattenbelt et al. (Amsterdam: Amsterdam University Press, 2010).
[45] Russell Fewster's definition of Presence in "Nodes: Mode of Experience," 47.

In *A Creator's Guide to Transmedia Storytelling*, Andrea Phillips lists the four creative purposes for transmedia: worldbuilding, characterization, backstory and exposition, and native transmedia.[46] Phillips implies an ascending order to the list, seemingly based on the level of mastery of transmedia principles required. In the case of native transmedia, she explains that creators "aren't creating supplemental pieces for a performance, film, or written work. Instead, you're creating a story that is fractured into pieces and conveyed through multiple media, often as though the events were really occurring."[47] She suggests that the deliberate construction of a transmedia piece requires more from those involved in its creation, but also promises a greater reward for audiences. In a collection of essays on transmedia world-building edited by Marta Boni, Marie Laure-Ryan similarly proposes that transmedia aesthetics involves the intentional distribution of narrative, involving top-down planning by the creators.[48] She continues to point out that major franchises such as *Lord of the Rings, Harry Potter*, and *Star Wars* do not meet this definition. Rather, they "exploit the success of a single-medium narrative that has already achieved popularity, by offering the public more and more stories that take place in the same storyworld."[49] In fact, successful native transmedia projects are few and far between.

These guides acknowledge that the audience and their experience are central to transmedia narrative design. In Marta Boni's collection of essays, Veronica Innocenti and Guglielmo Pescatore point out that as contemporary narratives become increasingly multitextual and transmedial, narrative gives way to user experience and texts to interfaces.[50] For a 'modular' (transmedia) experience to be successful, the audience has to be able to navigate both within and between multiple narrative paths, making experience design a necessity. In his book, Robert Pratten identifies the 'community' of audiences as one of the goals of transmedia (along

[46] Andrea Phillips, *A Creator's Guide to Transmedia Storytelling: How to Captivate and Engage Audiences across Multiple Platforms* (New York: McGraw-Hill, 2012).
[47] Phillips, *A Creator's Guide to Transmedia Storytelling: How to Captivate and Engage Audiences across Multiple Platforms*, 53.
[48] Marie-Laure Ryan, "The Aesthetics of Proliferation," in *World Building*, ed. Marta Boni (Amsterdam: Amsterdam University Press, 2017).
[49] Ryan, "The Aesthetics of Proliferation," 38.
[50] Veronica Innocenti and Guglielmo Pescatore, "Narrative Ecosystems: A Multidisciplinary Approach to Media Worlds," in *World Building*, ed. Marta Boni (Amsterdam: Amsterdam University Press, 2017).

with characters and convenience).[51] As part of transmedia narrative design, he includes the need to identify the audience, from their demographics, media consumption, and access to technology. He also refers to Richard Bartle's analysis of MUD player types to identify four types of transmedia participants and their interests: achievers (interested in reaching defined goals or rewards), socializers (interested in socializing with other users or characters), explorers (interested in discovering parts of the storyworld), and killers (interested in dominating and upsetting).[52] Phillips hints at treating audiences as users, encouraging creators to chart their narrative path in a flowchart in a similar way that UX designers might chart user journeys.[53] Similar to Pratten, she explains that managing the audience (as users) involves considering, first, which audiences the transmedia work is hoping to reach, including their geography, culture, access to resources, age and literacy level. This allows transmedia creators to identify the type of experience these audiences would expect.

Interactivity is a common theme in these guides, particularly the different types of interactivities and how they affect the audience. Phillips overlaps with Ryan and Dixon in her categories of interactivity, listing story archaeology (how the audience synthesizes the different texts), communication (between audience members and characters, actors, or among themselves), and changing the storyworld (where audience members' actions cause a change in the storyworld).[54] Aside from levels of interactivity, Robert Pratten identifies three stages of engagement with overall transmedia experience (discovery, experience and exploration) encompassing three levels of engagement (attention, evaluation, affection, advocacy, contribution).[55] In addition, both Phillips and Pratten propose that transmedia audiences are largely divided into three categories: passive viewers, engaged viewers or players, and

[51] Robert Pratten, *Getting Started with Transmedia Storytelling: A Practical Guide for Beginners* (CreateSpace Independent Publishing Platform, 2015).
[52] Pratten, *Getting Started with Transmedia Storytelling: A Practical Guide for Beginners*, 78-79.
[53] Phillips, *A Creator's Guide to Transmedia Storytelling: How to Captivate and Engage Audiences across Multiple Platforms*, 107.
[54] Phillips, *A Creator's Guide to Transmedia Storytelling: How to Captivate and Engage Audiences across Multiple Platforms*, 120.
[55] Pratten, *Getting Started with Transmedia Storytelling: A Practical Guide for Beginners*, 92.

"superfans" or "producers".[56] [57] The first category forms the majority of the audience (80% for Phillips, 75% for Pratten), the second a smaller portion (15% for Phillips, 20% for Pratten), and the last one the smallest (5% for both). Transmedia creators must therefore acknowledge that "deeper" experiences requiring greater audience initiative are likely to attract fewer participants (Phillips points out that user-generated content involves a high barrier to participation, often for mediocre results). Knowing which category of viewers one is designing each text for is therefore key to experience design. In fact, attempting to reach all categories becomes a balancing act in deciding the levels of interactivity of the different texts and paratexts.

An interactive storytelling mechanism discussed in all three guides, as well as many other early texts on transmedia storytelling, is the ARG (alternate reality game). Jane McGonigal was the first to define ARG as "an interactive drama played out online and in real-world spaces, taking place over several weeks or months, in which […] players come together online, form collaborative social networks, and work together to solve a mystery or problem that would be absolutely impossible to solve alone."[58] Indeed, transmedia storytelling and ARG seem inextricably linked. Jenkins himself pointed this out as an example of storytelling that necessitates the use of transmedia principles, as players collectively attempt to piece together information from different media to solve the game.[59] Both Phillips and Pratten identify ARG as a subset of transmedia storytelling (and interactive narrative in general), but with the extra requirements of puzzle-solving and direct communication with characters.[60] [61] The act of communal puzzle-solving distinguishes ARG from other live, in-person interactive narrative forms like immersive theatre. Conversely, the real-world collaborative nature of ARG separates it from other transmedia storytelling modalities that involve gaming and puzzle-solving.

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[56] Phillips, *A Creator's Guide to Transmedia Storytelling: How to Captivate and Engage Audiences across Multiple Platforms*, 104.
[57] Pratten, *Getting Started with Transmedia Storytelling: A Practical Guide for Beginners*, 91.
[58] Jane McGonigal, "Alternative Reality Gaming," (2004). https://www.avantgame.com/McGonigal%20ARG%20MacArthur%20Foundation%20NOV%2004.pdf.
[59] Jenkins, *Convergence Culture: Where Old and New Media Collide*, 125-28.
[60] Phillips, *A Creator's Guide to Transmedia Storytelling: How to Captivate and Engage Audiences across Multiple Platforms*, 19.
[61] Pratten, *Getting Started with Transmedia Storytelling: A Practical Guide for Beginners*, 15-16.

This brings us to the next practical framework: interaction design (which encompasses user experience design). Given the abundance of literature in the discipline, this research will narrow the scope of its contextual review to interaction design as applied to digital and/or interactive theatre performance. Aside from Benford and Giannachi's writing mentioned in the previous chapter,[62] the only key text identified on this subject is Jocelyn Spence's *Performative Experience Design*.[63] Spence defines performative experience design (PED) as the intersection between experience design and performance studies, which places this research within the subject. In the opening chapter of the book, she acknowledges that the challenge, risk, and vulnerability associated with performance puts PED at odds with experience design's traditional tendency to "reinforce the usability goals of efficiency, effectiveness and satisfaction."[64] Rather, PED answers the need for new methodologies as HCI enters a third wave less concerned with purposeful, rational interaction and more with culture, aesthetics, emotions. This alignment between PED and the latest wave of HCI is fortuitous, yet it does mean a gap in scholarship where digital interactive theatre was never quite examined through the lens of first and second wave HCI.

In addition, PED provides a methodology which, Spence claims, "can be applied to any experience design project involving an element of performance."[65] This involves the designer and/or researcher: 1. exploring their areas of interest to develop a line of enquiry; 2. selecting performances to view which would shed light on the line of enquiry; 3. analyzing the performances to arrive at a set of properties that can be designed for; 4. conducting design exploration through ideation and the creation of a prototype; 5. using the prototype in performance and collecting data; and 6. analyzing the prototype in use through a set of thematic, interaction, and 'coded performance analysis'. At the end of the book, Spence

[62] Refer to Chapter 1A (Background and Motivation)
[63] Jocelyn Spence, *Performative Experience Design*, ed. Ernest Edmonds, Springer Series on Cultural Computing, (Cham: Springer International Publishing Switzerland, 2016).
[64] Spence, *Performative Experience Design*, 5.
[65] Spence, *Performative Experience Design*, 81.

provides a set of guidelines for future designers and researchers.[66] One of them is making sure that they design the *opportunity* for people to perform (or participate, when applied exclusively to audience members) rather than forcing them to. Transmedia storytelling fits this guideline due to its opt-in nature, allowing personalized experiences that facilitate idiosyncrasies. The guidelines also place a great emphasis on being open to possibilities, be them in the ways of interacting, in approaches to digital technology, and in the creation of new meanings (and the meaning-making process itself), even in the final stages of the methodology.

Of course, one could not discuss design and theatre performance without mentioning the fields of theatre design and performance design. Theatre design, traditionally consisting of the production elements of scenery, costume (including makeup and hair), lighting (including projections), and sound, can certainly contribute to the audience experience of a transmedia theatrical work. Spence differentiates performance design, on the other hand, by referencing the work of Jon McKenzie.[67] Performance design, she explains, is concerned with the broader elements of places, things, gestures, and imagery, yet still focused on the environments that facilitate interactions rather than the interactions themselves. These frameworks are excluded from this research not because they do not affect audience experience, but because the scope of a doctoral research cannot facilitate the even wider range of possibilities that they would allow.

D. Transmedia Theatre Definition and Scope

Based on the frameworks above, this research first needs to define 'transmedia theatre' as a work of transmedia storytelling with a live theatrical performance as the core text. As this is the CI's initial attempt at defining and categorizing "transmedia theatre," the boundaries will likely evolve and become refined over the course of this research. Following guidelines from

[66] Spence, *Performative Experience Design*, 193-94.
[67] Spence, *Performative Experience Design*, 8-9.

Jenkins and Ryan (particularly the latter's list of "What Transmedia Storytelling is Not (Or Rather, Should Not Be"),[68] along with the essential digital and participatory nature discussed in the previous sections, the scope of the different modalities is defined through the following criteria:

1. The narrative is told across multiple media in a cohesive manner. They fulfill what Charles H. Davis term "narrative self-containment" and "narrative additionality,"[69] which means each text can stand on its own narratively, but also brings something new to the storyworld. Following this rule, the 1862 *Les Miserables* novel by Victor Hugo, the 1980 Broadway musical and the 2012 film adaptation, while separate cultural artefacts, all followed the same story as the last two are adaptations of the first, transposed to a different medium. They are examples of remediation, but ultimately do not constitute transmedia based on Jenkins' (and Davis') definition.

2. The various texts involved are conceived as a cohesive piece of creative storytelling—at least in the case of the live performance for this research—rather than just mere extensions that arise from marketing strategies. Many computer games based on popular films or television shows (and vice versa) qualify as extensions, not transmedia. This criterion therefore precludes all existing commercial transmedia franchises with live performance as one of their texts, as the performance is never the core text and is often an extension of the main narrative, as in the case of the Harry Potter musical mentioned above. Another example is the musical *Lazarus* (2015), which continued the narrative thread of Walter Tevis' novel *The Man Who Fell to Earth* (1963), its film adaptation (1976) and TV series (1987). The film and musical even shared the creative input of David Bowie, who acted in the former and wrote the music for the latter. The musical, however, was conceived long after its preceding media and is more akin to a "jukebox

[68] Ryan, "Transmedia Storytelling: Industry Buzzword or New Narrative Experience?," 2-4.
[69] Charles H. Davis, "Audience Value and Transmedia Products," in *Media Innovations: A Multidisciplinary Study of Change*, ed. Tanja Storsul and Arne H. Krumsvik (Göteborg: Nordicom, 2013), 177.

musical," abandoning characters and narrative threads seemingly in favor of presenting Bowie's songs against a digital backdrop.[70]

3. The actual performance event, as defined spatially and temporally, is one medium among other media in the work—the accompanying text (hereafter referred to as 'transmedia paratext' or just 'paratext') need to be viewed or consumed outside the event. Therefore, theatre performances that only employ other media within the event are excluded from this definition. For example, Blast Theory's seminal 1999 work *Desert Rain* incorporated a video game and short films into the actual performance, but once the participants leave the venue there is no additional storytelling in the transmedia paratexts.

4. One or more paratexts are digital (meaning, computer-based) and participatory or interactive, ensuring immersion in the storyworld through media convergence. Where possible, the performance incorporates digital elements that relate to the paratext—for example, the use of video or social media. The immersive works of London-based troupe Punchdrunk Theatre, for example, are participatory in that they require audiences to navigate through large spaces, encounter multiple narrative threads and choose which one(s) to follow. And yet, most of them, like *Sleep No More* (2003) do not incorporate the use of digital texts, so they fall outside the scope of this thesis. This criterion ensures cohesion not just of the narrative across the work, but also of social and cultural practices surrounding the varying media involved. The participatory or interactive element will follow Jenkins' and Ryan's definition, which includes the act of choosing between different media (Ryan's external interactivity). Most of the traditional examples of transmedia storytelling—the large franchises listed by Jenkins and Ryan in their research—inherently fulfill this requirement.

[70] Alexis Soloski, "*Lazarus* Review – Bowie's Baffling Starman Lands Off-Broadway," *The Guardian* (December 7 2015). https://www.theguardian.com/stage/2015/dec/08/lazarus-review-david-bowie-jukebox-musical-off-broadway-new-york.

Based on these criteria, several works were identified as relevant to this research from the last three decades, among other possible existing artistic works. The earliest notable example, which the CI would consider a precursor to transmedia theatre, was Motherboard's *M@ggie's Love Bytes*.[71] Neither the core performance nor the paratext told a traditional, linear narrative, but rather portrayed the personality of a dancer onstage. Online viewers were invited to contribute pictures and audio files, as well as chat to other viewers and leave comments on videos through a webpage called "M@ggie's Giftbox" on the performance's interactive website[72]. Some of the materials submitted were incorporated into the performance, informing the character of M@ggie for different performances. On the website, viewers could also visit the "M@ggie's Memories" page, which contain pictures and videos from the performances (Fig. *5*). This type of interaction will be referred to as "digital user-generated (DUG) dramaturgy" as user contribution affects the unfolding storyline (or, in this case, character).[73] Another performance using a similar modality was *The Illiad Project*, staged at UCLA's School of Theater, Film and Television.[74] This project similarly used an interactive website that the viewers could access. On this website, viewers not only learned background stories related to the performance; they could also submit personal information which would be incorporated into the performance.

[71] *M@ggie's Love Bytes*, choreography by Amanda Stegell, direction by Amanda Stegell and Per Platou, first performed at VOID Festival, Moonfish, Oslo, November 3 1995.
[72] "Maggie's Love Bytes," updated January 2 1999, accessed April 4, 2022, http://www.liveart.org/motherboard/MLB/index.html.
[73] Under Ryan's categorization, this would fall under bottom-up or hybrid productive interactivity.
[74] *The Illiad Project*, script by Jared Stein, architecture by Jeff Burke, Adam Shive and Jared Stein, Los Angeles Theater Center, Los Angeles, 2002.

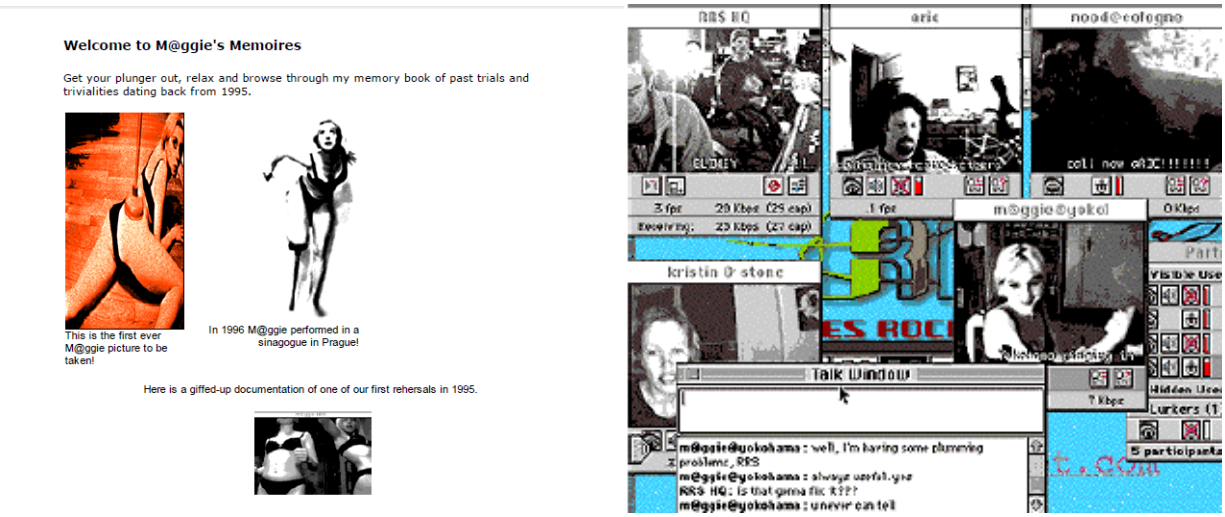

Fig. 5. Examples of archive materials from *M@ggie's Love Bytes* (1995) in M@ggie's Memories

Note that in this research, the use of the term "dramaturgy" is based on the contemporary American definition. Said definition evolved from the notion of what a dramaturg does as introduced by Bertolt Brecht after World War II. The task of the dramaturg now involved researching the political, historical, aesthetic and formal contexts of a play.[75] The term 'digital user-generated dramaturgy' is an adaptation of this definition through the lens of user-centered design. In the case of a performance like *M@ggie's Love Bytes* and *The Illiad Project*, the audience does not perform the task of the dramaturg. They do, however, play a part in contextualizing the text embedded in the performance through user-contributed data. In *M@ggie*, the songs and pictures submitted by audience members may provide the aesthetic context for Maggie herself, while in *Illiad*, the audience's collective residence form the geographical and social recontextualization of Homer's epic. Audience-generated dramaturgy is not restricted to transmedia storytelling—Boenisch has discussed 'relational dramaturgy' as the full interplay involving actors and spectators, with an emphasis on the latter's experience.[76] [77] In digital user-generated dramaturgy, the participating audience members are also the users

[75] Magda Romanska, *The Routledge Companion to Dramaturgy* (New York: Routledge Abingdon, 2015).
[76] Peter M. Boenisch, "Acts of Spectating: The Dramaturgy of the Audience's Experience in Contemporary Theatre," *Critical Stages* 8 (2012), http://archive.criticalstages.org/26.
[77] While Boenisch warns that relational dramaturgy exists in all performance, not just ones requiring audience active participation, it is perhaps telling that he chose examples specifically from the latter subset in his writing.

of the digital system that facilitates their contribution and allows them to contextualize or recontextualize the performance in that specific manner.

Another type of relevant work is *hamlet_X* by Herbert Fritsch, which is featured in Chapple and Kattenbelt's *Intermediality in Theatre and Performance*.[78] While in the book, it is presented as an example of intermedial work, the descriptions of *hamlet_X* qualify it as transmedial, incorporating different media such as short films, animations, comics, and online chats. The piece divided the play into 111 fragments, with each fragment told, and at times expanded, through different paratexts. The staged element incorporated some of these texts along with performed fragments—one such event was broadcast live on television. While the project incorporated different modalities (currently listed on the project's website),[79] it stands out as being a good example of Ryan's external interactivity. Like Jenkins' hunters-and-gatherers, with the multitude of texts and media, audiences had to choose which texts to view and put together. Also incorporating external interactivity is *tts* (short for *terrorist training school*) and accompanying DVD *tts: recruit* by Perth-based media art group pvi collective.[80] The company, known for works that deliver social messages and incorporate digital, often location-specific performances, aimed to highlight the growing politics of fear in Australia. Like *M@ggie*, the work did not deliver a traditional story, but rather an immersive in-person experience where viewers rode a bus around Perth and were shown the city's vulnerability to terrorism. The interactive DVD contained motivational videos, workout routines (Fig. *6*), aptitude tests, and other materials to be watched at home at the viewer's choosing.

[78] Birgit Wiens, "Hamlet and the Virtual Stage: Herbert Fritsch's Project *hamlet_X*," in *Intermediality in Theatre and Performance*, ed. Freda Chapple and Chiel Kattenbelt (Amsterdam: Rodopi, 2006).
[79] "Hamlet_X," updated 2017, 2001, accessed April 4, 2022, http://www.hamlet-x.de/.
[80] *terrorist training school*, design and performance by pvi collective, first performed at ArtRage Festival, Perth, December 2002.



Fig. 6. The workout video in *tts: recruit* (2002), the DVD accompaniment to pvi collective's *tts* (2002)

Video games are one the most common media products found in transmedial works, with popular media franchises often expanding to PC and console games. Gaming interaction in transmedial works is not limited to the two platforms, however. Unlimited's *The Moon, The Moon* used simple Flash animation to create a web-based text questionnaire game (developed by ConeyHQ).[81] The questions were posed by "the moon", a character in the stage performance whose existence is questioned.[82] If viewers carried out certain tasks, the game would flash words from the answers in randomized configurations and 'reward' participants with music created for the performance. More recent examples of gaming interaction in transmedia theatre are Blast Theory's *Karen* and *2097: We Made Ourselves Over*.[83] [84] Blast Theory, known for incorporating many digital, interactive, and/or location-specific performances in their work, has long expanded into gaming applications. *Karen* revolved around the viewer's interaction with a fictional life coach through a downloadable mobile app (Fig. *7*), while *2097* took the viewers to a futuristic world. Like *The Moon, The Moon*, Blast Theory's games involved questions asked by characters from the performance. However, both

[81] "The Moon, The Moon," accessed April 4, 2022, https://coneyhq.org/2012/01/21/the-moon-the-moon/.
[82] *The Moon, the Moon*, script by Clare Duffy, Jon Spooner and Chris Thorpe, direction by Jon Spooner, Unlimited Theatre, Leeds, May 2009.
[83] *Karen,* (Blast Theory, 2016).
[84] "2097: We Made Ourselves Over," 2017, accessed April 4, 2022, http://wemadeourselvesover.com/.

works by Blast Theory featured non-conventional stage performances. For *Karen*, an "immersive live experience" was planned, framed as the titular character's birthday party (later cancelled for undisclosed reasons).[85] The main event of *2097* blended installation with theatre in site-specific performances.[86]

Finally, with the increasing ubiquity of social media as part of daily digital consumption, theatre companies have been utilizing the platform not just as a marketing tool, but also creatively as a performance space. While there are plays that take place entirely on one social media platform (such as the Royal Shakespeare Company's 2010 performance *Such Tweet Sorrow*, a Twitter-based adaptation of Shakespeare's *Romeo and Juliet*), this research will focus on cross-platform performances. After the success of *Such Tweet Sorrow*, the RSC performed *Midsummer Night's Dreaming* in 2013, combining live performance in four different locations and virtual performance on the Google Plus platform by the actors involved (Fig. *8*).[87] Sophy Smith's *Pervasive Theatre*, on the other hand, is an original narrative unfolding over Twitter, Vine, Facebook and YouTube, with different types of media content suited to each platform.[88] It was staged as part of her research project into cross-platform multi-media (or transmedia) performance. While the actual execution did not involve live performance, she mentioned in her lecture at the 2014 Conducttr Conference of the possibility of such a performance being "a wrap-around for a live performance event […] so that by the time they came to see the live show, they knew the characters […] and a much deeper understanding of what is going on".[89] This possibility aligns with *Midsummer Night's Dreaming* and could be explored within the scope of this project.

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[85] "Karen's 40th Birthday Bash," 2015, accessed April 4, 2022, https://www.blasttheory.co.uk/news-item/karens-40th-birthday-bash/.
[86] "2097: We Made Ourselves Over," 2017, accessed April 4, 2022, http://www.aarhus2017.dk/en/programme/performing-arts/2097-we-made-ourselves-over/.
[87] *A Midsummer Night's Dreaming*, script by William Shakespeare, direction by Gregory Doran, online and live at The Dell Theatre, Stratford-upon-Avon, June 21-23, 2013.
[88] Sophy Smith, "Pervasive Theatre: New Writing for New Environments," *Convergence* 24, no. 3 (2016), https://doi.org/10.1177/1354856516675253.
[89] Transmedia Storyteller, "Transmedia Performance and Pervasive Theatre," (YouTube, April 4 2022 2015), Video. https://www.youtube.com/watch?v=_VcDX0EcghQ.



Fig. 7. The questionnaire in the mobile app for Blast Theory's *Karen* (2016)

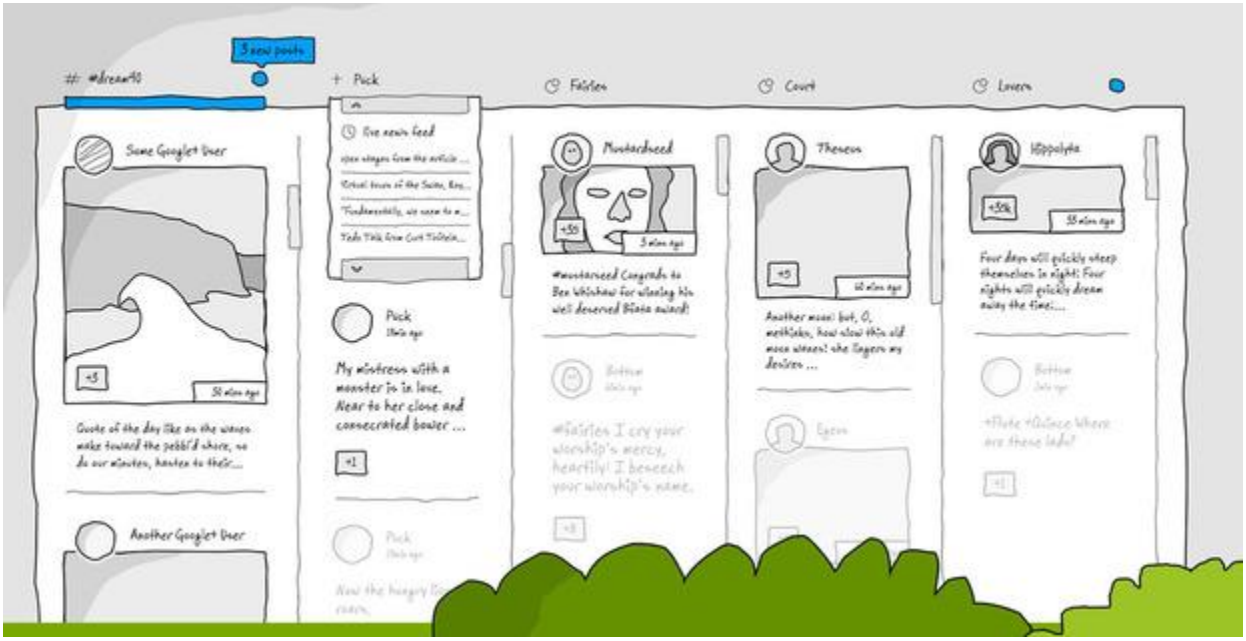

Fig. 8. Sketch of the Google Plus stream for Royal Shakespeare Company's *Midsummer Night's Dreaming* (2013)

As a whole, the type of transmedia theatre that follow the criteria above—one that focuses on storytelling and world-building—has not been executed yet, but the examples discussed are relevant in discussing the narrative and interactive potential of the different modalities and technologies involved. These will in turn inform the experience design of transmedia theatre, as outlined in the next chapter.

CHAPTER 3: RESEARCH METHOD

A. Introduction

This PhD research is practice-led, employing mixed methods through design strategies (conceptual framework, prototype exploration and cultural probes) and audience research, conducted in three stages (Fig. *9*). The first stage, following the structure of phenomenon-first research through design (RtD) described by Stappers, Visser and Keller,[90] forms the conceptual framework based on an identified phenomenon—"what happens in the world."[91] This involves case studies of various historical transmedia theatre modalities (as informed by the contextual reviews). The resulting ontological knowledge base informs the next stage of this research by identifying the different factors of consideration affecting the experience design of transmedia theatre.

The second stage involves prototype exploration, combining cultural probes with audience research in collaboration with an established local theatre company with a suitable upcoming performance, functioning as the core text of the transmedia project. The iterative design process of RtD is employed, with ideation informed by the aforementioned ontological knowledge base and low-fidelity prototypes built around the performance. Design exploration is carried out through the use of Bill Gaver et al.'s cultural probes.[92] These probes consist of the prototypes and a series of tasks that participants perform, along with the performance to be viewed. The tasks simulate the aforementioned "associated protocols or social and cultural

[90] Pieter Stappers, Froukje Sleeswijk Visser, and Ianus Keller, "The Role of Prototypes and Frameworks for Structuring Explorations by Research through Design," in *The Routledge Companion to Design Research*, ed. Paul A. Rodgers and Joyce Yee (Oxfordshire: Routledge, 2014).
[91] Stappers, Sleeswijk Visser, and Keller, "The Role of Prototypes and Frameworks for Structuring Explorations by Research through Design," 165.
[92] Bill Gaver, Tony Dunne, and Elena Pacenti, "Design: Cultural Probes," *Interactions* 6, no. 1 (1999), https://doi.org/10.1145/291224.291235.

practices" of each medium.[93] Responses to tasks are analyzed and audience research is conducted through self-directed discussions, in order to identify the potentials of the digital transmedia modalities as perceived by participants.

Finally, based on the potentials, strengths and weaknesses that are discovered through audience- or user-centered research, one or more prototypes are chosen and refined in the next stage of the iterative design process. This high-fidelity prototype, along with the user experience design based on related cultural practices, will be implemented into the stage performance of the core text by the company involved. The three stages form the iterative design process as pictured below:

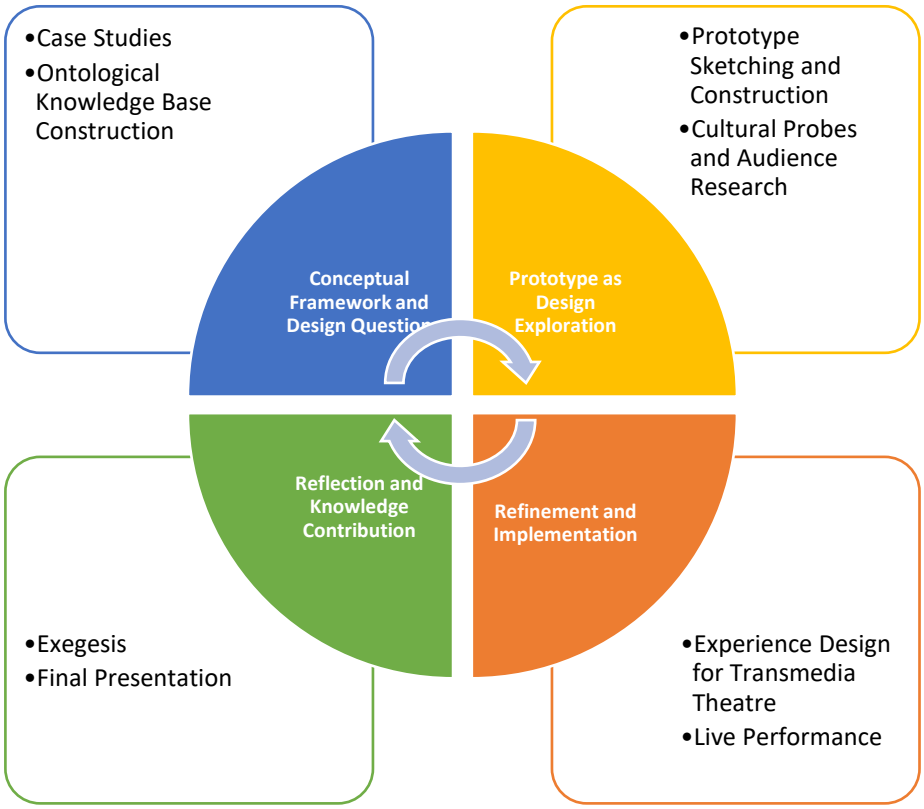

Fig. 9. Diagram of the research stages as an iterative design process

[93] Jenkins, *Convergence Culture: Where Old and New Media Collide*, 13.

The overall structure of this research method resembles the PED methodology outlined by Jocelyn Spence, particularly in its emphasis on design exploration and prototype use in performance.[94] It concedes, however, the initial limitations of the research due to the novelty of transmedia theatre relative to digital interactive theatre in general. First of all, discussions of transmedia theatre examples in secondary sources are rare enough that watching such performances (live or recording) is highly unlikely. This research method also immediately centers the process of design exploration on the audience-as-user through the use of cultural probes to generate prototypes. This focus on audience continues through to the analysis stage, where thematic analysis focuses solely on audience feedback. Meanwhile, the lack of audience interactivity during the performance itself means that interaction analysis does not hinge on video recording of interactions, but rather on user-generated content and web analytics of user behavior.

B. Stage 1: Building a Conceptual Framework

In stage 1, a sample of past performances are categorized and analyzed according to the different modes of interactivity and narrative cohesiveness in transmedia storytelling (Ryan 2009, 2015). The examples discussed in the contextual review are then used to inform the development of the ontological knowledge base, forming the contextual framework.

These again include:

1. Hunting-and-Gathering – External Interactivity: pvi collective's *tts* and *tts: recruit* (2002-2005)
2. Gaming Application – Internal Interactivity: Blast Theory's *Karen* (2016) and *2097: We Made Ourselves Over* (2017)
3. Social Media Theatre – Top-Down Productive Interactivity: The Royal Shakespeare Company's *Midsummer Night's Dreaming* (2013)

[94] Refer to Chapter 2C (Practical/Design Framework)

4. DUG Dramaturgy – Hybrid/Bottom-Up Productive Interactivity: UCLA's *The Illiad Project* (2002)

The interactive and narrative affordances of each modality—both the technology and cultural practices involved—are examined, as well as how spatial, temporal and physical boundaries are negotiated in the liminal intermediality between live performance as the core text and digital media as paratexts. Similarities and differences, potentials and limitations are noted, as well as where and how one could situate each modality within an overall transmedia piece alongside a live performance. The codified and categorized modalities form the knowledge base, serving as inspiration for design ideas for the second stage of the research.

C. Stage 2: Prototype Exploration, Cultural Probes and Audience Research

I. Prototype Exploration

Following the RtD structure of Stappers, Visser, and Keller, prototypes function as a form of exploration rather than hypothesis testing.[95] Collaboration with an established theatre company or theatre artist is ideal as the research focuses on the experience design of the performance rather than creating the artwork or text. Parallel to the first stage, the chief investigator (CI) approaches local theatre companies, performing groups, and student theatre projects in Adelaide for possible collaboration in this project. A planned performance in the company or the artist's upcoming season is then chosen as the core text of the project based on its artistic objectives and narrative goals, its compatibility with digital interactive media, as well as other considerations arising from the source material and related pre-existing media properties. Several low-fidelity prototypes are sketched and constructed around the core text,

[95] Stappers, Sleeswijk Visser, and Keller, "The Role of Prototypes and Frameworks for Structuring Explorations by Research through Design."

with technologies and cultural practices based on the discoveries made within the first stage. These take the form of simple text-based games (likely multiple-choice interactive narrative similar to Blast Theory's *2097*—the platform Quiffy or Twine might be used in this instance), scheduled short videos (on YouTube), websites (Wordpress), and social media pages (Facebook, Twitter or Instagram) that are easy to set up and use. The prototypes are quite basic in design and functionality, focusing on user experience along with the "performance". The content is created by the CI in collaboration (or at least consultation) with the company or artist involved, to be accessed in conjunction with rehearsal material for the performance. The final version of the prototypes forms the materials for the cultural probes, to be tested and explored by participating audience members.

II. Cultural Probes

Cultural probes can be an effective research method for exploring design, intended to provoke new ideas, modifications and improvements through different experiences.[96] They usually involve a package of objects and tasks for target users to interact with, yielding fragmentary user-focused data over a period of time. The probes can be adjusted to suit different modalities, technologies and practices, potentially with different groups of participants completing different sets of tasks. The small sample of participants—between twelve and fifteen in total—are selected from theatre students, the existing audience base of the company involved, and other theatre-goers. The demographic of selected participants attempts to represent, as closely as possible, a cross-section of the intended audience of the performance. Each participant is given a cultural probe, in which the main task involves attending and viewing the rehearsal of an abridged version or part of the performance. The rest of the tasks consist of the use of the assigned prototypes for a set period of time (2-3 weeks) before and after the viewing. Given the importance of agency in transmedia, as well as the need to avoid rigidity in

[96] Gaver, Dunne, and Pacenti, "Design: Cultural Probes."

the use of cultural probes, the tasks are largely optional, with considerable flexibility in levels of interaction and contribution made by participants.

Due to the digital nature of the possible prototypes (videos, gaming application, social media platforms and interactive websites), digital cultural probes are used in this research. Past examples of digital cultural probes include Iversen and Nielsen, which used Nokia 7650 phones with Dictaphone function in their research into designing location-based support for educational use.[97] With children as participants, they discovered that using digital probes allows more access to informal practice, particularly since the device used (phones) are central to the users' lives. Another example is Service Design Lab Singapore's Envision project, which explored young working adults' financial habits and goals. The probe was deployed through Facebook, collecting data from picture and text-based posts (Fig. *10*).[98]

[97] Ole Sejer Iversen and Christina Nielsen, "Using Digital Cultural Probes in Design with Children" (Proceedings of the 2003 Conference on Interaction Design and Children, Preston, England, Association for Computing Machinery, 2003).
[98] "Design Probes," accessed April 5, 2022, http://www.servicedesignlab.net/design-probes/.

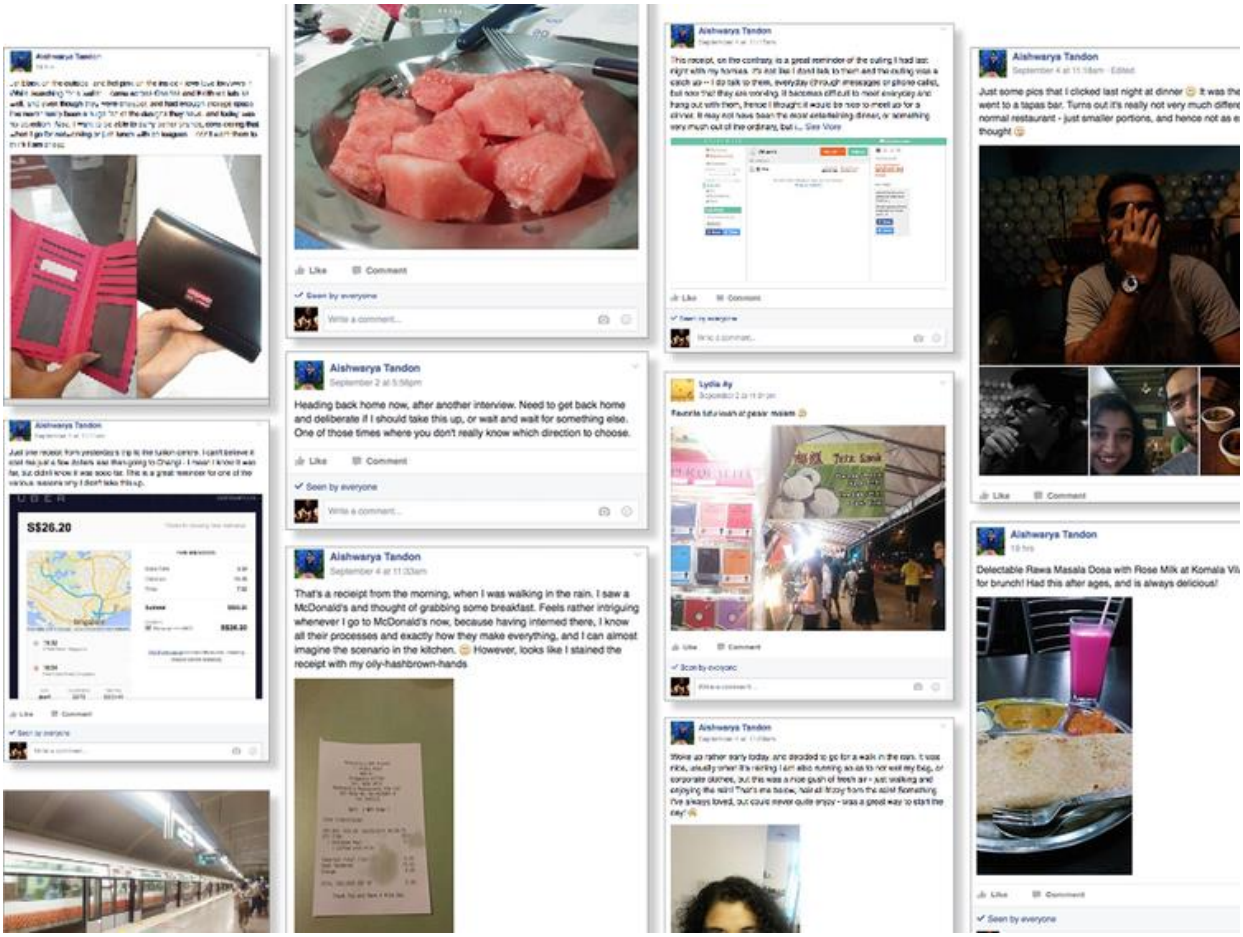

Fig. 10. Service Design Lab Singapore's Facebook-based cultural probes

For this project, the overall probe consists of a simple app or website, meant to be accessed through a mobile device. Pages on the site/app list tasks and instructions for every prototype and modality assigned to participants, which also include links to download apps, watch videos, as well as access social media and interactive web pages. A suggested calendar is embedded into the pages with dates for performing different tasks and watching rehearsals or performance footage. The flow diagram for the probe app can be seen below (Fig. *11*). Data is collected not through the probe mobile site, but rather through the activities carried out and contributions made on the different apps, videos and pages that the site leads to. The record of said activities is obtained through simple analytic tools provided by the different platforms (e.g. YouTube or Instagram), while user contributions should be evident in observable content.

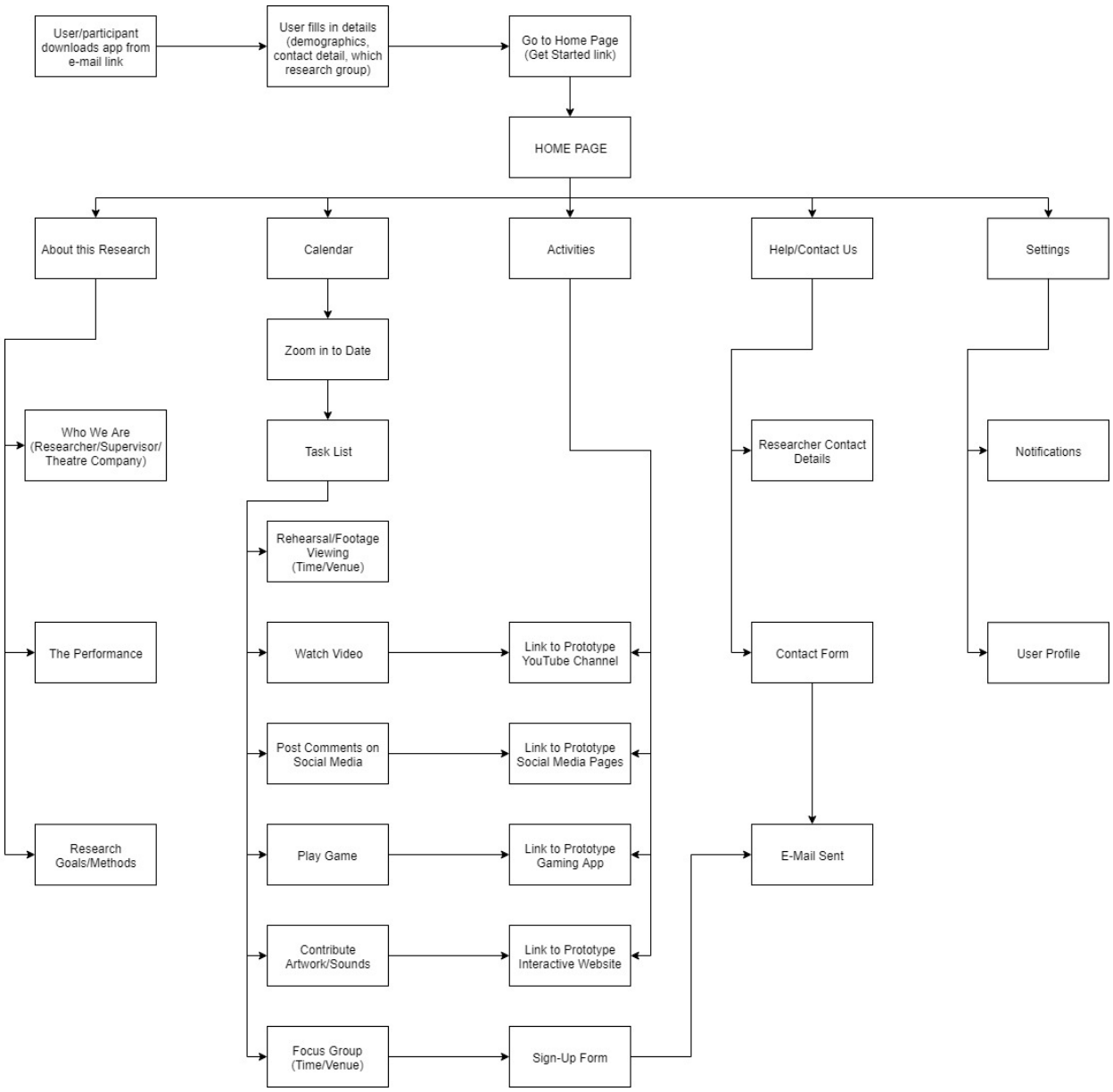

Fig. 11. Proposed flow diagram of the digital cultural probe mobile app

III. Audience Research

Given the emphasis on audience experience in transmedia theory, phenomenological audience research is conducted in addition to cultural probes. Williamson and Brewster first formulated

a performative perspective approach on user experience combining traditional ethnographic methods from the humanities with quantitative usability methods from computer science.[99] With the use of cultural probes to explore design possibilities (rather than traditional usability testing), phenomenology can help interpret and understand the user experience of these possibilities. In her audience research on participatory performance as an aesthetic form, Astrid Breel used a methodology based on interpretive phenomenological analysis (IPA), which is focused on making meaning out of experience through interpretation.[100] Given the small sample of self-selecting participants, a hermeneutic approach to the codification of interaction is suitable for this project. Breel, however, used questionnaires, semi-structured interviews, reaction observations and memory study, the strict rules of which do not complement the use of cultural probes and transmedia in general. This research instead uses a participant-directed group discussion, held upon the return of the probes. Matthew Reason employed this method in his research into the audience perceptions of liveness.[101] For this project, participants are similarly given prompts to discuss the experience of using the cultural probes. Clear conceptual markers are avoided and intervention by the research team (the CI, partner investigators and research supervisors) are fairly low. The discussions are recorded, transcribed, and then analyzed in conjunction to the responses to the cultural probes given.

D. Stage 3: Refined Experience Design and Implementation

Based on audience perceptions of interactive and narrative potentials discovered in the previous stage, one or more prototypes are chosen from the different interactive modalities explored. In her research on Pervasive Theatre, Sophy Smith uses the creative process of writing combined with audience research (and a simplified version of cultural probes)

[99] Julie R. Williamson and Stephen Brewster, "A Performative Perspective on UX," *Communications in Mobile Computing* 1, no. 1 (2012), https://doi.org/10.1186/2192-1121-1-3.
[100] Astrid Breel, "Audience Agency in Participatory Performance: A Methodology for Examining Aesthetic Experience," *Participations: Journal of Audience & Reception Studies* 12, no. 1 (2015).
[101] Matthew Reason, "Theatre Audiences and Perceptions of 'Liveness' in Performance," *Participations: Journal of Audience and Reception Studies* 1, no. 2 (2004), http://www.participations.org/volume%201/issue%202/1_02_reason_article.htm.

culminating in the performance, or rather, release, of the final narrative.[102] This project also involves the implementation of the design in an actual performance. Working in close collaboration with the theatre company or performing group, modification and refinement to the prototype(s) are made based on feedback from the audience, as well as necessary adjustments to suit the arising narrative and aesthetic needs of the performance. The actual live performance event by the company, as well as the prototypes of the digital interactive media, will form the overall transmedia text. The resulting transmedia design is therefore ancillary to the stage performance itself—as postulated by Jenkins, it narratively adds to the media viewing experience but is not required to enjoy the core text. Unlike Smith's project, however, this performance experience design is further analyzed not as a form of hypothesis testing, but rather as design practice within the knowledge base of the related fields in accordance with the aforementioned focus of RtD. The exegesis includes the CI's own perception of and reflection on the intermediality, narratology, and interactivity of the overall transmedia text.

E. Ethical Considerations and Limitations

Given the inclusion of surveys and interviews in this project, as well as user research through cultural probes and group discussion, ethics clearance is sought in the early stages of the research (refer to the Gantt charts in Appendix A).

F. Research Timeline (Proposed and Final)

The Gantt charts for the research timeline (both proposed and final) can be found in the appendix, color-coded to respond to the diagram in Fig. *9* (refer to Appendix A).

[102] Smith, "Pervasive Theatre," 5-6.

G. Research Outcomes

The outcomes of this project are as follows:

- An ontological knowledge base of various digital transmedia theatre modalities with existing works as examples, outlining the narrative and technological affordances as well as degree of interactivity of the media involved. This is of significance to future researchers and practitioners of transmedia theatre, in addition to the broader studies of digital and interactive art, media art studies, and performance studies.
- An outline of the Research through Design (RtD) method combining audience research, prototype exploration (through cultural probes) and iterative design. While RtD and cultural probes are defined methodologies, synthesizing them with audience research is a relatively novel approach whose effectiveness is investigated in this project.
- An artistic output in the form of a user experience design for transmedia theatre, which adds to the CI's own practice as well as contribute, methodologically and formatively, to future design/artistic investigations in the field.
- An evaluation of the research method, the design process, as well as the artistic output, in the form of a written exegesis. This evaluative process seeks to identify prospective changes and improvements to be explored in future research.

CHAPTER 4: RESEARCH STAGE 1 – CONCEPTUAL FRAMEWORK (CASE STUDY ANALYSES AND ONTOLOGICAL KNOWLEDGE BASE)

A. Introduction

The following series of case studies examine four creative pieces that fulfill the transmedia theatre criteria outlined in the previous section, providing strong exemplars of the four common modalities identified. The idea of multi-platform storytelling and world-building has continued to attract cultural and scholarly interest—for example, recent discussions on the nascent Metaverse resemble that around Web 2.0 nearly two decades ago.[103] As mentioned earlier, the COVID-19 pandemic and resulting restrictions have further facilitated the growth of transmedia theatre experiences, whether they label themselves as such. Nevertheless, these case studies focus on older examples from the early 2000s to the mid-2010s, as reviews, critiques and scholarly discussions are more readily available. Discussions of more recent transmedia theatre pieces which run slightly before or concurrently with this research project will occur in later sections of these exegesis as they are more practical rather than theoretical in nature. In addition, preliminary research into each case study revealed ample secondary sources—the proposed interviews with the theatre-makers involved were deemed superfluous and potentially distracting from objective analysis of the works themselves.

In the next step, an ontological knowledge base was created based on the defining characteristics of transmedia theatre experiences noted during the case study analyses. Parameters were set up, taking into account the narrative and production elements, as well as technological and logistical considerations, that distinguish transmedia theatre from other theatrical or digital storytelling endeavors. Noted examples of transmedia theatre works up to

[103] David Armano, "Web 3.0 And The Metaverse Will Mainstream—That Might Not Be A Good Thing," *Forbes* (November 11 2021). https://www.forbes.com/sites/davidarmano/2021/11/11/web-30-and-the-metaverse-will-mainstream-that-might-not-be-a-good-thing/?sh=4d5fe4ee1996.

this point were then entered into the database, with variations among them identified and codified through the parameters. While the database can be continually updated with more recent examples, either by the Chief Investigator (CI) or other researchers, it is not meant to be a universal classification system, but rather an instrument to support this research. By codifying these ontological dimensions early on in the research, the CI had a foundation upon which to design transmedia theatre prototypes in subsequent research stages.

B. Case Study: Hunting-and-Gathering – pvi collective's *terrorist training school* and *terrorist training school: recruit*

Given the earlier emphasis on audience interactivity as a key feature of transmedia theatre, the natural tendency would be to dismiss works where paratexts do not necessarily fit the interactivity criteria.[104] As previously discussed, a transmedial work can be viewed as a single piece, in which case the relationship between the core text and paratexts can qualify as interactive. Henry Jenkins explains in *Convergence Culture* that "to fully experience any fictional world, consumers must assume the role of hunters and gatherers, chasing down bits of the story across media channels."[105] The deliberate dispersion of narrative across different texts and platforms forms Janet Murray's procedural function. The audience-as-user's input consists of deciding which texts to chase down and consume, which affects their individual experience of the narrative. This again falls under Marie-Laure Ryan's category of 'external interactivity,' and employs what game designer and theorist Eric Zimmerman terms 'meta-interactivity' (as opposed to his 'explicit interactivity' which reflects the earlier criteria).[106] Meta-interactivity is a cultural process, occurring beyond the experience of a single text and

[104] To again use Murray's definition of interactivity as both procedural and participatory as well as Laure's concept of mediated collaboration, to qualify as interactive requires a deliberate procedure enabling the user to exert input on the work which would perceptibly affect the text.
[105] Jenkins, *Convergence Culture: Where Old and New Media Collide*, 21.
[106] Eric Zimmerman, "Narrative, Interactivity, Play, and Games: Four Naughty Concepts in Need of Discipline," in *First Person: New Media as Story, Performance, and Game*, ed. Noah Wardrip-Fruin and Pat Harrigan (Cambridge: The MIT Press, 2004), 158.

therefore can be applied to the consumption of any transmedial piece. In this meta-interactive process, Jenkins' concept of "pleasure"—derived from making the connection between texts—mirrors Murray's "pleasure from agency", providing the audience with the choice of narrative experience.[107] [108]

Pvi collective's *terrorist training school* (often abbreviated to *tts*) is an umbrella term for performances of the same theatrical work in different locations. It premiered in 2002 in as part of the Artrage festival in Perth, Australia, under the title *tts: route 65*. The performance at the core of the piece was in itself immersive and interactive—audiences or participants were invited to hop on a customized bus to be taken on a tour of local architecture and/or attractions. The experience simulated a "tour of duty", with "paranoid tour guides, security defects, bus inspections and 'training' exercises" designed to skew the audience's perspective of familiar settings.[109] The paratext was *tts: recruit*, a limited-edition DVD available for purchase at performance sites and for rent in video stores. The content similarly satirized military recruitment procedures and offered "motivational videos, aptitude tests, game-play and role-play scenarios." A printed training guide was also provided to audience members attending the performance, which it can be read during the tour or afterwards. Rather than a transmedial paratext, however, the guide functioned more as a program, containing essays, images, and other dramaturgical materials that would illuminate the process and message of the performance. Since the DVD itself was made up of multiple segments that the viewers could pick and choose from, it could be construed as a collection of paratexts or in its entirety.

tts presents an interesting case study as the performance itself is immersive and lacks the causality and plot progression that are often considered necessary in establishing a narrative. And yet, Zimmerman (drawing on J. Hillis Miller) provides a broader definition of narrative as a change of state represented in a medium through patterning and repetition, using the example

[107] Jenkins, *Convergence Culture: Where Old and New Media Collide*, 129.
[108] Murray, *Hamlet on the Holodeck: The Future of Narrative in Cyberspace*, 12.
[109] Pip Christmass, "PVI's Terror Australis," *Real Time* (February 2005).

of the game of chess.[110] In this case, the language of drama (acting, costumes, bus "set") facilitated the change from a familiar setting to an alternate reality version of the city in question. In the latter, terrorism seemed to lurk in every corner through repeated reveals of potential, if obtusely imaginary, dangers. *tts: recruit*, then, continued this narrative thread by casting the newly 'enlightened' participants as military recruits who could now train to combat these terrorist threats. This was supported by the temporal positioning of the paratext consumption relative to the core text experience. While the DVD was available at video stores, there was little to no publicity intended to inform those who had not attended the performance of its existence. The most likely scenario was viewers purchasing the DVD at the performance site or, now aware of its availability at video stores, renting it after attending the performance, and watching it at home.

In analyzing the DVD as the paratext, it is important to consider the technological affordance of the medium itself. At the time of its release, DVDs were the ubiquitous medium, with almost every household possessing the means to play them, enforcing the spatial positioning of the paratext. There was almost no learning curve involved, and even navigating the DVD menu or fast-forwarding through segments would come as second nature to most potential viewers of *tts: recruit*. The DVD contained a series of videos, with pvi collective actors dressing up as pseudo-military instructors, addressing the viewers directly as "recruits" in the style of instructional videos. There was no explicit interactive element in the videos, but meta-interactivity is at play as viewers could choose which segments to watch and whether to follow the actors' instructions. While attending the tour, the viewers experienced the narrative from a first-person perspective, becoming a character in the story and having the agency to react to change as they saw fit (they could even leave the tour, which would effectively change what happened to their character). Similarly, as recruits watching the DVD, the instructors requested that the viewers perform different actions, but ultimately, the viewers had the freedom to opt in or out (*Fig. 12*). They could decide whether they watch the training videos, take the aptitude

[110] Zimmerman, "Narrative, Interactivity, Play, and Games: Four Naughty Concepts in Need of Discipline," 156.

tests, or complete the workout, and ultimately question whether they would be attracted by such a terrorist group enlistment effort.

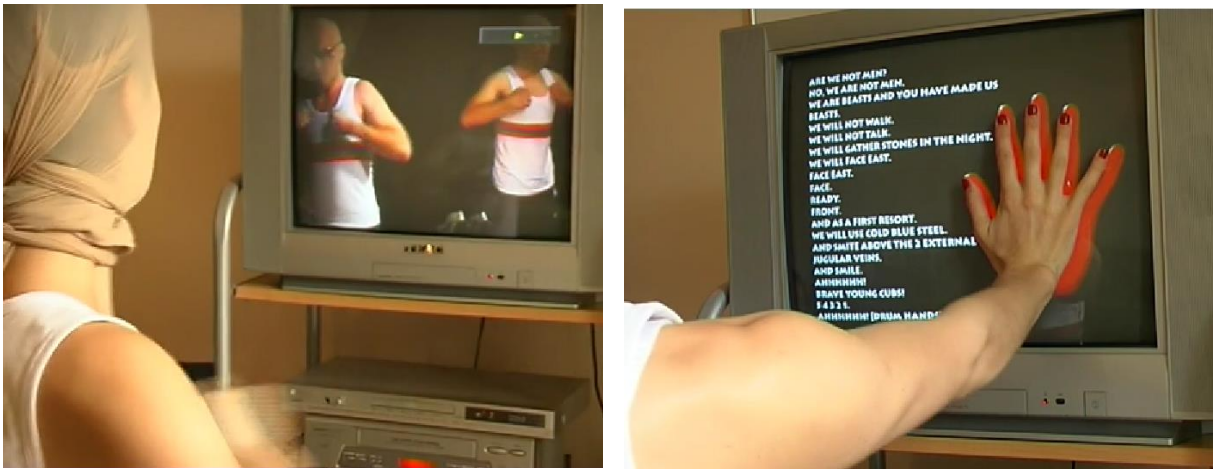

Fig. 12. A video uploaded by pvi collective's official page on the platform Vimeo introduces the *tts: recruit* DVD (2002) and previews some of the activities involved

In Jenkins' example of *The Matrix* franchise, the hunting-and-gathering modality found in *tts* can be applied to the viewing of, for example, the movie trilogy along with *The Animatrix* DVD, which is similarly not explicitly interactive.[111] This cultural process promises more information and more narrative to the characters and the storyworld they occupy. In *The Animatrix*, for example, the paratext tells viewers what happened before the events in the film. Similarly, in *tts: recruit*, the videos suggest what the guides have gone through prior to meeting the participants on the bus. Hunting-and-gathering takes a new dimension in *tts* aside from extending the narrative, mainly due to immersive theatre's potential of offering a personalized first-person experience.[112] This results in the paratext going beyond the immersive and resulting in what Sophy Smith terms an 'integrative' experience. She writes:

[111] *The Matrix,* directed by Lana Wachowski and Lilly Wachowski (Warner Bros., 1999); *The Matrix Reloaded*, directed by Lana Wachowski and Lilly Wachowski (Warner Bros., 2003); *The Matrix Revolutions*, directed by Lana Wachowski and Lilly Wachowski (Warner Bros., 2003); *The Animatrix*, directed by Andy Jones, Mahiro Maeda, Shinichirō Watanabe, Yoshiaki Kawajiri, Takeshi Koike, Kōji Morimoto, Peter Chung (Village Roadshow Pictures & Warner Home Video, 2003).

[112] Rose Biggin, *Immersive Theatre and Audience Experience: Space, Game and Story in the Work of Punchdrunk* (Cham: Palgrave Macmillan, 2017).

> Rather than taking people out of their daily lives, it has the potential to bring arts directly into people's everyday lives. Rather than an immersive storyworld being imposed on the participant, audience members can weave the performance into their everyday lives.[113]

In the case of *tts*, by watching the *tts: recruit* DVD after the performance, audience members could bring a slice of this disconcerting alternate reality into their living room. After all, if the work was meant to question just how much we had internalized the war-on-terror narrative propagated by the media,[114] the choice of watching the DVD at home could deliver an at-home assessment to complement *tts*'s immersive on-site experience. The hunting-and-gathering paratext used a meta-narrative and a highly accessible technology, allowing audiences to tailor their experience at their convenience. As a transmedia theatre piece, *tts* and *tts: recruit* took the performance's disconcerting narrative of terrorism from local landmarks to an even more familiar setting—home.

C. Case Study: Gaming Interaction – Blast Theory's *2097: We Made Ourselves Over*

Similar to *tts*, Blast Theory's *2097: We Made Ourselves Over* included an immersive theatrical experience, though it is difficult to identify a single core text in the overall work. It was conceived as a multi-platform piece, combining live performance, short films, and a mobile gaming application.[115] In 2017, British artists' group Blast Theory collaborated with the city councils of Hull in England and Aarhus in Denmark to create a joint event (held in both cities, a few weeks apart) presented within the context of the EU's City of Culture program, with the goal of raising awareness of climate change, sustainability and building towards a better future.

[113] Smith, "Pervasive Theatre: New Writing for New Environments," 15.
[114] Christmass, "PVI's Terror Australis."
[115] "Blast Theory: Visions of the Future," 2017, accessed April 5, 2022, https://www.britishcouncil.es/en/programmes/arts/hull/blast-theory-visions-future.

Given the unlikelihood of the same participants attending both sets of performances, this case study will focus on the Hull iteration, with reviews and articles on the event more readily available. Both versions feature the same dystopian sci-fi storyworld, consisting of a city in a technologically advanced future, ruled by young women referred to as "elders". These are conveyed primarily through five short films (each less than five minutes in duration), available for viewing on the *2097* mobile application, on video-sharing platform YouTube, as well as screened in various public spaces across the two cities. In the application, each short film is followed by an "interactive episode"—these are short versions of interactive movies, a videogame-cinema hybrid that uses full-motion video or FMV (pre-recorded live-action video sequences) where the players/viewers can make choices that impact the narrative.[116] While Blast Theory does not refer to the episodes as a "game", they follow (or at least mimic) the branching structure of the Choose-Your-Own-Adventure (CYOA) format.[117] Playing from a first-person perspective, the users' avatar "wakes up" in the dystopian future as a character who died right at the start of the films. Users would interact with lead character Hessa, into whose body the user's consciousness is "downloaded", with additional interactions involving other minor characters. Hessa addresses the user directly and ask a series of questions, formatted either as multiple choice (with 2-3 answers to choose from) or short answer questions (Fig. *13*). As artist Nick Tandavanitj from Blast Theory explains, they wanted to explore the idea that "everyone has the power to act and influence the future,"[118] persuading their audience to contemplate how their actions may affect future stories.

[116] Bernard Perron et al., "Methodological Questions in 'Interactive Film Studies'," *New Review of Film and Television Studies* 6, no. 3 (2008), https://doi.org/10.1080/17400300802418552.
[117] Blast Theory, "2097: We Made Ourselves Over," http://wemadeourselvesover.com/.
[118] Niall Flynn, "The Sci-fi Shorts Imagining Our Cities of the Future: Life in 2097," *Huck* (September 29 2017). https://www.huckmag.com/art-and-culture/film-2/series-sci-fi-shorts-imagining-cities-future/.

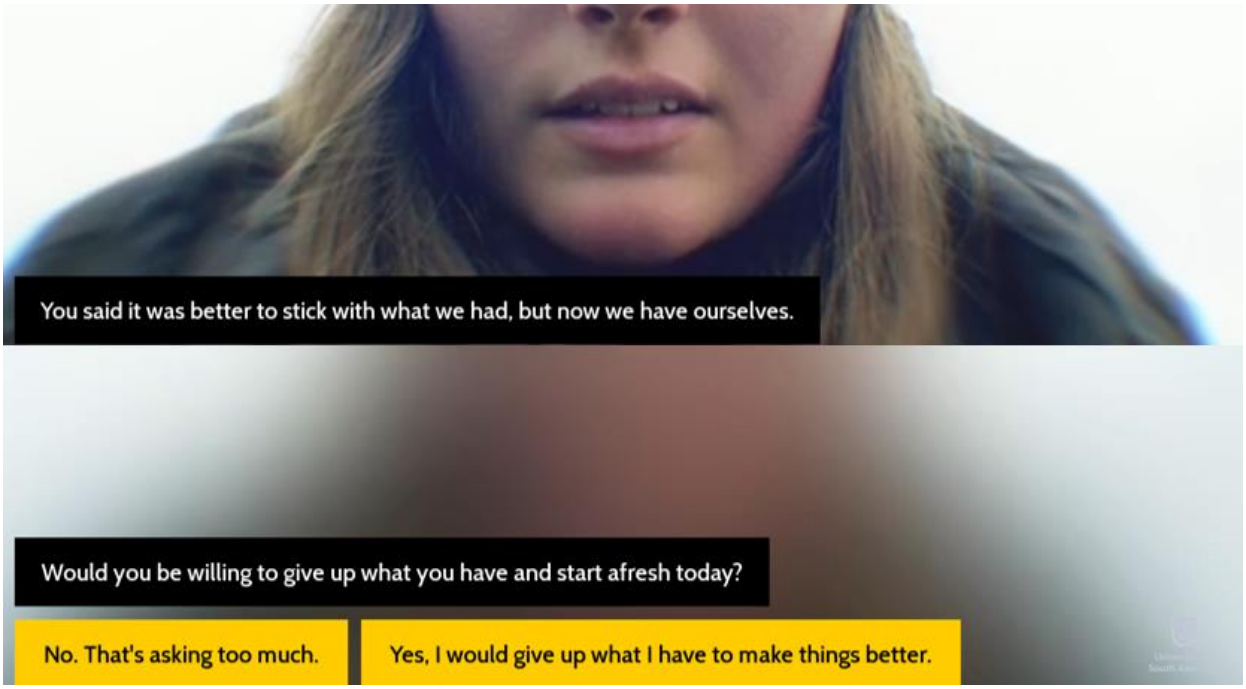

Fig. 13. Screenshots from one of the *2097: We Made Ourselves Over* (2017) interactive episodes, showing dialogue and multiple-choice question

The Hull event offered two kinds of interactions: in the first, participants could "converse" with Hessa (in the form of a voice recording of the actress) through custom-made phone boxes installed throughout different neighborhoods; in the second, chosen participants were picked up for a car ride and had a face-to-face encounter with characters from the films/app.[119] The former forms another digital paratext, a mediated performance that is structurally similar to the app. The latter, while not taking place in a conventional theatre space, still fulfills the live theatre criteria for transmedia theatre. It involved co-presence between actors and audience, is spatially and temporally delineated, and contained a narrative as defined above. The actors established the story of the imagined future and again ask the audience questions, reacting to their responses in a conversation. It is difficult to pinpoint the core text of the transmedia piece—the phone boxes, along with the public screenings of the short films, were the likely entry points into the work, as they were freely accessible, designed to catch attention, and

[119] Blast Theory, "2097: We Made Ourselves Over," https://www.blasttheory.co.uk/projects/we-made-ourselves-over/.

allowed immediate direct engagement. The short films provided the most coherent, straightforward narrative, but on the app, users were given the option to skip them altogether and only play the interactive episodes. In this case, the films serve a similar function to cut-scenes in video games, meant to flesh out backstories but not essential in understanding the narrative of the game itself.[120] The interactive episodes, on the other hand, could not be skipped or paused, requiring users to sit down to complete the chapter and therefore encouraging immersion in the narrativity (and interactivity) of the gaming interaction itself.

Ultimately, each text can be viewed individually and complement one another in terms of both narrative cohesion and interactivity. Within Steve Dixon's categorization of interactivity in digital media, the *2097* interactive episodes offer 'navigational' interaction, employing the branching-structure narrative common in interactive storytelling from CYOA books to interactive cinema.[121] Even lower on the interactive scale than these examples, however, the narrative branches of the interactive episodes are minimal and ultimately converge toward the same ending. The choices laid out for users are limited, and for many of the questions, choosing either answer seems to lead to the same response from Hessa. In her discussion of interactive narratives and games, Marie-Laure Ryan explains this as the 'top-down' approach,[122] which favors narrative immersion rather than ludic immersion.[123] In terms of interactivity in transmedia systems, on the other hand, the app falls under Ryan's 'internal interactivity'. The app was played on an individual level and the users' actions do not leave any permanent trace on the system or change it in any way. The idea of participants having a hand in shaping the future was not quite materialized here, as the sense of agency is quickly revealed as an illusion. Storytelling, particularly in building the 2097 storyworld, was favored over the interactive game aspect of the app. Interestingly, the phone box conversations followed the same branching

[120] Ryan, "From Narrative Games to Playable Stories: Toward a Poetics of Interactive Narrative."
[121] Dixon, ""Performing" Interactivity."
[122] This 'top-down' approach is conceptually related to but technically different from her 'top-down design' of transmedia storytelling and 'top-down productive interactivity' in transmedia systems. All three concepts denote limited range of user input and control by systems prescripted by the creators. In this approach, however, Ryan is concerned with independent works of interactive narrative and the top-down interactivity within the work itself, as exemplified by story-focused video games.
[123] Ryan, "From Narrative Games to Playable Stories: Toward a Poetics of Interactive Narrative."

structure of the app (and therefore 'internal interactivity'), but masked it under the appearance of Dixon's 'conversational' interactivity. Using the phone box—and later, a hotline number that can be dialed from any phone—instead of a mobile screen differentiated this live theatre interaction from that within the *2097* app. The phone box in particular provided a transparent interface, sustaining a stronger illusion of the participants' two-way exchange with Hessa.

The performance, in contrast, does fit into Dixon's 'conversation,' and somewhere between Ryan's 'internal interactivity' and '(top-down) productive interactivity,' when considering the actors, in character, as part of the storyworld system. The latter attempt at categorizing the interactivity and narrativity reveals its essence—on one hand, they were minimally scripted by the storyworld system, yet they were distinctly individual experiences where one instance of interaction does not affect the next. Dixon's categories may better explain this interaction, as the conversations between the actors and the participants (whether in-person or mediated) are genuinely reciprocal. The participants were playing themselves instead of an avatar, yet through the simple technique of frosting windows, they were still transported to the future world. Actress Martelle Edinborough's voice, one reviewer writes, "lull you into becoming part of this experiment."[124] This mode of interactivity in performance, as Dixon explains, builds towards a complex relationship or negotiation "reliant on such issues as trust, cooperation, and openness."[125] [126] In both the phone box/hotline and the car ride performances, the narrative cohesion was preserved from one participant to the next, with personal narrative immersion in the storyworld established by the short films and interactive episodes. This is further supported by the consistent and easily identifiable use of dramatic language between the different media, particularly the same settings (a visually-enhanced Hull) as well as the same actors. The experiment, as artist Nick Tandavanitj from Blast Theory explains, was finding out

[124] Hannah Robinson, "We Went to 2097 as Hull's Phone Boxes Ring in City of Culture Project - and Here's What We Found," *Hull Daily Mail* (October 2 2017). https://www.hulldailymail.co.uk/whats-on/whats-on-news/went-2097-hulls-phone-boxes-560946.
[125] Dixon, ""Performing" Interactivity," 584-85.
[126] Ryan, "From Narrative Games to Playable Stories: Toward a Poetics of Interactive Narrative."

participants' hopes for the future and their plans toward realizing them.[127] The success of the experiment hinged on participants believing they were being listened to, particularly by people whom they perceived as having a vested interest in that very future.

Similar to *tts*, it is important to note the technological affordances and cultural protocols of each text, as well as where and when they were available and likely to be viewed in relation to each other. The whole event at Hull took place in October 2017. The phone box event occurred only on October 1 and only in spaces chosen by the company and city councils, though participants could call the hotline number at any point that month and have the same interaction with Hessa. Public screenings of the videos, as well as the car ride event, were held each weekend that month. The app was made available on Apple's App Store (for iOS) and Google's Play Store (for Android) in late September, with the last update, consisting of the last film and interactive episode, released on October 27. The videos were uploaded on YouTube in a similar timeline, starting on October 1 and ending on October 28.

The texts have different levels of accessibility (Fig. *14*) depending on spatial and temporal limitations as well as who were invited to take part. With the exception of the public screening of the films, there was a general trend of higher levels of interactivity coming hand-in-hand with less accessibility. Simply put, as more people were able to participate, the level of interactivity was lower, therefore focusing on a consistent, broader storyworld. It would be interesting to apply the reverse intermedial relationship on a transmedia theatre work which similarly uses the gaming application modality. A higher level of interaction in the game (more narrative branches, different endings) may serve a different function paired with a more traditional performance.

[127] Andrew Dickson, "Floods, Locust Farms and Teens in Charge: Blast Theory's Vision of Hull in 2097," *The Guardian* (October 11 2017). https://www.theguardian.com/stage/2017/oct/10/blast-theory-hull-2097-future-city-of-culture-aarhus.

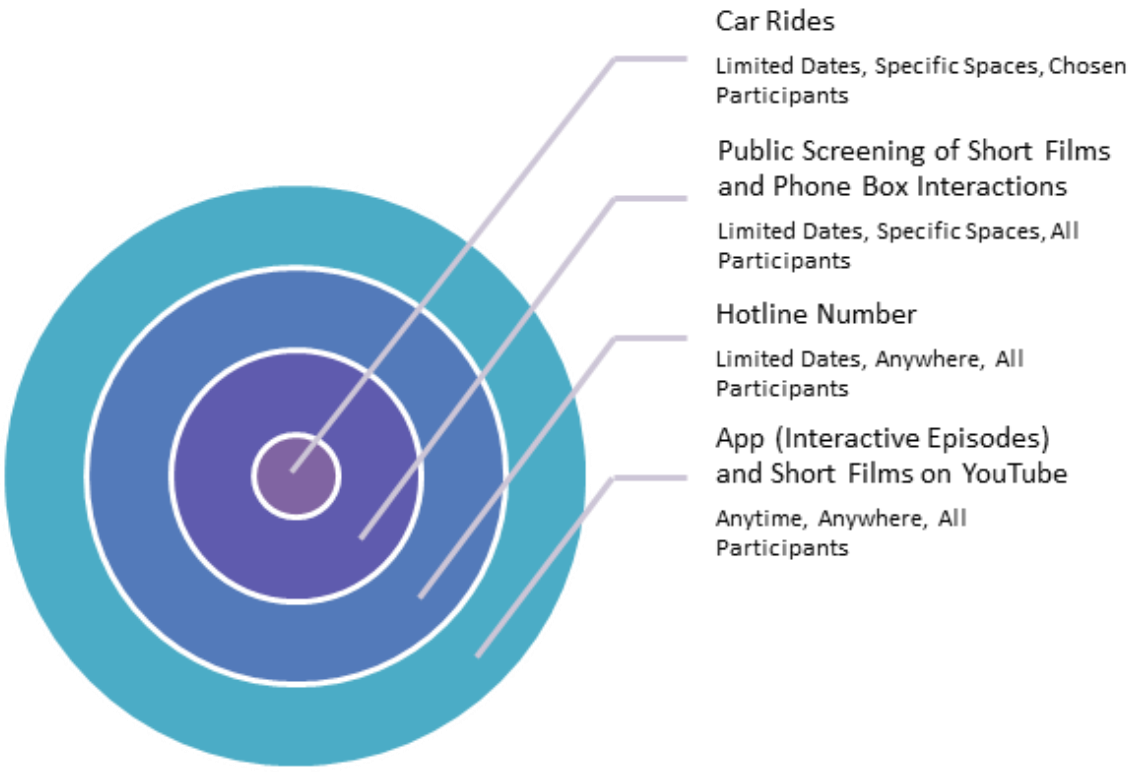

Fig. 14. Diagram showing the accessibility levels of the different texts in *2097: We Made Ourselves Over*

Compared to *tts*, the transmedia theatre paratexts in *2097: We Made Ourselves Over* provides several modes and degrees of interactivity. The interactive episodes in general allows personal immersion through navigational functionalities, allowing audiences to explore branching storyline possibilities (or the illusion thereof) while familiarizing themselves with the characters in the dystopian *2097* storyworld. The piece is also notable for sustaining a cohesive storyworld across the core performance and multiple paratexts through consistent dramatic language and production elements. As such, in-person participants would arrive at the Hull or Aarhus knowing Hessa and perhaps feeling a degree of responsibility towards her and the future she lived in.

D. Case Study: Social Media – Royal Shakespeare Company's *Midsummer Night's Dreaming*

In his book *Theatre and Social Media*, Patrick Lonergan lists five different approaches to discussing the relationship between the two media: 1. social media as a performance space; 2. the presence of social media in theatre; 3. the use of social media to restage performances; 4. social media as a space for theatres and theatre-makers to perform themselves; and 5. social media as a space to analyze theatre.[128] The first approach views the act of using social media as inherently performance-like. The second approach points to social media as part of the narrative and/or design of a live performance. The third approach applies Bolter and Grusin's concept of remediation,[129] with audiences experiencing a theatre performance mediated through a digital social media platform. The fourth and fifth approaches point to social media as a promotional and critical tool for theatre professionals, removed from the actual narrative of the performance. Transmedia theatre where a cohesive narrative is spread over a theatre performance and social media is arguably another approach, although in analyzing *Midsummer Night's Dreaming* by the Royal Shakespeare Company (RSC), it would be helpful to consider the first and third approaches as well.

Unlike the previous two case study examples, *Midsummer Night's Dreaming* featured an established work—one of the most performed plays of all time. In 2013, to mark its 40th performance of William Shakespeare's comedy *A Midsummer Night's Dream*, the company collaborated with Google's Creative Lab to adapt the play for the web—specifically, Google's social media platform Google+.[130] The play was performed only once through over three days in Stratford-upon-Avon, Shakespeare's birthplace. Despite the more traditional dramatic text, the format of the performance was unorthodox, taking place in four different locations (approximating the different settings of the play) in what Shakespeare scholar Pascale

[128] Patrick Lonergan, *Theatre & Social Media* (London: Palgrave Macmillan, 2016), 34.
[129] Bolter and Grusin, *Remediation: Understanding New Media*.
[130] Kevin Holmes, "Shakespeare 2.0: Midsummer Night's Dreaming Brings the Bard To Social Media," *Vice* (June 21 2013). https://www.vice.com/en/article/z4yjdw/shakespeare-20-imidsummer-nights-dreamingi-brings-the-bard-to-social-media.

Aebischer refers to as "site-sensitive" staging.[131] Similarly, the play was performed in 'real-time' in four temporal divisions, culminating in the wedding scene and a staging of "Pyramus and Thisbe" for the guests. While only a limited number of invitations were given out for the live performance, the full audio of the production, along with video snippets, were available online on the performance's official website as early as the next day. [132]

Embedded into the website, and making up the bulk of its content, was the performance's Google+ page, which formed the paratext of the transmedia piece. The page was populated with three weeks' worth of posts related to the performance, some of which were curated by the character of Puck (in reality, members of the creative team) and assembled into a best-of channel.[133] There were two kinds of posts: the first were posts by thirty-odd secondary characters created specifically for the piece, while the second were posts by Google+ users who respond to the first group of posts.[134] The former, submitted by commissioned artists, resembled user-generated content but were arguably created, or at least approved, by the production team. In the case of the latter, the users played themselves in this digital space, and their posts fell under user-generated content. Even with Puck's curation, any content submitted to Google+ with the project's hashtag #dream40 was accessible online through the project's page. Both kinds of posts involved a variety of digital media, including images and videos, memes, recipes, podcasts, songs and playlists, as well as thoughts and updates, some of which formed mini narrative threads related to the narrative of the play.[135] One such thread told the story of Lysander's sister, Ophelia, who escaped from a convent and found herself lost in the woods. Another depicted Abbess Volumnia, who runs the convent but is desperate for love and sex, finally succumbing to an encounter with Hercules, Theseus's brother. The

[131] Pascale Aebischer, "Performing Shakespeare through Social Media," in *Shakespeare in Our Time: A Shakespeare Association of America Collection*, ed. Dympna Gossett Callaghan, Suzanne (London: Bloomsbury, 2020), 100.
[132] Dominic Cavendish, "The RSC's Digital Midsummer Night's Dream: Lunatic or Inspired?," *The Telegraph* (June 21 2013). https://www.telegraph.co.uk/culture/theatre/10134769/The-RSCs-digital-Midsummer-Nights-Dream-lunatic-or-inspired.html.
[133] Holmes, "Shakespeare 2.0: Midsummer Night's Dreaming Brings the Bard To Social Media."
[134] Carol Taaffe, "'A New Kind of Play': Theatre in the Digital" (MSc. Interactive Digital Media Dissertation, University of Dublin, 2016), 18, https://www.scss.tcd.ie/publications/theses/diss/2016/TCD-SCSS-DISSERTATION-2016-041.pdf.
[135] Taaffe, "'A New Kind of Play': Theatre in the Digital," 26-27.

majority of the content seemed arbitrary and absurd—common traits of social media. Yet snippets of additional storytelling, particularly in the first group of posts, added to the narrative while allowing opportunities for user interaction.[136]

Interactivity in *Dreaming*'s Google+ page similarly falls between Ryan's 'internal interactivity' (posts made by the creative team) and '(top-down) interactivity' (posts made by users and audiences). Yet according to Dixon it would likely be a combination between 'conversation' and 'collaboration'. The ability for users to comment on each other's posts (and, conversely, reply to those comments) is a key affordance of social media, and conversation with users is a stated goal of the project.[137] In *Dreaming*, few character posts received comments from users, which the characters could ostensibly reply to, hence creating reciprocal communication between artists and audiences. Collaboration, on the other hand, occurs when Lonergan's first approach to theatre and social media is taken into account. If the use of social media is inherently theatrical or performance-like, then users on Google+ are simultaneously performing and watching other users perform identities (and, by extension, stories).[138] The performance aspect of the Google+ page was therefore a collaboration, an act of co-creation, between theatre-makers and audiences. On the other hand, unlike *tts: training* and *2097*, audience interactivity during the performance was tied to the digital realm. Audiences were encouraged to take pictures and record videos of the performance on their own devices and share them on Google+.[139] Live audiences were therefore engaging in collaboration-by-proxy, co-creating content for their digital counterpart.

In this case, interactivity in the performance was arguably non-immersive in effect, as such activities would result in conscious interruptions of the act of viewing. The audience did not

[136] The team also posted behind-the-scenes writings and videos sharing the production process, particularly closer to the weekend of the performance, but since they had little narrative nor interactive consequence on the transmedia storyworld, they are not discussed in this case study.
[137] Nathan Bowser, "All the World's A Stage & All the Tech, Gadgets Merely Players," *Delight*, October 19, 2016, http://delight.us/all-the-worlds-a-stage/.
[138] Lonergan, *Theatre & Social Media*, 2.
[139] Erin Sullivan, "Shakespeare, Social Media, and the Digital Public Sphere: Such Tweet Sorrow and A Midsummer Night's Dreaming," *Shakespeare* 14, no. 1 (2018): 69, https://doi.org/10.1080/17450918.2018.1439092.

affect change on the performance itself, or even their experience of the narrative, aside from self-imposed remediation in the act of watching through the screen of their devices. This is a rather confusing choice given the clear attempt at immersion in the spatial and temporal formats of the performance. In a blog post discussing her experience of the collaboration, Creative Director Tea Uglow lists aspects of the piece she would have done differently.[140] One of them is creating opportunities to broadcast the live action without involving audience members and their devices. "Screens break the wilful suspension of disbelief," she writes, "[…] mediating a shared reality or fantasy through a screen removes the possibility of being present in the reality/fantasy." Agency and opportunities for immersion were therefore mainly offered through the Google+ platform. The posts had largely integrative qualities, as the nature of social media on a mobile device gives users options of where and how to access the content, and the notification function (if turned on) allows the performance to intrude on daily activities. Emer McHugh, a blogger and participating audience member of *Midsummer Night's Dreaming*, writes that this mode of interactivity "encouraged [him] to be creative about what [he] posted, and to be creative about how [he] would interact with the play online."[141] Playing as themselves or even as imagined characters, users affected the performance (that is, the digital performance) in ways that were visible to other users, compared to, for example, the lack of traceable change in the *2097* gaming app.

As a transmedia theatre piece, therefore, *Dreaming* gave its community of audiences and participants an activity that brought them together, as Jenkins envisioned. By the end of the three-day period, 3,000 posts had been submitted to the page, half of which were user-generated, and 110,000 users visited the RSC's Google+ page, mainly over the weekend of the live performance.[142] The nature of the social media aspect of the piece as paratext is therefore debatable, with Shakespeare scholars Christie Carson and Peter Kirwan arguing it is "not

[140] Tea Uglow, "An Epilogue: 21 Things I Learnt from Midsummer Night's Dreaming at the RSC," *BBH Labs`*, October 18, 2013, http://bbh-labs.com/an-epilogue-21-things-i-learnt-from-midsummer-nights-dreaming-with-the-rsc/.
[141] Emer McHugh, "[Long Overdue] REVIEW: Midsummer Night's Dreaming (RSC/Google+), Stratford-upon-Avon, June 2013," *Letters from a Patchwork Wizard*, October 18, 2013, https://emeramchugh.wordpress.com/2013/07/20/review-midsummer-nights-dreaming/.
[142] Lonergan, *Theatre & Social Media*, 62.

subordinate to live performance, but an entirely different mode of performance."[143] Narratively, however, the characters and stories told by the creative team on Google+ had to follow the canon established by Shakespeare's work. Sarah Ellis, the digital producer at the RSC who worked on *Midsummer Night's Dreaming*, suggests that the social media aspect enriches the storyworld while maintaining the integrity of the core text. "From the dramaturgical perspective, the text didn't change, the outcome of the play didn't change. What changed was how the world of the play existed," she said in an interview with *The Theatre Times*.[144] The dual nature of interactivity and narrativity between commissioned posts and user-generated posts also offsets Ryan's prediction that with higher degrees of interactivity comes less narrative coherence and cohesion. While there was no predicting the stories and comments posted by active users, the creative team actively guided them by posting their own short narratives to respond to, perhaps in an attempt to keep the storyworld as consistent as possible between the different platforms.

What *Dreaming* lacked compared to *tts: recruit* and *2097*, however, was cohesion in its technical aspects. Characters appearing on Google+ were absent from the performance (in any identifiable manner, at least), while none of the characters from the play posted on the page. The sole exception was Puck, who was played by actor Mark Hadfield in the production but "performed" on social media by writer Dan Rebellato (in creating content) and the Google Creative Lab (in curating posts).[145] It would be interesting to see social media as a paratext to a traditional on-stage performance with a longer run, which would change the temporal dynamics between the two texts but would allow more of the digital audience to view the live performance. *Midsummer Night's Dreaming*, however, shows social media's potential as an avenue of conversation and co-creation between artists and audience within a larger transmedia storyworld.

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[143] Christie Carson and Peter Kirwan, eds., *Shakespeare and the Digital World: Redefining Scholarship and Practice* (Cambridge: Cambridge University Press, 2014), 239.
[144] Agnes Bakk, "Theatre, Technology and 'The Tempest' – Interview with Sarah Ellis," *The Theatre Times* (February 5 2017). https://thetheatretimes.com/theatre-technology-tempest-interview-sarah-ellis/.
[145] Dan Rebellato, "Playing Puck," *Dan Rebellato*, April 5, 2013, http://www.danrebellato.co.uk/spilledink/2013/6/25/playing-puck.

E. Case Study: Digital User-Generated (DUG) Dramaturgy – UCLA HyperMedia Studio's *The Illiad Project*

The last case study of this research happens to be one of the earliest yet most intricate examples of transmedia theatre, particularly due to its mode of audience interactivity. Aside from Boenisch's relational dramaturgy discussed in an earlier section,[146] theatre scholars have expanded and modified the principles of dramaturgy to encompass other digital and interactive media. In her analysis of intermediality in Herbert Fritsch's *Hamlet_X* (a very early example of transmedia theatre), Birgit Wiens uses the term 'electronic dramaturgy' to denote the variety of media involved in telling the narrative over the internet.[147] Cultural heritage surrounding the myth of Hamlet, she writes, "is channeled and changed through different media."[148] 'Interactive dramaturgies', on the other hand, is defined by Heide Hagebölling as a term encompassing "new forms of narration and information transmission" which organize interactive storytelling through interactive, multimedia programs.[149] Elements of interactive dramaturgies include two-way communication and individual reception, complex non-linear and segmented spatial/temporal construction, the use of open multi-user platforms, a more mediator perspective (rather than observer) perspective by the user, and a polyform concept.[150] These elements certainly apply to the transmedial modality described in this case study. The term 'digital user-generated dramaturgy', therefore, implies a combination of the two, with the word 'digital' once again becoming shorthand for Murray's idea of the multiform, participatory qualities of convergent media. It signifies a process of forming and organizing narrative and design elements of transmedia storytelling based on content generated by users through digital means.

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[146] Refer to Chapter 2C (Transmedia Theatre Definition and Scope)
[147] Wiens, "Hamlet and the Virtual Stage: Herbert Fritsch's Project *hamlet_X*."
[148] Wiens, "Hamlet and the Virtual Stage: Herbert Fritsch's Project *hamlet_X*," 225.
[149] Heide Hagebölling, *Interactive Dramaturgies New Approaches in Multimedia Content and Design* (Berlin: Springer, 2004), 1.
[150] Hagebölling, *Interactive Dramaturgies New Approaches in Multimedia Content and Design*, 2.

The Iliad Project was a 2001 research project undertaken by a team at HyperMedia Studio at the UCLA School of Theater, Film and Television, including playwright Jared Stein and technology integrator Jeff Burke. The retelling of Homer's *The Iliad*, which incorporated "online community, video feeds, digitally projected images, an interactive floor show" was meant to be "a metaphor for how 21st century people find their lives shaped by technology and media."[151] The performance at the core of the project was staged at the Los Angeles Theater Center, while the paratexts included e-mail, a website where participants can submit information about themselves, as well as an interactive exhibits at the performance venue. The website, e-mail, and digital exhibition all conveyed at least part of the transmedial storyworld, and therefore formed the transmedial paratexts of *The Iliad Project*. Unlike the rest of the case studies, however, some of the paratexts—the website and the digital exhibition—also served a dramaturgical function through data input. To clarify the distinction between the transmedial modalities discussed thus far: Unlike the data input process in *2097* and *Midsummer Night's Dreaming* (through the gaming app and social media, respectively), the data submitted in *The Iliad Project* produced an output that affected the narrative of the core performance. It is akin to if players' actions in the *Enter the Matrix* videogame[152] somehow determine how the narrative of the *Matrix* films unfolds, as opposed to affecting only the game's own narrative as it did.

The intended flow of the piece (Fig. *15*) is as follows:[153]

Stage 1: Pre-Performance (Days Before) – Outside the Venue

A. Upon purchasing tickets to the performance, audience members are directed to a website, accessible from any computer at any convenient location, introducing them to the storyworld.

[151] Michael Stroud, "An Iliad for the 21st Century," *Wired* (January 2 2002). https://www.wired.com/2002/01/an-iliad-for-the-21st-century/.
[152] *Enter the Matrix*, directed by Lana Wachowski and Lilly Wachowski (Shiny Entertainment, GameCube, Microsoft Windows, PlayStation 2, Xbox, 2003).
[153] Jeff Burke and Jared J. Stein, "Theatre of Context: Digital's Absurd Role in Dramatic Literature," in *New Visions of Performance: The Impact of Digital Technologies*, ed. Gavin Carver and Colin Beardon (Lisse: Swets & Zeitlinger Publishers, 2004).

B. The website also contains a survey, where visitors can submit personal information such as e-mail address and physical address—this information is stored by the CI.
C. Additional behavioral information is gathered from analytics software embedded into the website, such as number and length of views of different pages, and similarly stored.
D. Audience members receive e-mails ("news-flashes" from the war front)[154] which serve as a prologue for the performance and relays the inciting incident: Helen's kidnapping.

Stage 2: Pre-Performance (Day Of) – At the Venue

E. Arriving at the venue, they encounter an exhibition, including a photo gallery elaborating on the website and providing more information about the kidnapping.
F. The gallery also establishes the audiences' role as Achaean constituency in the performance and introduces the Achaeans' recognizable media manipulation.
G. RFID (Radio Frequency Identification) tags in their tickets allow antennas installed in the gallery to track their movements in the gallery, while an image capture system takes snapshots of their facial reactions to the provocative photography presented.

Stage 3: Performance Act I

H. Data from audience members' physical presence is integrated with the data stored from the survey and website activity, which then, recontextualized, informs the narrative of the performance (e.g. when Achaean politicians refer to a map of their constituency, it derives its boundaries from the actual addresses of the attending audience).

Stage 4: Intermission (Day Of) – At the Venue

I. During intermission, another interactive gallery provides "a carnivalesque abstraction of the battle at hand,"[155] while again recording images and sounds of the audience.

Stage 5: Performance Act II

[154] Stroud, "An Iliad for the 21st Century."
[155] Burke and Stein, "Theatre of Context: Digital's Absurd Role in Dramatic Literature," 97.

J. In the second act, the captured images, survey information and gallery reactions are projected into the performance space along with live media from the city, demonstrating the unwanted effects of media manipulation and propaganda.

Stage 6: Post-Performance (Day Of) – At the Venue

K. At the end of the performance, a final gallery is presented in the exhibition space, again customized to the attending audience, in the place of a traditional epilogue.

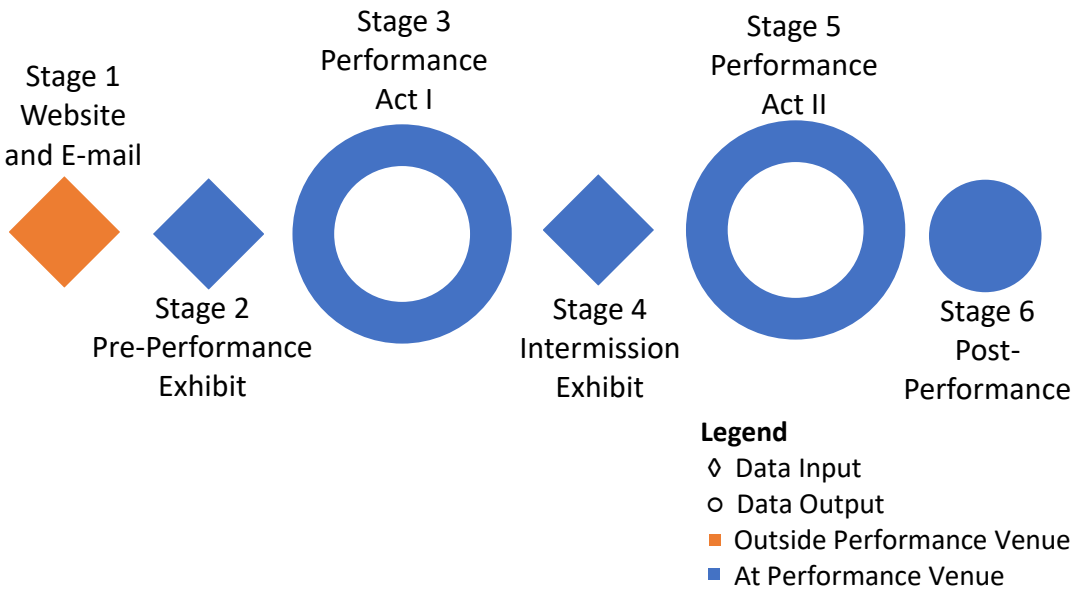

Fig. 15. Diagram showing the flow of data collection and output in *The Iliad Project* (2001)

Data input therefore occurred in three different time periods: in the days leading up to the performance (stage 1), on the day itself but before the performance (stage 2), and mid-performance during intermission (stage 4). The first stage of data input took place outside the venue, while stages 2 and 4 took place outside the venue. Data output occurred not only during the actual performance (stages 3 and 5), but also after the performance (stage 6)—this took place only at the performance venue. Several characteristics seemed geared toward ensuring a positive, engaging experience for the audience as users. The balance between input

and output was important in making the audience feel rewarded for their submission. There was a variety of submission processes, including at the venue. This allowed users to make contributions at their convenience, decreasing the possibility of opting out altogether. It is worth noting that in *The Iliad Project*, audience interaction took place only in the form of data input affecting the actual performance—no other type of direct interactivity takes place and the data input does not produce an output that changes the paratext itself. In a promotional article, Burke references a "Whack-a-Helen" game with airsoft guns in the exhibit,[156] yet it is not mentioned in any of the post-performance write-ups. So it was likely either a plan that did not get executed or, if it did, it was inconsequential both narratively and dramaturgically. This is not a limitation of the modality, but if a paratext also includes interaction which influences its own narrative, it would likely constitute an overlap with other modalities.[157]

Narratively, there is an opposite effect to that of the social media interaction observed in *Midsummer Night's Dreaming*. The narrative of the paratexts did not change through and as a result of the interaction, only that of the core text does. The change occurred not in the actual plot, however, but rather in the dramaturgical context against which the plot unfolds. Interaction with the storyworld was immersive rather than integrative in nature—the storyworld does not become part of the users' world, but rather the opposite, similar to the interaction in the *2097* gaming application. The audience became Achaeans and parts of Los Angeles became their domain; the Achaeans did not become the audience (Fig. *16*). Burke and Stein uses the classification of interactivity in digital media from Marie-Laure Ryan's earlier work and identifies this effect as 'internal-ontological'.[158] [159] In the categories of interaction employed in these case studies so far, the interaction in falls under 'top-down productive

[156] Stroud, "An Iliad for the 21st Century."
[157] As in the case of *2097* and *A Midsummer Night's Dreaming*, *The Iliad Project* also inherently employs the hunting-and-gathering modality, as audience members can opt out of viewing the website and/or the exhibit and therefore the narrative threads of the storyworld conveyed in either text.
[158] Burke and Stein, "Theatre of Context: Digital's Absurd Role in Dramatic Literature," 97.
[159] Marie-Laure Ryan, "Beyond Myth and Metaphor: Narrative in Digital Media," *Poetics Today* 23, no. 4 (2002), https://doi.org/10.1215/03335372-23-4-581. In this article, she distinguishes interactivity in digital media by identifying two binaries: internal-external (where the user is situated with respect to the storyworld) and exploratory-ontological (the impact of and trace left by their actions on the storyworld). This classification is useful for digital media in general, but the specified categorization of interactivity specified for transmedia storytelling in her more recent work is naturally preferred for this research.

interactivity', since co-creation through data submission left a permanent trace but occurs only under the invitation of the producers. The algorithm processing and recontextualizing the data was also highly controlled by the producers, again leaving the plot relatively intact.



Fig. 16. Dynamic renderings of test maps for two different test audiences in *The Illiad Project*

Burke and Stein have stated that in the case of narrative variation in the performance, a story branching structure does not effectively show multiple perspectives. Most audience members only attended the performance once and in sequence (as opposed to a gaming application which can be re-played multiple times and out of sequence), and therefore would largely "[remain] unaware of the field of possibilities from which choices can be made."[160] In their project, information provided by the audience revealed the possibilities as the algorithm and resulting variation can be glanced from the output. The producers again quote Ryan in stating their research question, asking if interactors can "retain a reasonable freedom of action throughout the performance without taking the plot in a direction for which there is no ready-made, logically coherent response stored in the system?"[161] Note that "performance" refers to the transmedia piece as a whole rather than just the core text. As such, *The Iliad Project*'s use of DUG dramaturgy is another instance of transmedia serving the goal of agency and immersion for the audience while retaining narrative cohesion.

[160] Burke and Stein, "Theatre of Context: Digital's Absurd Role in Dramatic Literature," 101.
[161] Ryan, "Beyond Myth and Metaphor: Narrative in Digital Media," 592.

After two decades, it is tempting to imagine where the present-day technological affordances would take DUG dramaturgy. An application developed for the current mobile platform could employ GPS technology, a front-facing camera with more sophisticated facial recognition, fingerprint reader, and multiple environmental sensors. The current ubiquity, processing power, and transparency of mobile devices would definitely enhance the interaction, making the flow data input, storage, processing, and even output, more extensive and seamless. An increasingly relevant concern in utilizing DUG dramaturgy today as *The Iliad Project* has done, however, is one of privacy. The project asked audience members to volunteer private information (including their real physical address) as well as tracked their movement and records their images at the exhibit. The producers even justified such "breaches" of privacy in the narrative, highlighting the Achaeans' tendency to manipulate media.[162] The academic setting and experimental nature of *The Iliad Project* perhaps encouraged the self-selection of audiences who were open to volunteering their information. While consent was likely sought for such extensive data gathering in this project, the inability to opt out from data submission in the exhibit would likely discourage more traditional theatregoers from attending the performance altogether, let alone participate in the exhibit. In taking advantage of transmedia theatre's ability to attract digital-savvy audiences to theatre, any concerns relating to privacy and consent would need to be addressed.

As observed in *The Illiad Project*, the DUG Dramaturgy paratext provides an opportunity to involve audience members in a co-creative endeavor through user-generated data. The data is processed, recontextualized, and integrated into the overall storyworld, often creating non-reproducibility depending on season and venue. Today's technological affordances of internet-capable personal devices would render the possibilities of DUG Dramaturgy endless, although privacy and security issues need to be considered. Nevertheless, the DUG Dramaturgy modality becomes a tool of audience agency and immersion, allowing them to change the dramaturgy of the theatre performance at the core of the piece.

[162] Burke and Stein, "Theatre of Context: Digital's Absurd Role in Dramatic Literature," 97.

F. Case Study: Discussion/Evaluation

Given the aim of this research in formulating a method for designing transmedia theatre experiences that can effectively engage audiences, case studies of past examples should serve to illuminate the various design parameters to consider. These parameters are, in turn, determined by the narrative, dramaturgical, technical, and logistical requirements of the transmedia theatre piece.

Narrative considerations need to take into account the entire storyworld of the overall work, including its plot, characters, setting (time and place), and any other minutiae that flesh out the narrative. In considering such factors, theatre-makers do not merely seek to maintain cohesion, but also expand (or contract) the storyworld through the various paratexts involved. As discussed above, *tts: recruit* takes into account that the *tts* live performances were immersive, utilizing recognizable local sites in multiple cities in which the theatrical work was mounted, which included Perth, Sydney, Melbourne, and Adelaide. In translating the experience into the home setting, pvi collective did not focus on an explicit continuation of plot and character in the manner of *2097* and *Midsummer Night's Dreaming*, where Puck and Hessa (and others) appear in both performance and paratext. The faceless *tts* tour guides drive home the idea that anyone anywhere can be susceptible to recruitment tactics, heightening audiences' paranoia of potential terrorism—expanding on specific characters or stories would make little narrative or dramaturgical sense. Rather, *tts: recruit* simply shows the previous step in the recruitment process, taking advantage of the geographical spread of the different incarnations of *tts* and reinforcing the theme of pervasiveness through a universal video recruitment drive. As seen in the images above, the generic visuals in the scenes presented from the DVD offer limited geographical markers. Audiences watching from anywhere in Australia can readily believe that there is a local branch of *tts* nearby accepting enlistments.

By contrast, *2097* needed to focus on specific, identifiable characters, in order to show the personal and intimate effects of climate-driven societal change. The title of the piece

immediately establishes the timeline of the narrative as that of a distant future, with Hessa and other characters existing in that period. *2097* is immersive rather than integrative—even in live interactive performances, audiences are transported to Hessa's timeline rather than the other way around. The gaming application, therefore, give viewers a chance to familiarize themselves with that space and time at their convenience, before and/or after being transported in real-time through conversations and encounters. Given this consideration, the division of the narrative into five short films and five interactive episodes, released on a weekly interval, allowed viewers ample time to keep returning to this storyworld, each time learning a little bit more about what had happened that led to the state of Hessa and her group. The limited choices and individual interactivity of the game allows Blast Theory to provide a specific plot for the audience to place themselves into and be a part of, rather than the process seen in *tts: recruit*. Similar considerations can be seen in *Midsummer Night's Dreaming*, which transposes the recognizable setting and characters from Shakespeare's text into Google+.

The Iliad Project, on the other hand exist somewhere between *tts* and *2097/Dreaming*, as the narrative of *The Iliad* lends itself to a storyworld expansion through a generic process. The war at the center of the plot take place between the two major societies in the canon of Classical Antiquity: the Achaeans and the Trojans. And yet in typical Homeric fashion, the original text focuses mainly on a few central characters, gods, kings and high-ranked soldiers alike, leaving the large majority of said societies out of the narrative. This allowed Stein and Burke to expand on the background characters of *The Iliad* through the paratext of user-generated dramaturgy. Like *2097*, *The Iliad Project* is immersive, with audiences transformed into the Achaean constituency, yet their participation is based in process, not plot—their identities, data submission and reactions inform the expansion of the storyworld. The above examples show that the storyworld established by the text of the theater performance should drive the narrative considerations in designing a transmedia theatre piece. What aspects of the narrative can or should be expanded upon, and more importantly how, should inform the form and content of the transmedia paratexts.

Dramaturgical considerations are similarly paramount in the design of transmedia theatre since it involves the sum of knowledge and information that drive theatre-makers' creation and/or interpretation of the text and how they communicate it to the audience. Be it historical, sociocultural, philosophical, or all other nature of research materials of broad thematic or particularized importance, dramaturgy can be applied to experience design in the same manner as to visual (scenery, costume, lighting) design. In crafting *tts*, for example, pvi collective cited advancements in surveillance technology as driving people's obsession with "watching and being watched," which then manifested itself in the popularity of reality television, webcam girls, and other similar media phenomena of the time.[163] A home video where terrorist guides directly address the viewers and beckon viewers to join the organization plays on the desire to simply watch, without necessarily interacting or communicating. In addition, members of the collective attended Australian army recruitment drives, where they likely encountered some of the persuasive tactics found on the *tts: recruit* DVD.

Midsummer Night's Dreaming similarly drew from sociocultural discussions around technology, focusing on how social media had changed how news stories are shared and experienced—through "blogging, tweeting, opining, memeing, [and] hashtagging."[164] In Shakespeare's text, plotlines and politics play out in the restricted sphere of the forest of Athens. In adapting them to the 21st century context, however, the RSC were eager to allow audiences to interact with and become part of that world. A royal wedding of the scale of Theseus and Hippolyta's, for example, would be ripe for social media interaction akin to that of Prince William and Kate Middleton's.[165] Where dramaturgical considerations were underserved was in the decision to stage a single instance of in-person performance in Stratford-upon-Avon, which critics found to be disjointed from its digital decalcomania. Critics noted the distance between "the pared-down, site- and time-specific scenes from the live production and the expansive, always-

[163] Meg Mundell, "Terror Takes to the Streets," *The Age* (April 19 2005 2005). https://www.theage.com.au/entertainment/art-and-design/terror-takes-to-the-streets-20050419-ge0055.html.
[164] Holmes, "Shakespeare 2.0: Midsummer Night's Dreaming Brings the Bard To Social Media."
[165] Stephen O'Neill, "Shakespeare and Social Media," *Literature Compass* 12, no. 6 (2015), https://doi.org/10.1111/lic3.12234.

unfolding kind of storytelling on the Google+ platform."[166] Actors performed to the in-person live audience, so the recorded and shared footage would have not only a noticeable time delay, but a lack of feedback loop which would still be present with livestream audiences, for example ('liveness' and feedback loops in livestream or 'mediated live' performances will be discussed in a later section of this exegesis). Google+ participants who have commented, memed, and hashtagged on the impending wedding with the inhabitants of Athens were now limited to viewing a lo-fi, low-key, delayed event broadcast through phone and tablet cameras.

If the intent of the transmedia experience was to showcase the amplification of social interaction through platforms like Google+, then a more digital-oriented performance would have better suited the piece dramaturgically. Adding to Uglow's admission that raw footage from audiences' devices were a poor way of showcasing the performance, McHugh suggests that the next step would be livestreaming.[167] Youtube, a subsidiary of Google, began their livestreaming feature in 2011—Google+'s Hangout function offered the ability for users to view YouTube livestreams together.[168] A livestream of the performance using broadcast-quality cameras, with actors being aware of digital audiences and performing to them, would likely have been less jarring in conjunction with the social media paratext. Also in Uglow's list of things she would have done differently were "one vision directing", a stronger overarching narrative in the social media content, more involvement of characters from the play on Google+, and, conversely, having online characters appear in the live performance—all these changes seem geared on improving the interlinking between the two texts.[169]

Interestingly, *The Iliad Project* might provide some insight into how to incorporate social media content in the performance of *Dreaming* without altering Shakespeare's text or adding live versions of additional characters (which certainly would have been a logistical/budgetary

[166] Sullivan, "Shakespeare, Social Media, and the Digital Public Sphere: Such Tweet Sorrow and A Midsummer Night's Dreaming," 75.
[167] McHugh [Long Overdue] REVIEW: Midsummer Night's Dreaming (RSC/Google+), Stratford-upon-Avon, June 2013.
[168] Toastykitten, "Use Google+ Hangouts to Watch YouTube Live Streams," *Wonder How To*, April 5, 2011, https://googleplus.wonderhowto.com/how-to/use-google-hangouts-watch-youtube-live-streams-0129065/.
[169] Uglow An Epilogue: 21 Things I Learnt from Midsummer Night's Dreaming at the RSC.

concern). For *The Iliad Project*, Burke and Stein were, like pvi collective and the RSC, informed by the state of media and technology at the time of the work's conception—particularly, how they shape people's allegiances and tribal tendencies.[170] The data-gathering that took place at the venue had an immediate and visible effect on the performance through the use of projections, which enhanced audiences' awareness of media and technology's role. A similar interplay between user-generated content and performance could have been implemented in *Dreaming*. Participants' stream of posts, comments, memes, hashtags of the event could be projected at the venue and showcased on the livestream prior to the performance. Meanwhile, live comments can be projected on the stage as they appear on the livestream. This could have more effectively conveyed the way events are viewed, shared and commented on instantaneously in the age of social media, in accordance with the dramaturgy of the piece.

Technical considerations have to deal with the affordances and procedures surrounding the digital technologies involved. While dramaturgical considerations may contain theoretical and cultural discussions about media and technology, as discussed above, technical considerations involve looking at what is and is not possible with the various media and platforms used. In addition, theatre-makers also need to take into account the way that the media can interact with one another and/or be compiled into one overall piece. In *2097: We Made Ourselves Over*, for example, Blast Theory wanted to communicate the impact of individual actions. A first-person CYOA gaming interaction is a suitable modality given its immediate visualization of choices and consequences (or at least the illusion of such). With gaming, there is also a broad spectrum of visual design to choose from, from text-based, to simple 8-bit animation, 2D or 3D animation, up to the most lifelike graphics. Given the aforementioned importance of consistent dramatic language, Blast Theory opted to utilize live-action full-motion video rather than sprites or models. This allows an instant connection, for example, between the Hessa in the game, the Hessa in the short films, and the Hessa in the immersive in-person performances. Of course, the *Matrix* franchise provides an alternative to achieve immediate recognizability by having Niobe and other characters rendered in high-fidelity 3D graphics in *Enter the Matrix*. Blast

[170] Stroud, "An Iliad for the 21st Century."

Theory presumably lacked the budget and resources to achieve this (another logistical consideration). At the same time, as gaming scholars have identified, even in classic examples, that "the integration of live-action sequences to these gameplay components often diminished the precision and depth of the control afforded to the gamer."[171] Not to mention, the file size and downloadability of the episodes may determine whether users want to or are even able to experience them—a factor which has changed over time. This places further limits on Blast Theory's inclusion of branching storylines and choices that make up the overall storyworld of the piece.

In contrast with *2097*, where the digital platform was tailor-made to suit Blast Theory's storytelling goals, *Midsummer Night's Dreaming* had to work around the affordances of an existing platform. This is an important technical consideration for any social media modality, as social media participation hinges upon a network effect to encourage information-sharing and, consequently, user-generated content.[172] Not to mention, using a popular platform increases the possible degree of familiarity that users have with all the different features and functionalities, reducing the learning curve involved—this would also lower the barrier to participation. Google+ profiles are linked to users' Google/GMail accounts, for example, and are likely to feature their real names and identifying information. Users would have to be comfortable with the kinds of information they will be sharing and commenting on with their profiles attached, visible to the *Dreaming* community and their private circles. Since there were no time constraints on when the Google+ page could go live, the choice of three weeks prior to the performances were deliberate. The RSC was likely informed by the five-week duration of *Such Tweet Sorrow*, taking into account optimum durations for engagement and how much user-generated content would need to be curated. Excluding the fact that Google+ was discontinued in 2019 and the *Dreaming* page had been taken down prior to the start of this research project, the user-generated content could have lived on digitally forever, or at least far beyond the life of the three-day performance. A well-maintained page, along with a good-

[171] Perron et al., "Methodological Questions in 'Interactive Film Studies'," 242.
[172] Pin Luarn, Jen-Chieh Yang, and Yu-Ping Chiu, "The Network Effect on Information Dissemination on Social Network Sites," *Computers in Human Behavior* 37 (2014), https://doi.org/10.1016/j.chb.2014.04.019.

quality recording of a livestream of the Stratford-Upon-Avon performance could have attracted continued engagement. Currently it is very hard to find any archived material from both the performance and the Google+ page, which not only works against the piece's message about social media engagement but is also an unfortunate squandering of what Google+ was able to do. Indeed, Uglow states in her reflection that her team should have known their tools better, listing all the platform's features and functionalities that were not capitalized upon.[173]

The technical considerations of user-generated content also played into the transmedia design of *The Iliad Project*, albeit involving a different method of interaction and user submission to social media. Created before the advent of online social media platforms, the HyperMedia Studio Team relied on web browsers, online survey forms, e-mail, RFID tags and trackers, GIS (Global Information System), image capturing, and projections. As discussed in the piece's dedicated section above, the process of DUG Dramaturgy was delineated into two physical spaces: outside the venue (likely at audiences' homes) and inside the venue. Unlike today where the vast majority of audience members for such a performance would presumably own a GPS-enabled handheld device, tracking their collective physical movements at the time would only have been possible through loaning devices capable of movement tracking. This meant some element of data collection or input had to occur at the venue in a limited spatial range. Similarly, for audience members to immediately see the output of data collection and processing, without everyone having a smart device on hand, it had to have been broadcasted at the venue. As such, the performance had to include a foyer or exhibition area where these technologies can be set up and introduced to the audience. On the other hand, the team took advantage of the digital space to pre-collect any data that could be submitted through websites and e-mails, such as physical addresses and online behaviors, from the comfort of audience members' homes. This allowed the team more time to process such data and experiment with ways to embed it into the narrative. Technical considerations can therefore have a significant effect in the construction of the storyworld, the design of the performance and paratexts, as well as narrative, dramaturgical, or logistical considerations.

[173] Uglow An Epilogue: 21 Things I Learnt from Midsummer Night's Dreaming at the RSC.

Finally, logistical considerations include budgeting, scheduling, programming, personnel, legal and ethical, and other practical factors that support the creative and storytelling practice of a transmedia piece. In theatre production, most of these would fall under the purview of the producer—for transmedia theatre experiences, there are often collaborations involved that create grey areas. In the case of *Midsummer Night's Dreaming*, the collaboration between the RSC and Google+ meant Uglow was the creative head on the social media paratext while Doran was in charge of the Stratford-upon-Avon performance. While Ellis from the RSC was dubbed the digital producer of the project, no doubt the Google's Creative Lab had input on the logistical aspects of the piece as well. Uglow, for example, laments the lack of online advertising for the project, which would likely have been managed in conjunction with Google's advertising team.[174] Aside from the need for one-vision directing, Uglow also mentions the difficulty of having the Google+ team and the RSC team geographically separated, presumably on both sides of the Atlantic. While teleconferencing technologies and remote work procedures have changed significantly after the global pandemic in 2020, such personnel issues, particularly relating to creative vision and reporting hierarchy, need to be resolved and clarified as early as possible.

With *tts: recruit*, for example, the terrorist tour guides' use of balaclava-like masks (Fig. *12*) and resulting facelessness would have simplified logistical concerns. The production team did not have to worry about having the same actors appearing in the paratext and any of the immersive performances. The training videos could have been shot long before the scheduled in-person bus ride, allowing the DVDs to be printed and distributed to venues and rental places in time for audiences to watch them before or soon after attending the performance. In contrast, for *2097*, the recognizability of Hessa and other characters meant that the production team had to organize actors' availability. Scheduling would determine which characters can be in the short films, interactive episodes, phone box recordings, and/or live performances, which may in turn

[174] Uglow An Epilogue: 21 Things I Learnt from Midsummer Night's Dreaming at the RSC.

affect the overall story of the piece and how characters move narratively from one text to another.

Dreaming skirted around these logistical concerns surrounding characters by, again, having no overlap between characters in the paratext and characters in the performance (except for Puck). This saved the need to ensure a consistent voice between, on one hand, an actor playing one character and, on the other hand, a Google+ team member writing for the same character. At the same time, the narrative cohesion of the storyworld was sacrificed, as relationships between the two groups of characters are explained but never shown—viewers are told Hercules is Theseus's brother but they never see the two interact on either medium. One solution would have been what Uglow offers post-facto, which was to write the Google+ content far ahead of time.[175] This could have facilitated the overall storyworld construction to include clear progression for each character across the different texts, including the project's theatrical interpretation of Shakespeare. Characters could have overlapped, and the writing for their Google+ posts could have informed the actors' performance, or vice versa.

Based on these case studies, one could conclude designing a transmedia theatre piece needs to take into account the different texts individually and as a whole. The narrative, dramaturgical, technical and logistical factors not only affect one another, but also the choice of paratexts, how the main text and paratexts can be constructed, how they relate to one another (narratively, temporally, spatially and interactively), and how plotlines, characters and objects move across the texts. An overarching creative vision may determine the success of conveying that storyworld fully to the audience. This does not mean only one person or team can be in charge of the entire transmedia piece, but constant communication between those at the top of the creative team for each text is paramount. This is why, as iterated earlier in this exegesis, it is important for transmedia theatre pieces to be deliberately conceived as multi-platform storytelling. For original works not based on existing franchises or intellectual properties, in particular, there is a lack of an existing audience familiar with the storyworld and characters. In

[175] Uglow An Epilogue: 21 Things I Learnt from Midsummer Night's Dreaming at the RSC.

order to attract audiences to invest their time and effort, to follow the threads across various texts, to hunt and gather, theatre-makers and creatives need to ensure the design of their transmedia piece includes both a rich storyworld and a seamless experience.

G. Knowledge Base: Creation and Output

The knowledge base, in database terms, is a relational database created on the online platform Airtable (Fig. *17*). It can be accessed through the following link: https://airtable.com/shr8Pl22rVrOEIoNn

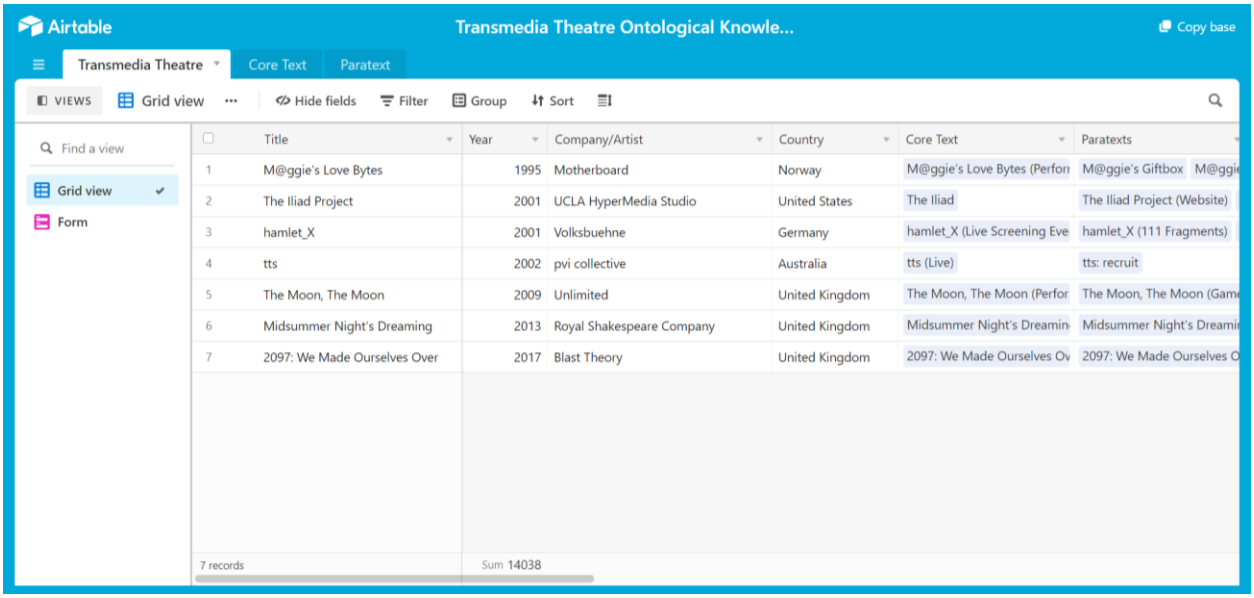

Fig. 17. The ontological knowledge base on Airtable

H. Knowledge Base: Tables and Parameters

The following is a description of the parameters in the database and their ontological dimensions. The knowledge base consists of three linked tables: the main table, 'Transmedia

Theatre', lists overall transmedia theatre experiences as a whole, while the linked tables 'Core Text' and 'Paratext' lists the live performance core text and the digital paratexts, respectively. For the purposes of this database, even if the live theatre performance is arguably not at the core of the piece (one could argue this with *hamlet_X* and even *Midsummer Night's Dreaming*), it will still be listed in the 'Core Text' table.

- *Title (all tables)*

The Title fields refer to the title of the overall piece, core text and paratext, respectively. Where the title is not distinguished between texts, the entry will do so in parentheses (e.g. '2097: We Made Ourselves Over' in the Transmedia Theatre table, '2097: We Made Ourselves Over (City of Culture Event)' in Core Text, and '2097: We Made Ourselves Over (Short Films)' in Paratexts.

- *Year, Company/Artist, Country (Transmedia Theatre table)*

The Year field refers to the year the first text within the overall piece was released, while the Company/Artist and Country fields refer to the theatre company responsible for the overall piece (or at least the core text) and the country in which they are based.

- *Transmedia Theatre, Core Text, Paratext (all tables)*

These fields are linked to one another in corresponding tables. When submitting an entry in the Transmedia Theatre table, entering a performance in the Core Text field automatically creates an entry in the Core Text table. That Core Text entry will also automatically have the corresponding overall piece in the Transmedia Theatre field.

- *Paratext No. (Transmedia Theatre table)*

This field automatically counts the number of paratexts included in the overall transmedia theatre piece.

- *Transmedia Theatre Modality/ies (Transmedia Theatre and Paratext tables)*

In the Paratexts table, this field lists one or more modalities included in each paratext. In the Transmedia Theatre table, this field rolls up all the modalities included in all linked paratexts.

- *Liveness (Core Text table) or Core Text Liveness (Transmedia Theatre table)*

The Liveness field indicates whether the core text is live both spatially and temporally, only temporally, or neither. Temporal-only liveness is particularly relevant after the COVID-19 pandemic, with the rise of digitally-mediated live performances. The Core Text Liveness field in the Transmedia Theatre table automatically populates based on the entry in the Core Text table.

- *Production Instances (Core Text and Paratext tables)*

This field indicates whether the core text performance or digital paratexts were a single event, a single season (multiple events), multiple seasons, or permanent (in the case of digital paratexts). This information is relevant to gauge how transmedia paratexts expand the temporal boundaries of the piece.

- *Narrative, Narrative Structure, and Proxy Characters for Audience (Core Text and Paratext tables)*

The Narrative field indicates whether the narrative of the text is adapted from an existing script or work or whether it is an original text conceived for the piece (which may differ between core text and paratext). Narrative Structure refers to whether the narrative involves the traditional Aristotelian dramatic structure, a more experimental narrative structure, or none. Proxy Characters for Audience means the text casts the audience as a fictional character or multiple characters within the storyworld.

- *Digital (Core Text and Paratext tables) and Digital Paratext (Transmedia Theatre table)*

The Digital field is a yes/no field, referring to the nature of the platform through which the performance or the paratext originally reaches the audience. Even if there are some digital elements in a performance and/or digital remediations of the performance, if it originally involved in-person audiences, it does not qualify as 'digital'. The Digital Paratext field in the Transmedia Theatre table automatically populates based on the entry in the Paratext table ('true' if at least one paratext is digital).

- *Digital Platform, Platform Creation, Platform Accessibility, and Platform Learning Curve (Core Text and Paratext tables)*

For digital core texts and paratexts, these field list, respectively, the name of the platform, whether a pre-existing platform was used or a new platform was built for purpose, whether the platform was accessible to the general public or only to those registered to attend the performance/view the piece, and the estimated learning curve of said platform.

- *Interactive, Interactivity Dixon, Interactivity Ryan, Interactivity Participants, and Interactivity Textual Consequences (Core Text and Paratext tables)*

The Interactive field is a yes/no field referring to whether the text allows active audience participation, even if said participation involves them simply choosing which text(s) to engage with. The Interactivity Dixon and Interactivity Ryan fields identify the text's interactivity based on Dixon's (Navigation, Participation, Conversation and Collaboration)[176] and Ryan's categories (External, Internal, Productive Top-Down, Productive Bottom-Up, and Productive Hybrid).[177] The Interactivity Participants field indicates whether interaction occurs between the audience and the text, the audience and the production team (as themselves), and/or among audience members. Meanwhile, per Andrea Phillips' categories of interactivity ("changing the

[176] Dixon, ""Performing" Interactivity."
[177] Ryan, "Transmedia Storytelling: Industry Buzzword or New Narrative Experience?."

storyworld"),[178] the Interactivity Textual Consequences field shows whether audience choices and actions affect the text permanently, which texts they actually affect and whether the effect is visible to the public.

- *Pervasivity (Core Text and Paratext tables)*

This field, in line with Sophy Smith's idea of immersive vs. integrative experiences, indicates whether the text seems intended to immerse the audience in (bring them into) the storyworld or weave/integrate the storyworld into the audience's lives, or both.[179]

- *Storyworld Link, Storyworld Timeline, Storyworld Overlap (Paratext table) and Paratext Storyworld Link (Transmedia Theatre table)*

The Storyworld Link field indicates whether the paratexts involve a deliberate distribution of the narrative, a sequel conceived after the release of the core text, or a remediation/adaptation. The Storyworld Timeline field shows where the narrative of the paratext falls in the overall timeline in relation to the core text. The Storyworld Overlap field indicates the narrative elements that the paratexts share with the core text. The Paratext Storyworld Link in the Transmedia Theatre table automatically populates with the Storyworld Link if Distribution (Deliberate) is selected for any of the paratexts.

- *Production Timeline and Production Overlap (Paratext table)*

The Production Timeline field refers to when a paratext is released to audiences in relation to the core text. The Production Overlap field indicates the production elements that the paratexts share with the core text, be it specific actors, locations or sets, costumes or props, and/or sound or music.

[178] Phillips, *A Creator's Guide to Transmedia Storytelling: How to Captivate and Engage Audiences across Multiple Platforms*, 120.
[179] Smith, "Pervasive Theatre: New Writing for New Environments."

- *Research Definition Met (Transmedia Theatre table)*

This field indicates whether the overall transmedia theatre meets the definition of transmedia theatre as set by this research. It populates automatically based on the conditional formula of: IF (Core Text Liveness = 'Temporal + Spatial' OR 'Temporal) AND (Digital Paratext = 'true') AND (Deliberate Storyworld Distribution = 'Distribution (Deliberate)', then 'Yes'; Otherwise, 'No'.

I. Knowledge Base: Limitations and Discussion

There are two main challenges in creating the knowledge base: the qualitative and often subjective nature of many of the characteristics/parameters and the dependence on secondary resources for the majority of the information. For parameters like 'Pervasivity' or 'Platform Learning Curve', for example, the lack of a universal standard means the CI has to enter her own perception or interpretation. Not to mention, parameters like 'Narrative Structure' or 'Interactivity Dixon' involve a spectrum where texts can exist at different points in between categories. These endless possibilities have to be reduced to strictly defined options—this process is, again, prone to subjectivity, where different writers or researchers may disagree on which side of the categorical fence each text lands on.

Second, the current entries, as they stand, are largely based on secondary resources—other researchers' and writers' descriptions and analyses of past performances and paratexts. Not only are they then at the mercy of *those researchers'* subjective perception and evaluation, but some of the information can also be vague or incomplete. For example, Agnes Bakk's recent writing on Herbert Fritsch's *hamlet_X* describes a website where audiences could play three interactive games based on *Hamlet*, with no further descriptions of the gameplay or interaction involved.[180] And yet, these games cannot be found on the existing *hamlet_X* website nor in

[180] Agnes Bakk, "New Technologies for a New Audience? Using Transmedia Storytelling towards a New Experience Design Form," in *Redefining Theatre Communities: International Perspectives on Community-Conscious Theatre-Making*, ed. Szabolcs Musca and Marco Galea (Bristol: Intellect Books, 2020).

Wiens' writing.[181] [182] Even in more recent examples, it is impossible to ensure the completeness and accuracy of the information entered unless the CI attends the performance.

The purpose of the knowledge base, therefore, is not to provide a comprehensive or even precise record of all existing transmedia theatre experiences. Rather, it functions as a tool for the CI, and other researchers, to codify the characteristics of past transmedia theatre examples, noting their similarities and differences, in order to inform future designs and artistic outputs. Constructing the knowledge base early in the RtD process helps solidify the framework upon which design ideas can be realized. The different characteristics and considerations identified in this chapter will appear and re-appear throughout the rest of this exegesis, particularly in the discussion of building, testing and revision of transmedia theatre prototypes.

[181] Fritsch, "Hamlet_X."
[182] Wiens, "Hamlet and the Virtual Stage: Herbert Fritsch's Project *hamlet_X*."

CHAPTER 5: STAGE 2 – SLINGSBY THEATRE'S *MAN COVETS BIRD*

A. Introduction

The purpose of this stage of the research is twofold: to explore the possibilities and considerations in constructing a transmedia theatre experience, and to begin the iterative design process leading to a final, public-facing artistic output. This stage involves prototype exploration, combining cultural probes with audience research in collaboration with an established local theatre company with a suitable upcoming performance functioning as the core text of the transmedia project. The RtD method is employed,[183] with ideation informed by the insights gained from the case studies and resulting ontological database. Low-fidelity transmedia prototypes will be built to facilitate the cultural probe process. The cultural probe tasks will simulate the aforementioned "associated protocols or social and cultural practices" of each medium.[184] As this research focuses on transmedia narrative that involves digital paratexts, the tasks are to be performed and the responses recorded digitally through a digital cultural probe instrument suited to younger participants.[185] As outlined in the next section, however, the choice of theatre company as collaborator led to an additional outcome: investigating the potential implications of transmedia theatre in drama education.

B. Company and Collaboration

Due to the nature of the paratexts, the CI approached theatre companies in Adelaide with prior history of integrating digital technology into their works. Slingsby Theatre, whose work caters

[183] Stappers, Sleeswijk Visser, and Keller, "The Role of Prototypes and Frameworks for Structuring Explorations by Research through Design."
[184] Jenkins, *Convergence Culture: Where Old and New Media Collide*, 13.
[185] Iversen and Nielsen, "Short Using Digital Cultural Probes in Design with Children."

to school students and young audiences, agreed to collaborate with the CI in both investigating the potential of transmedia storytelling and in developing a transmedia piece. The latter would be done in conjunction of their upcoming stage adaptation of Martin McKenna's 2014 memoir *The Boy Who Talked to Dogs*. The initial plan was to conduct the cultural probe by having participants perform activities in conjunction with viewing pre-recorded footage or scene rehearsal of the final performance. After consulting Andy Packer, the artistic director of Slingsby Theatre (Primary Partner Investigator, hereafter referred to as PI1) and his team, it was decided that the first round of cultural probes will revolve around the 2019 Adelaide restaging of *Man Covets Bird*, one of Slingsby's repertoire pieces. While this stage of the research predated the COVID-19 pandemic and its repercussions on theatre, there were logistical considerations that necessitated this change. These include research timeline (as *The Boy Who Talked to Dogs* was a new piece, with rehearsals not scheduled to take place until 2020) and participant recruitment (students from schools with affiliations to Slingsby had already arranged to attend *Man Covets Bird*, thereby simplifying the recruitment process).

Another major adjustment that had to be made was to the initial plan of using established digital platforms, such as Facebook for social media interaction and Squiffy for gaming interaction (uploading the game onto their gallery). The decision to recruit high school-age students as main participants (refer to 'Participant Recruitment and Ethics' section below) created concerns about their anonymity and privacy. In consultation with the research supervisors and the ethics committee, it was decided that the prototypes would be on one single platform that is accessible (through password-protection) only to the research team (the CI, PI1, research supervisors) and cultural probe participants. As such, three different elements had to be contained within the platform: the digital interactive paratexts serving as transmedia prototypes, the cultural probe tasks and prompts for participants, as well as the tool for data collection and analytics. To avoid confusion, this overall platform will heretofore be referred to as the 'cultural probe application' or, the name we decided to give the application, DigiStage. The term 'activity' refers to the different modalities of transmedia interaction when integrated into the cultural probe application.

C. Prototype Ideation and Construction

The overall design and construction process that was undergone for this stage of the research involved the following:

1. The design of the transmedia paratexts, which involved:
    - Interaction design
    - Content design and writing

2. The design of the overall cultural probe application, which involved:
    - User experience and interface (UX/UI) design
    - Building/developing the application

I. Designing the Paratexts

As outlined in the methodology section, the case study analyses from the previous stage would inform the design of the transmedia interactions in the prototype design from the cultural probe stage onwards. Nine different ideas for transmedia paratext prototypes (also referred to as "activities" by the research team due to their similarities to education pack activities) were presented to Slingsby Theatre personnel for feedback (refer to Appendix B). Care was taken to include different timelines (both narrative timeline and viewing timeline), with stories taking place before and after the events of the play and activities scheduled before and after the scheduled performance viewing. The stories and characters were also varied, from supporting characters in the play, minor characters, to original characters that fit into the world of the play.

Four activities were chosen out of the nine—one for each transmedia theatre modality—some combining different initial ideas.

1. Hunting-and-Gathering:

A series of 3 short stories (1,000-1,500 words each with picture illustrations) exploring what happens to a character (the woman in the rotunda) who appears briefly only at the start and the end of the play. Narratively, the stories would follow the same timeline as the events of the play, but taking place at a different location. These short stories will provide a backstory to the character, extending their narrative arc from that in the play.

2. Gaming Interaction:

A digital gamebook (Choose-Your-Own-Adventure or CYOA-style interactive fiction) exploring the lives of supporting characters in the play, with multiple-choice questions and a branching narrative structure. The participants will play as one of the supporting characters (even though this is never stated explicitly). The timeline of the game takes place before that of the play, ending shortly after these characters first appear in the play. It follows the characters' journey as they first move into the city where the play takes place. In a series of choices, the player decides where to live in the city, what their apartment looks like, how they will make a living, as well as who to interact with and how. Some information from the play will be mentioned or hinted at, with appearances by other minor characters.

3. Social Media:

As the research could not use an actual social media platform (for privacy reasons), the social media interaction would take place in a series of microblog entries. They will be posted by original characters who are connected to supporting characters in the play (referred to as 'peripheral characters'). These characters are connected to each other and therefore comment and reply on each other's entries, similar to social media posts. The posts would form parallel micro-stories, taking place during and after the events of the play.

4. Digital User-Generated (DUG) Dramaturgy:

Participants are asked to submit pictures of what they imagine their birds would look like along with a little blurb. Initially, the idea was to have them create original drawing on a digital canvas embedded into the app. Due to the limitations of the app builder and in order to simplify the activity for the participants, they had the freedom to submit either original artwork or pictures found online. This meant the pictures could not actually projected onto the set as originally planned to avoid copyright violations. The team decided on a picture gallery at the end of the cultural probe period, along with descriptions of the birds.

The four activities were presented again to the PIs along with sketches for the interface (Fig. *18*) and plans for contribution by the play's writer Finegan Kruckemeyer (refer to Appendix C)—the latter were ultimately decided against due to Kruckemeyer's lack of availability. Due to the closed nature of the cultural probe stage, as well as the fact that the final output would be associated to *Man Covets Bird*, PI1 decided to let the CI make creative decisions on the content of the activities with some feedback from the PI(s).

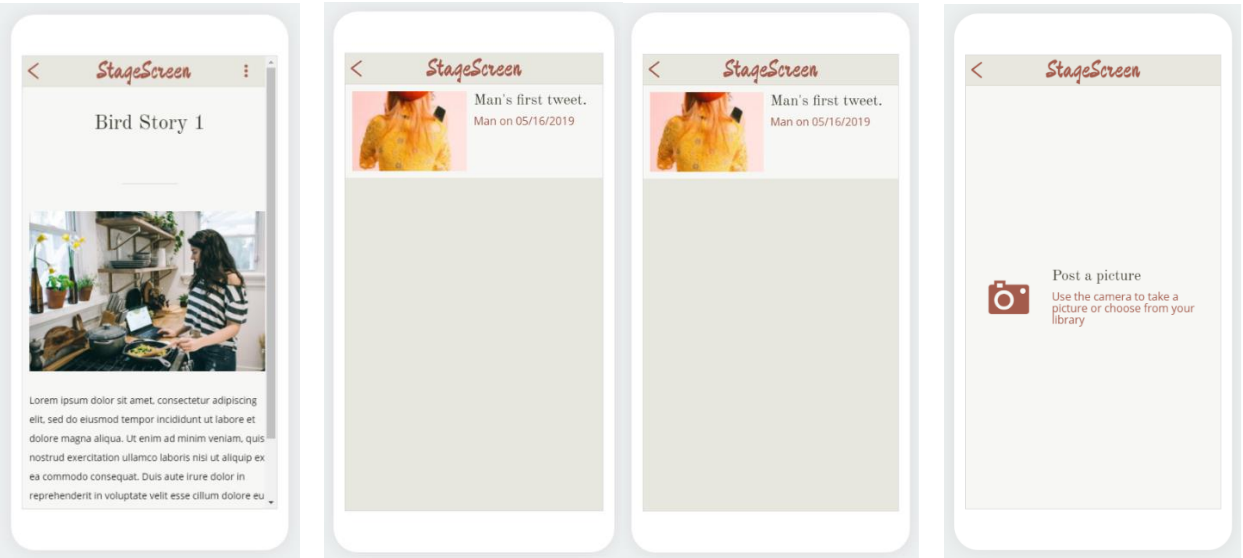

Fig. 18. Sketches for the transmedia activities on DigiStage, including short stories, microblog entries, and picture submission

II. Designing the Application

The first stage of the process was designing the operating system, platform, and builder for the application. As the participants would be using their personal devices, the application was ideally accessible on iOS and Android devices, as well as Windows and Mac personal computers. The research team settled on a progressive web application (PWA), which is an application that combines native mobile application and web experiences. PWAs are accessible through web browsers like regular websites, but they also have the look and many of the functions of mobile apps.[186] The main advantages of PWAs include cross-platform availability, which reduces the need to create discrete content for a website, an iOS app, and an Android app. The push notification function would also allow tasks or activities to be relayed to participants remotely and instantaneously, which suits the staggered scheduling of the different activities on the timeline.

Given the CI's limited experience in building PWAs, the web-based app-building software GoodBarber was used to streamline the process. The user-experience (UX) design of the PWA followed the template provided by GoodBarber, with flow based on the proposed flow diagram for the digital cultural probe tool (Fig. *11*). The main features are the home page, which introduces the purpose of the application, informational pages, pages for each activity, and a calendar outlining the tasks. Visually, the PWA followed the color scheme of the Slingsby Theatre website and their published materials on *Man Covets Bird*. A Google Analytics page was set up for the PWA to gather analytics data, particularly page views. Finally, the PWA was titled 'DigiStage' to denote the interaction between digital paratexts and stage performance in the activities. A more detailed flow diagram of the DigiStage app can be seen in the appendix (refer to Appendix D).

[186] Andreas Biørn-Hansen, Tim A. Majchrzak, and Tor-Morten Grønli, "Progressive Web Apps: The Possible Web-native Unifier for Mobile Development" (paper presented at the 13th International Conference on Web Information Systems and Technologies, Porto, 2017).

D. Participant Recruitment and Ethics

For the first round of the cultural probe stage, PI1 suggested consulting with Hannah Oliver, Slingsby's education consultant and the Head of Theatre at St. Mary's College in Adelaide (Secondary Partner Investigator, hereafter referred to as PI2). PI2 has previously coordinated Slingsby's education outreach programs and prepared teaching guides for performances (including *Man Covets Bird*). As she had planned to take her Year 9 and Year 10 theatre students to the performance of *Man Covets Bird*, she recommended them as participants. The group of students were deemed suitable for the cultural probe stage for the following reasons:

1. Made up of young adults between 13 and 16 years of age, the group fits into Slingsby's target demographic. While Slingsby's stated audience are "adults and young people", their education resources are geared towards students from Year 5 to Year 12.[187] [188]

2. Born between 2003 and 2006, the students are part of Generation Z, which has been classified as digital natives with high media use—the smartphone, in particular, functions as their entertainment hub.[189] At the same time, given the presence of intertextuality, extraliterary elements, multiplot narrative structures, and metafiction in contemporary teenage fiction,[190] this age group is likely to grasp the premise of transmedia theatre.

3. Focusing on students in the first round of cultural probes would allow early exploration of the educational potential of transmedia theatre, which is largely absent from the case studies. This leaves enough time to shift the focus onto other uses in subsequent stages if desired.

[187] "Our Story," 2017, accessed April 5, 2022, https://www.slingsby.net.au/about/.
[188] "Education Resources," 2017, accessed April 5, 2022, https://www.slingsby.net.au/education/.
[189] Anthony Turner, "Generation Z: Technology and Social Interest," *The Journal of Individual Psychology* 71 (2015), https://doi.org/10.1353/jip.2015.0021.
[190] Maria Nikolajeva, "Exit Children's Literature?," *The Lion and the Unicorn* 22 (1998), https://doi.org/10.1353/UNI.1998.0028.

4. Based on advice from PI1 and PI2 (along with the rules at St. Mary's College with regards to who is allowed on school grounds), the research team agreed that they would have no direct contract with the students. Recruiting PI2's own theatre students, with PI2 acting as liaison, would minimize the number of steps in communication between the research team and participants. This means no direct audience research (focus group discussions or interview with participants) will be conducted.

The students purchased tickets and attended the performances in two groups (according to which grade they are in)—the activity is part of the school's drama curriculum. Information sheets discussing the research and the cultural probe application were distributed during class by PI2, along with consent forms for parents and guardians.

E. The Digital Cultural Probe Procedure

The procedure for deploying cultural probe activities and collecting participants' responses starts with PI2 announcing the cultural probe round to participating students and distributing the Participant Information Sheet (PIS) as well as consent forms. The forms are to be signed by the participants and their parents or guardians and returned to the research team before the commencement of any activity. Once the consent forms are returned, PI2 distributes individual usernames and passwords to participants, required to access all content of the PWA. The non-identifying usernames and passwords are set by the CI, and since the distribution is at random and unknown to the investigator, the participants' activities and responses are anonymized. Participants are encouraged to immediately change their passwords, with instructions included on the PWA. Upon access to the PWA, participants are free to explore the 'About' pages (which includes information on the play, the research, and the research team), the Calendar, and the Activity pages. They are encouraged to check the Calendar regularly, set their notifications to

'On', and follow instructions on the Activity pages. The release schedule for the activities can be found in the next page.

For the gamebook, titled 'And the City Greets You,' participants are instructed to explore different choices and therefore have unique experiences as various characters. Visits to the gamebook page are recorded by Google Analytics but participants' individual choices within the gamebook are not. In the picture submission activity, titled 'Birds of a Feather', the pictures submitted are saved automatically by the PWA and published in a gallery along with short blurbs written by the CI. These blurbs are meant to emulate the incorporation of user-submitted content into the performance. On the other hand, the short story 'The Other End of the Rotunda' are published in four installments on four different pages. Each page includes a comment function for participants—any comment would be recorded. Finally, the social media activity 'Lost and Found' includes 45 microblog posts by five interconnected characters, written by the CI. Characters comment on one another's post using the PWA's comment function, which similarly allows participants to leave comments—any comment would be recorded. After the activities are completed, participants are asked to complete a survey (refer to Appendix E) about their experience with DigiStage, distributed by PI2 through a Google Forms link. The survey responses are anonymous.

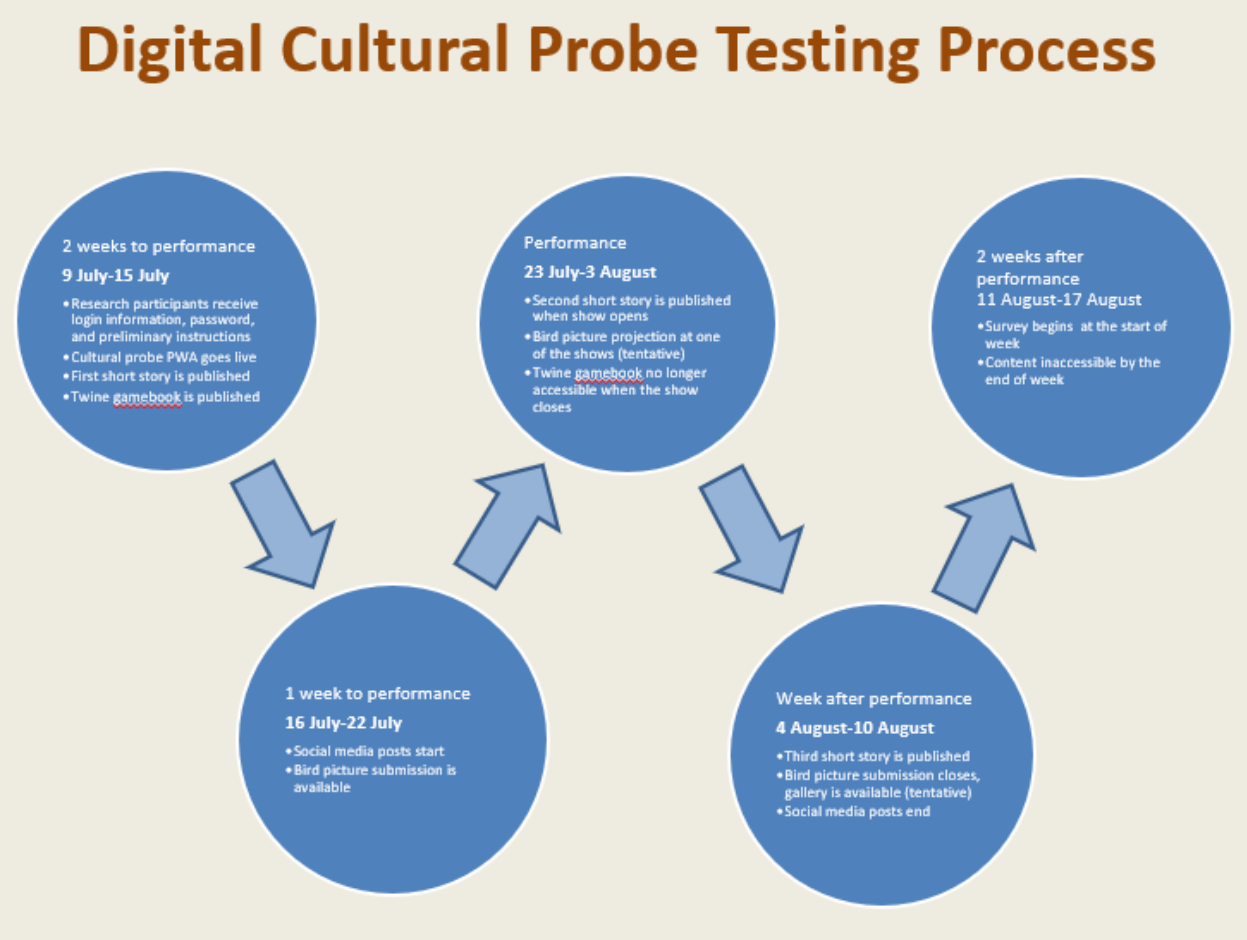

Fig. 19. Diagram of the digital cultural probe testing process for DigiStage

As seen in the diagram above (Fig. *19*), the order of the activities are as follows:

1. In order to simulate a true DUG dramaturgy modality, the picture submission is conducted first, two weeks before the scheduled performances. This allows the gallery to be published around the time that participants attend the performance.

2. The gamebook, which narratively takes place largely before the events of the performance, is released in the same period. Since the CYOA format allows for a variety of narrative outcomes and reveals several different characters from the performance, making it available earlier hopefully encourages participants to play it again after viewing the performance.

3. The next activity conducted is the short stories—since four installments are planned, starting it the week before the scheduled performance allows subsequent installments to be released on a one-week interval, ending towards the end of the cultural probe period. The narrative expands on the life of the main character's love interest, who gets left behind in their hometown at the start of the theatre performance and revisited at the very end. Having more chapters of the stories released after participants have learned about said love interest in the performance can hopefully help sustain interest.

4. Lastly, the microblogs featured 45 posts, five peripheral characters and three intertwining narrative threads which follow that of the performance. Given the volume and higher complexity of the narrative, the CI decided to start releasing them on 2 August, after participants have attended the performance and presumably completed the other activities.

The entire first round of cultural probe took five weeks, and the results comprise of user submissions and comments on the PWA, usage data from Google Analytics, as well as survey responses. The full survey questions and responses can be found in the appendix (refer to Appendix F).

F. Digital Artefacts: DigiStage Activities

The links to access the DigiStage activities and results can be found in the appendix (refer to Appendix G). As the PWA has been re-configured for the subsequent stage of the research,[191] the full interface and navigational interaction of DigiStage are not available—the links currently provide access to individual activities and results.

[191] Refer to Chapter 7C (Transmedia Ideation and Construction)

G. Results, Findings, and Evaluation

The results of the first round of cultural probe are mixed, with participants actively engaging in some activities and ignoring others. Participants submitted bird pictures for the 'Birds of a Feather' activity, for example, and even named their birds, but they did not leave any comments in the short story and the social media activities. There is a limited number of user submission materials to analyze, but fortunately there were ample results of survey responses and analytics data.

17 participants completed and returned the survey form—regardless of this low sample size, however, the survey responses can still provide qualitative data. Given the lack of direct audience research, this data might still generate insights for the subsequent stage, along with web analytics and other relevant feedback. Regarding the survey, it is also notable that due to a miscommunication with PI2 on the distribution of the survey, the participants actually completed a draft version of the form, sent for feedback and approval. Even though the questions in the draft were largely finalized by the research team, the draft did not yet implement the skip logic function on Google Forms. Most activity-specific questions had answer choices where respondents could indicate that they did not take part in the activity. But choosing this answer did not preclude the respondent from being asked further questions about the activity. This created inconsistencies in the responses, where respondents would indicate participation in one question and non-participation in another. In questions where responses from non-participants are omitted (usually questions on content and understanding of narrative), the effect is cumulative. Any participant who indicates non-participation at any point in the survey is omitted.

Google Analytics results also had limitations, the first of which is that the software did not differentiate 'users' between different GoodBarber user accounts on GoodBarber, only through IP addresses. This meant the same participant could be seen as different users if visiting through different networks (e.g. school and private mobile networks). In addition, in order to

submit characters' comments on the microblog posts, the CI had to log in through the front-end, which would qualify these activities as site usage. To try and isolate the CI's own activities, the CI used a VPN when logging onto DigiStage. This allowed the filtering of cultural probe participants by country and city (Adelaide, Australia) and date of first use (25 July), which identified 36 non-unique users. This method did not, however, filter out site usage by other members of the research team when testing the PWA, if they logged in from a new network after the date. Some inaccuracy in the analytics data is therefore expected, although the overall trend should still be relevant.

The results were compiled into a report presented to the research supervisors and partner investigators (refer to Appendix H), the summary of which will be discussed below.

I. Survey Responses

- *Usage and Attendance:*

When asked whether they used DigiStage during the cultural probe period, 16 of 17 participants answered yes. Of these, six participants used DigiStage less than once a week, while ten participants used it once or twice a week. While the usage rate is good, the frequency is lower than anticipated given there were new activities released at least twice a week (and almost every day once the microblog activity began).

- *Clarity and Success of Objectives:*

The majority of participants were "somewhat clear" on the function and purpose of DigiStage. When asked whether DigiStage has achieved a list of objectives (additional storytelling, character interaction and world exploration, fun and entertainment, and educational enrichment), between six to nine participants felt that any of the objectives had been achieved.

- *Transmedia Activities:*

Participants were asked which of the four activities they took part in. The picture submission activity had the highest rate of participation at fourteen, followed by the gamebook at twelve. The microblog activity had seven participants while the short stories only had five. They were then asked to rank the activities by preference, and the gamebook was the favorite, followed by the picture submission, the short stories, and the microblog being the least favorite. It is notable that the top two activities in terms of participation and preference were the two made available earlier. In addition, the participants who *did* take part in the short stories and microblog activities ranked them higher. This suggests that fatigue or loss of interest in participating altogether likely affected preference rather than actual or perceived quality of the activities.

- *Storyworld Expansion:*

Participants were asked whether they learned more about the world and characters from *Man Covets Bird* through the activities and whether they enjoyed (or would have enjoyed) doing so. Twelve out of sixteen participants responded that they either enjoyed or would have enjoyed engaging further with the storyworld, in line with the goals of transmedia storytelling, while ten of sixteen participants felt the activities facilitated this expansion.

- *Timeline of Participation:*

When asked whether they participated in each activity before and/or after attending the performance, only the picture submission activity, the first available, elicited greater participation prior to the performance. The majority of participants played the gamebook after the performance, even though it was available before. When asked about their preference, seven out of sixteen participants preferred to do the activities after attending the show, another seven answered both, while only two preferred to do them before. Except in the case of DUG dramaturgy, conducting the activities after the performance may be more conducive to engagement, perhaps due to increased familiarity with the storyworld.

- *Hunting-and-Gathering (Short Stories):*

After omitting all possible non-participants in the activity, three participants responded that they read more than one story, while one participant read only one. When asked whether they understood the story and characters, two of these participants responded with "no" while two responded with "somewhat". Three of the participants state that they did not realize the narrative connection between the short stories and the performance.

- *Gaming Interaction (Gamebook):*

Thirteen participants played the gamebook at least once, but none of them played more than twice. Of these, eight participants tried picking different choices, although five of them felt that their choices did not affect the story much. Most participants enjoyed learning about the characters' lives prior to the events in the performance. Seven participants liked the CYOA format, but four of these participants would have liked more choices and more characters, while four participants would have preferred a different gaming format. Both responses are consistent with what Ryan and other scholars on gaming and storytelling have proposed.[192] [193] A more open-ended format and/or more story branches would have increased ludic immersion, while players' choices having a greater impact on story outcomes would have increased narrative immersion.

- *Social Media Theatre (Microblogs):*

After omitting all possible non-participants, only five participants viewed the microblog entries—three of them viewed 1-3 posts while two viewed 4-10 posts (out of 45). Similar to the short stories, participants did not really understand the story and characters in the microblogs and did not enjoy their narrative connection to the performance. Most participants were not aware that they were able to comment on the posts and the majority also did not want to or would not have wanted to leave comments (which explains the fact that there were zero

[192] Ryan, "From Narrative Games to Playable Stories: Toward a Poetics of Interactive Narrative."
[193] Jan-Noël Thon, "Immersion Revisited: On the Value of A Contested Concept," in *Extending Experiences: Structure, Analysis and Design of Computer Game Player Experience* (Rovaniemi: Lapland University Press, 2008).

comments). In addition, most participants said they would have preferred for the activity to occur on an existing social media platform such as Instagram, Twitter, or Facebook.

- *DUG Dramaturgy (Picture Submission):*

After omitting all possible non-participants, twelve participants submitted pictures for the activity, with all but one submitting only a single picture. Of all research participants, only six viewed the gallery afterwards, four of whom read the blurbs and enjoyed them. Twelve participants responded positively to the possibility of their submission being featured in or affecting the performance, per the principles of DUG dramaturgy.

- *Functionality and Usability:*

Out of sixteen user participants, all but one said using DigiStage was either "very easy" or "quite easy". Nine participants said they accessed the activities through direct links on the Home page, seven participants did so through the calendar function, and none through the push notifications. Ten participants did the activities according to the calendar, while six never used the calendar at all. Only one participant received push notifications, the majority (nine) never turned them on, and four were not aware they existed. This is explained by the next question and response indicating that the majority of participants used iPhones, which do not support PWA push notifications. Five participants used Windows computers, while six used either MacBooks or iPads. When asked whether they would use DigiStage more if it were a native iOS or Android application, six out of seventeen participants said they would.

- *Future Usage:*

When asked whether they would use DigiStage again in the future, two participants said "Yes", four said "No", and eleven said "Maybe, depending on changes and improvements". Three out of ten participants said they would take part in the activities even if they were not attending the performance, while seven said the activities were only worth doing if they attended the performance.

II. Web Analytics

The following are results from Google Web Analytics:

- *Usage Data:*

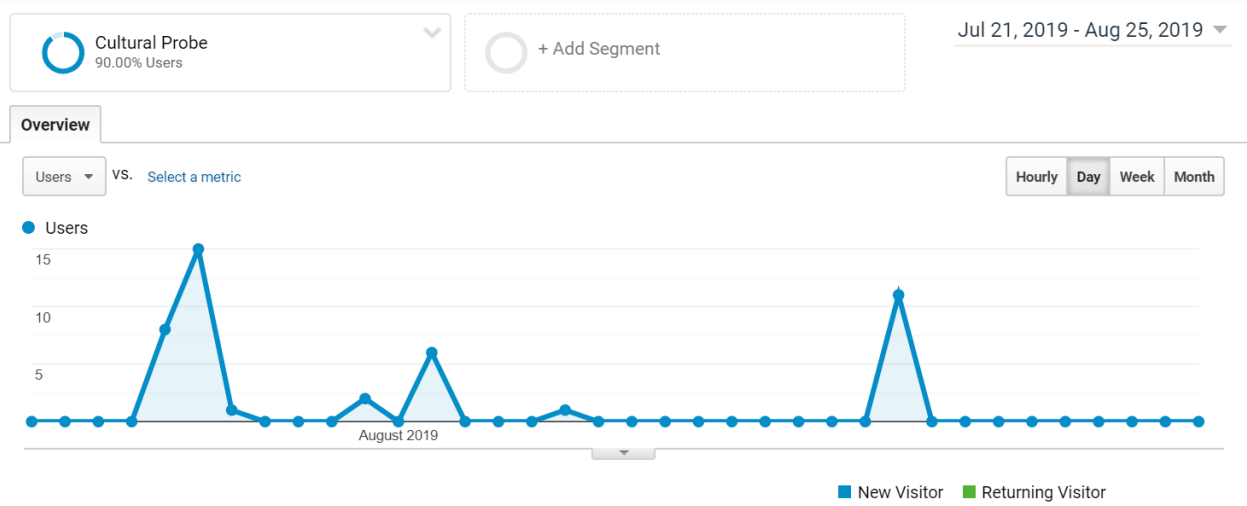

Fig. 20. Graph of usage data of DigiStage cultural probe participants

Usage spiked on 25-26 July when the DigiStage PWA first became available for participants' use and PI2 distributed usernames and passwords. There were a few visits in the following days, although they notably dropped to zero around the dates of the *Man Covets Bird* performance. Usage rose sharply again on 11 August when the surveys were distributed. Each unique user only had 1-2 sessions, but this might be due to the same participant visiting the PWA through different networks.

- *User Behavior:*

Each session lasted an average of 5 minutes, with users visiting an average of 12 pages (an average of 25 seconds per page), totaling 637 pageviews in the 5-week testing period. The majority of sessions lasted either less than 10 seconds (quick one-page view), 3-10 minutes (average view of 17 pages), and 10-30 minutes (average view of 24 pages). Consistent with the survey responses, the most visited pages contained the picture submission and gamebook

activities, while the short story and social media pages had minimum hits. The calendar page received the next highest number of visits while the pages in the 'About' section (such as the "About the Show" page and "The DigiStage Team" page) had some of the fewest hits.

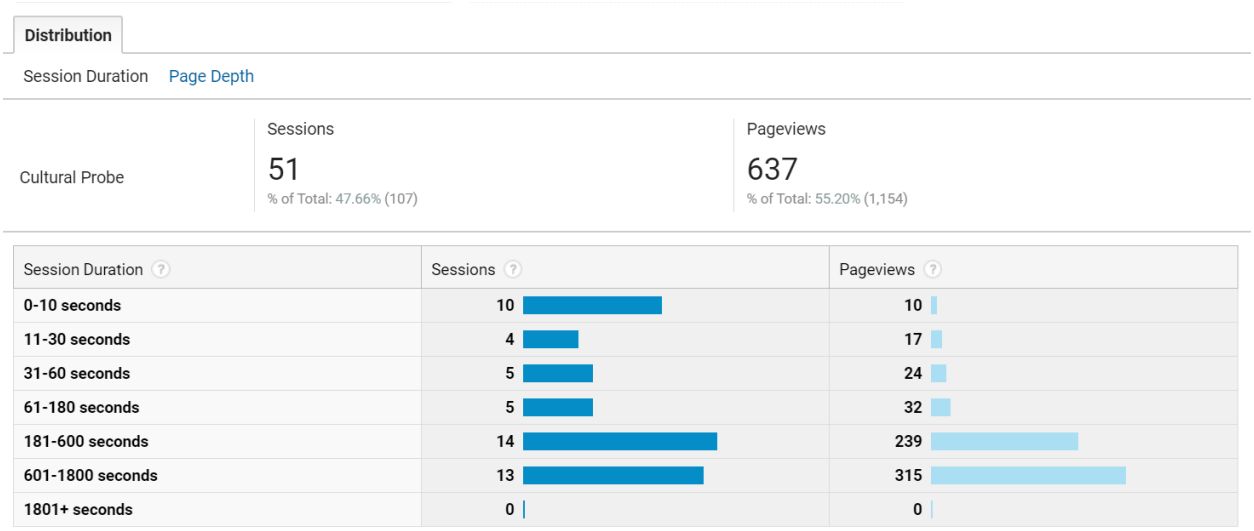

Fig. 21. Graph of user behavior of DigiStage cultural probe participants

- *Operating System/Web Browser:*

OS usage mirrored survey responses, with iOS (iPhones and iPads) being the majority, browsing on Safari. Google Chrome is used when visiting the site on Windows, Macintosh (computers), and Android devices.

III. Discussion of Results and Key Findings

In this stage of the research, the relevance of the results and subsequent key findings can be discussed in two ways: 1. How they might be applied to the second round of prototype construction and testing, as well as the final output as part of the internal iterative process, and 2. How they may inform the overall design process of a transmedia theatre piece. For the

former, findings can be determined in terms of the prototypes themselves (both design and content), participants, and procedure.

Based on the survey results, treated as qualitative data, at least some of the participants felt positively not just about engaging with additional content related to the theatre performance, but specifically content that expands the storyworld of the performance. With more narrative-oriented prototypes, namely the short stories, the gamebook and the microblogs, there was a lack of clear narrative connection to that of the performance. The use of peripheral characters might have worked for the Royal Shakespeare Company's *Midsummer Night's Dreaming* due to the target audience's likely familiarity with Shakespeare's text—a quick mention of Hercules being Theseus' brother would have immediately established the character's position within the broader storyworld.[194] The participating students would have only learned of *Man Covets Bird*'s characters during the performance. Expecting them to keep various supporting and background characters straight, not to mention peripheral characters with tenuous, implied relationships, was a tall order. Theatre-makers creating a transmedia piece involving original characters may need to consider simplifying the narrative connections and even the narrative itself, or alternatively, making the storyworld connections between the performance and paratexts extremely clear. Visual aids, or even a storyworld-wide *dramatis personae* list, might be beneficial—as seen in the *Matrix* example or even *2097*, consistent visual cues across a transmedia piece increase overall immersion. For the next stage, the hunting-and-gathering prototype might include a more visual format, such as a comic strip or video essays, while still maintaining a serial format.

On the other hand, the more interaction-oriented modalities (gaming interaction, social media theatre, and DUG dramaturgy) could seemingly incorporate even greater degrees of interactivity, more branching storylines, and greater agency for participants. While the CYOA format has a greater narrative allowance to expand the story, other formats that offer ludic immersion like puzzles and strategy games may offer greater variety of interaction. For social

[194] Refer to Chapter 4D (Case Study: Social Media)

media theatre, established platforms like Facebook or Instagram would offer more interactive features than just text comments (such as sharing and tagging), capitalizing on participants' existing social networks. The results also show a general reluctance to engage in narrative-based social media interaction, i.e. responding directly to fictional characters and storylines while roleplaying as part of that fictional storyworld. Due to the lack of existing examples, it is difficult to discern the incongruity between social media, which normally hinges upon the users' actual public identity, and the need to roleplay. For the next stage, less roleplay-oriented social media interaction, perhaps integrated into other modalities, could be explored. With DUG dramaturgy, participants responded positively to the idea of co-creation, where their contribution through transmedia paratexts actually affect the performance, not just the other way around.

The calendar function was useful as a guide to activities, but the push notifications were rendered ineffective due to incompatibility with iOS and resulting lack of awareness. The lack of participants' understanding of the objectives of DigiStage and the overall app suggests that the About pages could be more succinct and easily accessible. Again, participants' preference for engaging with transmedia activities after attending the performance points to the importance of familiarity with the storyworld in encouraging participation. If the transmedia piece is based on an original work, it might be a good idea to focus on post-performance paratexts (except for DUG dramaturgy). One possible alternative would be to provide a preview of the theatre performance before or within pre-performance transmedia paratexts, particularly plotlines or characters pertinent to the paratexts themselves (again, a *dramatis personae* might help in this case). There was also higher engagement with the activities released first, indicating that, where multiple paratexts are included in the transmedia piece, it would be a good idea to start with one(s) requiring higher degrees of active participation. In addition, based on web analytics, the median session range (excluding single-page sessions) was 3-10 minutes. Transmedia paratexts should therefore aim for short participation requirements not exceeding 10 minutes per session.

The goals of the digital cultural probe were met in this stage of the research, as participants' responses to the prompts and general behavior in using DigiStage showed the potential of transmedia theatre for further research and development. Overall, participants were receptive to opportunities for agency (through active participation) and immersion (through storyworld exploration). On the other hand, the affordances of digital (particularly mobile) technologies provide accessibility beyond the temporal and spatial limitations of theatre performance, but they do not guarantee engagement. Despite the initial focus on the design of the transmedia prototypes rather than the content, the quality of the latter and their interaction with the main dramatic text still dictate the desire to take part.

IV. DigiStage and Transmedia Theatre in Drama Education

While the findings from DigiStage are, again, far from generalizable, in an exploratory context they showed the potential of transmedia theatre experiences not just as a tool for storytelling, but also for drama education. As participating students' attendance of *Man Covets Bird* and use of DigiStage became part of their Drama course, the results could reveal how students in an educational context would respond similarly or differently to transmedia engagements compared to general audiences. Current secondary students are, to borrow Mark Prensky's popular yet perhaps outdated term, 'digital natives': "native speakers" of the digital language of computers, video games and the Internet."[195] While Prensky's term has now been criticized as a generalization, both overly optimistic of students' deftness with digital technology and pessimistic of analog curricula, an undeniable feature of the generation is their unprecedented access to the tools of digital creation.[196] Within the last decade, the role of digital technology in facilitating creative participation in drama pedagogy has been continually dissected by drama education scholars. Cameron discussed how digital technology allows seamless pre-text (in

[195] Marc Prensky, "Digital Natives, Digital Immigrants," *On the Horizon* 9, no. 5 (2001): 1, https://doi.org/10.1108/10748120110424816.
[196] David Cameron and Michael Anderson, "Potential to Reality: Drama, Technology and Education," in *Drama Education with Digital Technology*, ed. Michael Anderson, John Carroll, and David Cameron (London: Continuum, 2009).

process drama), engagement beyond dramatic space (through discussion forums) and an 'expanded universe'.[197] Jensen added that in an increasingly mediatized world, the use of technology in drama education contributes to students' multimodal literacies.[198] Bell and Borsuk discussed how digital educational resources enhance Shakespeare's texts' accessibility in various academic settings.[199] These views are consistent with the results of digital cultural probes, which suggest that students were able to navigate DigiStage's multimodal landscape and engage beyond the text of the performance.

At the same time, the student participants sought authenticity and effortlessness in their engagement, preferring practices and technologies they are accustomed to. Sophy Smith's idea of integrative rather than immersive experiences is relevant here, bringing the dramatic storyworld into students' lives rather than thrusting the students into the storyworld. This provides a contrast and complement to existing 'analog' educational resources (which do not take advantage of the convergence aspect of digital media, even if they are digitally remediated). Nevertheless, these resources, often used in classroom setting, is less concerned with immersivity. The study guide for *Man Covets Bird*, for example (written by PI2), contained lessons and activities on theme and style, writing and dramaturgy, acting, production elements, imagination, inner peace, drama criticism, and the creative process.[200] It prompts students to perceive *Man Covets Bird* as a piece of dramatic storytelling worth interpreting and analyzing. Meanwhile, in the gamut of drama education tools, transmedia theatre is suitable for teaching concepts of narrativity and interactivity, enhancing other existing resources, by engaging students in active participation of storyworld assembly.

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[197] David Cameron, "Mashup: Digital Media and Drama Conventions," in *Drama Education with Digital Technology*, ed. Michael Anderson, John Carroll, and David Cameron (London: Continuum, 2009).
[198] Amy Petersen Jensen, "Theatre Education and New Media/Digital Technologies," in *Key Concepts in Theatre/Drama Education*, ed. Shifra Schonmann (Rotterdam: Sense Publishers, 2011).
[199] Henry Bell and Amy Borsuk, "Teaching Shakespeare: Digital Processes," *Research in Drama Education: The Journal of Applied Theatre and Performance* 25, no. 1 (2020), https://doi.org/10.1080/13569783.2019.1704241.
[200] Hannah McCarthy Oliver, *Man Covets Bird Study Guide & Activity Book* (Adelaide: Slingsby Theatre Company, 2017), https://www.slingsby.net.au/wp-content/uploads/2017/11/Man-Covets-Bird-Education-Resources.pdf.

Shortly after this stage of the research was completed, the COVID-19 pandemic and resulting restrictions forced educational institutions, from primary schools to universities to informal education and vocational training, to move towards online learning. When combined with theatre's shift towards digital performance, further discussed in the following chapter,[201] the impact on drama education was multiplied. Within the first few months of the pandemic, drama education scholars raised concerns on how to grapple with creating intimacy through online-only pedagogical work.[202] The pandemic provided an impetus to explore and refine digital tools in drama education, not just to deal with the current situation, but to prepare for the uncertainties of the future. The potential of multimodality was quickly noted, as researchers describe the efficacy of incorporating images, videos, social media content, and other digital artefacts in online co-creative process drama.[203] In addition, a number of theatre practitioners and companies began specifically engaging student-aged audiences through digital means. Disney Theatrical UK, for example, began offering online educational resources such as printable activities and career-related videos through their website, while Steppenwolf Theatre launched virtual programs including video recordings, lesson plans, and creative challenges. In Australia, Slingsby Theatre, among others, created an On Demand program, where parents and educators can purchase packages that include temporary access to recordings of their performances, along with education resources and backstage videos. The pandemic-driven emerging forms of digital performances have inadvertently provided online resources for drama education in both formal and informal settings.

Transmedia theatre's greatest educational value, however, may lie in the augmented experience it offers, which could foster students' desire to engage with dramatic texts. The next stage of research involves developing high-fidelity prototypes based on participants'

[201] Refer to Chapter 6B (The COVID-19 Pandemic)
[202] Kathleen Gallagher et al., "Response to COVID-19 – Losing and Finding One Another in Drama: Personal Geographies, Digital Spaces and New Intimacies," *Research in Drama Education: The Journal of Applied Theatre and Performance* 25, no. 4 (2020), https://doi.org/10.1080/13569783.2020.1816817.
[203] Adam Cziboly and Adam Bethlenfalvy, "Response to COVID-19 Zooming in on Online Process Drama," *Research in Drama Education: The Journal of Applied Theatre and Performance* 25, no. 4 (2020), https://doi.org/10.1080/13569783.2020.1816818.

feedback, which will subsequently be released to the general public as a transmedia theatre piece. The output will serve as a departure point for future research and creative endeavor in transmedia theatre. One possible area of research is in integrating transmedia theatre into drama education, using process drama to develop a transmedia piece. Another possibility within the education realm is the development of a transmedia theatre app like DigiStage as the "killer app" that Cameron and Anderson refer to.[204] Such a mobile app could facilitate a wider use of technology in drama education through a standardized digital narrative-based educational resource. As drama education continues to prepare students for an uncertain future, the field itself needs to continue to adapt to uncertainties and explore new ways of teaching, engaging, and creating. The intersection between drama, technology and education is full of potential and, within it, transmedia theatre's ability to enhance students' viewing and learning experience through storyworld creation and exploration.

[204] Cameron and Anderson, "Potential to Reality: Drama, Technology and Education," 13.

CHAPTER 6: CONTEXTUAL REVIEW – THE COVID-19 PANDEMIC

A. Introduction

This chapter is a continuation of the preliminary contextual review in Chapter 2. It discusses the COVID-19 pandemic, which resulted in a global wave of restrictions throughout much of 2020 and 2021, and its impact on both the theatre industry and this research. The first and second stages of the research took place prior to the pandemic, but the third stage and subsequent discussions were greatly affected by it. The difference in analyses performed between the pre-pandemic and post-pandemic periods reflects the major paradigm shift in the realm of digital performance.[205] This discussion also shows the constant evolution of digital media and experiences, highlighting the need for an adaptable design process.

B. Background

The coronavirus disease 19 (COVID-19) was declared a global pandemic by the World Health Organization in March 2020, prompting world governments to respond with various levels of public restrictions. While the Australian government initially placed restrictions on international travel, by 16 March, as daily new case numbers surpassed 100, public gatherings were limited to 500 people.[206] On 20 March, a 4-meter square density rule was placed on indoor and outdoor gathering; on 24 March, a stay-at-home order (often referred to as a "lockdown" was instituted for all non-essential activities; and on 29 March, a two-person limit

[205] In this exegesis, the terms 'pre-pandemic' and 'post-pandemic' are predicated on the onset of the COVID-19 pandemic, per the announcement by the World Health Organization. Hence, 'post-pandemic performance' refers to performances devised after March 2020. The CI is not implying, at time of writing, that the pandemic is over in any way.

[206] David J. Price et al., "Early Analysis of the Australian COVID-19 Epidemic," *eLife* 9 (August 13 2020), https://doi.org/10.7554/eLife.58785.

was placed on all public gatherings. The same month, five Australian states and territory announced state border restrictions, including South Australia on 22 March.[207] Restrictions were slowly eased beginning in May 2020, as limited numbers of public gatherings were allowed in most Australian states and territories.[208] In July, however, a sharp increase in number of cases in Victoria resulted in the return of restrictions (including a stay-at-home order) within the state, along with interstate travel restrictions from other states, which lasted until October.

Cluster outbreaks continued to emerge and dissipate in various Australian states in the first half of 2021, resulting in brief localized lockdowns. In February 2021, Australia's public vaccination program began, prioritizing at-risk populations and healthcare workers.[209] The spread of the Delta variant of COVID-19 starting in June resulted in another wave of outbreaks, with high numbers of cases in New South Wales, the Australian Capital Territory Victoria sending those states into weeks-long lockdown.[210] This prompted state governments to speed up their vaccination programs, with the goal of reducing restrictions when vaccination targets were met. State governments started loosening restrictions in October and November, with interstate territories increasingly allowed and the Australian border opening up to citizens, permanent residents, and eventually temporary visa holders. The highly transmissible Omicron variant of COVID-19, which likely entered the country in December 2021, prompted the largest outbreak yet in Australia.[211] By mid-January 2022, daily new cases reached 100,000, even with expected

[207] Rebecca Storen and Nikki Corrigan, *COVID-19: A Chronology of State and Territory Government Announcements (Up Until 30 June 2020),* Social Policy, Parliament of Australia (October 22 2020), https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/rp/rp2021/Chronologies/COVID-19StateTerritoryGovernmentAnnouncements.
[208] Cassidy Knowlton, "A Timeline of Covid-19 in Australia, Two Years On," *Timeout* (January 24 2022). https://www.timeout.com/melbourne/things-to-do/a-timeline-of-covid-19-in-australia-two-years-on.
[209] Rachel Clun and Josh Dye, "COVID-19 Vaccines Begin as Prime Minister Receives Pfizer Immunisation," *The Sydney Morning Herald* (February 21 2021). https://www.smh.com.au/politics/federal/covid-19-vaccines-begin-as-prime-minister-receives-pfizer-immunisation-20210221-p574cw.html.
[210] Alice Klein, "Sydney Comes Out of 4-month Lockdown After Reaching Vaccination Target," *New Scientist* (October 11 2021). https://www.newscientist.com/article/2293117-sydney-comes-out-of-4-month-lockdown-after-reaching-vaccination-target/.
[211] Maani Truu, "After the Peak: What's in Store for Australia Now That the Omicron Wave Has Turned?," *ABC News* (January 30 2022). https://www.abc.net.au/news/2022-01-30/covid-whats-next-after-omicrons-peak/100786176.

undertesting and asymptomatic cases. This resulted in supply chain disruptions, staff shortages, and cancellations or restriction of events involving large public gatherings.[212] While case numbers have steadily declined since February in all states and territories except Western Australia, there remains a sense of uncertainty throughout the nation in terms of both the pandemic and the corresponding public policy.

C. The Impact of COVID-19 on Theatre and Performance

There is no shortage of scholarly articles published in the past two years on how the theatre and performance sectors have been affected by the COVID-19 pandemic. While a substantial number involve tales of triumph over adversity, it is undeniable that stay-at-home rules, density limits, as well as personal and communal risk aversion, severely impacted an industry largely dependent on people gathering in public spaces. In the early days of the pandemic, the suddenness with which restrictions were put in place left many theatre companies with no choice but to cancel their planned performances for weeks and even months. The resulting domino effect meant artists and crews went unpaid, venues were forced to shut down, and projects were on hold indefinitely. In Australia, by mid-March performing arts industry leaders forecasted losses in the hundreds of millions of dollars.[213] Cancellations and postponements continued to occur during subsequent Delta and Omicron outbreaks, this time partly from performers and theatre workers testing positive and/or having to go into isolation. During the Omicron wave in New South Wales, over 90 performers tested positive for the virus, prompting

[212] Ben Butler and Peter Hannam, "From Empty Shelves to Cancelled Festivals: How Omicron is Wreaking Havoc Across Australia," *The Guardian* (January 13 2022). https://www.theguardian.com/australia-news/2022/jan/13/from-empty-shelves-to-cancelled-festivals-how-omicron-is-wreaking-havoc-across-australia.
[213] Michaela Boland, "Coronavirus Shuts Down Live Music and Arts Industry, Leaders Call for $850m Stimulus Package," *ABC News* (March 17 2020). https://www.abc.net.au/news/2020-03-17/coronavirus-covid19-live-music-arts-funding-stimulus-package/12064320.

companies to bring in understudies for more roles than usual and adding significant costs to those already incurred by additional health and safety protocols.[214] [215]

In line with most other industries affected by lockdowns and restrictions, the theatre world sought digital solutions, realizing that the internet was the primary method for people to connect to the outside world. The methods through which artists, theatre-makers, community theatres and major theatre companies utilized the digital space can be organized into three broad categories. The first is what theatre critic Arifa Akbar refers to as "the archival arm of online theatre,"[216] where on-stage theatre performances are pre-recoded, perhaps edited, and made available for online on-demand viewing. She cites as examples the National Theatre's NT at Home program as well as the popularity of *Hamilton* on the Disney+ streaming service.[217] In Australia, the Sydney Opera House and Melbourne Theatre Company, among others, put their filmed plays online.[218] While these examples capitalized on existing libraries from before the pandemic, other companies recorded, edited and broadcasted new works in response to pandemic restrictions. The San Francisco Playhouse, for example, filmed a staging of Yasmina Reza's *Art* on their stage under union-approved COVID guidelines, released online to subscribers and ticket-buyers in October 2020.[219] This form of digital theatre, while missing the 'liveness' component, offers audiences the flexibility and immersion of other online video-on-demand content, comparable to watching a film or television show on Netflix.

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[214] Elissa Blake, "Major Australian Musicals Cancel Shows as More Than 90 Performers Contract Covid," *The Guardian* (December 30 2021). theguardian.com/stage/2021/dec/29/covid-sweeps-through-casts-of-australias-major-musicals-as-more-than-90-performers-test-positive.

[215] Smriti Daniel, "Australian Theatre Industry Faces Unsustainable Expenses Staying COVID-Safe in A Post-Omicron Era," *ABC News* (March 1 2022). https://www.abc.net.au/news/2022-03-01/australian-theatres-covid-safety-with-testing-regimes/100863808.

[216] Arifa Akbar, "The Next Act: How the Pandemic is Shaping Online Theatre's Future," *The Guardian* (September 21 2020). https://www.theguardian.com/stage/2020/sep/21/future-of-live-theatre-online-drama-coronavirus-lockdown.

[217] In July 2020, *Hamilton* was the most-watched film or TV show across all streaming platforms (Natalie Hunter, "Hamilton Was Watched by More People in July Than Anything on Netflix," *ScreenRant* (August 10 2020). https://screenrant.com/hamilton-disney-plus-netflix-ratings-july-comparison/.)

[218] Hannah Reich, "Australian Theatre Grapples with Access, Diversity and Job Losses Through the Coronavirus Shutdown," *ABC News* (December 19 2020). https://www.abc.net.au/news/2020-12-19/australian-theatre-access-diversity-job-losses-coronavirus-covid/12996568.

[219] A. A. Cristi, "Photo Flash: San Francisco Playhouse Presents ART By Yasmina Reza," *Broadway World* (October 19 2020). https://www.broadwayworld.com/san-francisco/article/Photo-Flash-San-Francisco-Playhouse-Presents-ART-By-Yasmina-Reza-20201019.

The second method involves performance telematics, where performers and audiences came together via online teleconferencing (or any platform with teleconferencing feature) for a 'live' performance. The most ubiquitous of these platforms was Zoom, which spawned an entire genre of 'Zoom Theatre.'[220] Actors could perform from geographically separate locations using webcams or even professional-quality cameras, reaching audiences anywhere with internet access in dedicated Zoom rooms. The starting point involved straightforward readings using the "faces-in-the-box" approach, occasionally taking advantage of the platform's virtual backgrounds and layouts.[221] Artists soon began experimenting and creating new works for the medium, however, such as Richard Nelson's *What Do We Need To Talk About?* where the audience observes a family's fictional Zoom call.[222] The choice of platform expanded to Whatsapp, Facebook, YouTube Live, and even videogame streaming platform Twitch, offering various interfaces and functionalities. The temporal and (digital) spatial co-presence offered by these online platforms also allowed live interaction between performers and audiences, as well as among performers and audiences themselves. In April 2020, Creation Theatre in the UK tailored their production of *The Tempest* for Zoom, asking audience members to click their fingers to their microphones to create rain sound effects and hold up snacks to create a ghostly banquet for Prospero's men.[223] Theatre scholar Laura Jayne Wright writes that "each time other audience members appeared on screen, there was a rush of excitement as we got to see one another". It is through this act of mediated digital user-generated (DUG) dramaturgy that audience members were able to connect, despite physical isolation.

[220] Paul Sermon et al., "A Telepresence Stage: Or How To Create theatre in A Pandemic – Project Report," *International Journal of Performance Arts and Digital Media* (2021), https://doi.org/10.1080/14794713.2021.2015562.
[221] W. B. Worthen, "Zoom; or, Obsolescence," *TDR: The Drama Review* 65, no. 3 (2021): 184, https://doi.org/10.1017/S1054204321000460.
[222] *What Do We Need To Talk About?,* script and direction by Richard Nelson, online on Zoom, April 29, 2020.
[223] Laura Jayne Wright, "Shakespeare on Zoom: How a Theatre Group in Isolation Conjured Up a Tempest," *The Conversation* (April 23 2020). https://theconversation.com/shakespeare-on-zoom-how-a-theatre-group-in-isolation-conjured-up-a-tempest-136974.

And yet, criticism of the genre cropped up almost as quickly as the works themselves. As early as mid-2020, critics and scholars cited "Zoom fatigue",[224] seeing Zoom Theatre as "safe" compared to physical in-person co-presence.[225] The boxes became confines, hiding performers' bodies and hence movement, constantly reminding viewers of all the other social activities they had to perform on the platform due to the strange times they were living in. Theatre-makers and researchers have proposed and implemented potential alternatives to the Zoom format. In their effort to provide a greater variety of streamed content, the Royal Shakespeare Company is exploring mixed reality productions and experimenting with broadcast-style multi-camera set up with switchers for live-editing.[226] Paul Sermon et al. extended their decades long pioneering research in telematic performance by exploring a new telematic method. They combined the use of green screen, chromakey compositing and live video mixing, creating unusual spaces and angles that are easily interchangeable.[227] António Baía Reis and Mark Ashmore, on the other hand, suggests that virtual reality performance as part of the nascent metaverse might be the way forward for an audience now primed for digital interactive performances.[228] Variety of content, aesthetics and/or technologies aside, this method generally involves mediated liveness, where the performance is temporally 'live', yet mediated through a digital platform.

In contrast, the third method does not necessarily involve the temporal liveness of Zoom Theatre, and yet avoids the full remediation of archival online theatre and filmed plays. Rather, it incorporates transmedia storytelling principles, connecting various digital texts to form a cohesive yet interactive narrative. This method would meet the definition of transmedia theatre outlined earlier in this research if not for the requirement of a live (in-person) theatre performance—in order to distinguish the two, this method will be referred to as 'multimodal

[224] Elissa Blake, "Zoom Fatigue and An Awkward In-Between: Theatre Can't Wait to Be Back Onstage," *The Guardian* (June 16 2020). https://www.theguardian.com/stage/2020/jun/16/zoom-fatigue-and-an-awkward-in-between-theatre-cant-wait-to-be-back-onstage.
[225] Worthen, "Zoom; or, Obsolescence," 190.
[226] Barbara Lewis and Supantha Mukherjee, "All the World's An Audience Whether Theatres Are Light or Dark," *Reuters* (July 6 2021). https://www.reuters.com/lifestyle/all-worlds-an-audience-whether-theatres-are-light-or-dark-2021-07-06/.
[227] Sermon et al., "A Telepresence Stage: Or How To Create theatre in A Pandemic – Project Report."
[228] António Baía Reis and Mark Ashmore, "From Video Streaming to Virtual Reality Worlds: An Academic, Reflective, and Creative Study on Live Theatre and Performance in the Metaverse," *International Journal of Performance Arts and Digital Media* (2022), https://doi.org/10.1080/14794713.2021.2024398.

theatre'. An early example of the use of this multimodal form as a solution to pandemic restrictions is Theater In Place, a website-based interactive theatre for children.[229] The website leads to different "storyworlds" such as Wonderland from Lewis Carroll's *Alice's Adventures in Wonderland* (Fig. *22*) and 221 Baker Street from Arthur Conan Doyle's *Sherlock Holmes* novels. Within each storyworld, viewers can watch pre-recorded performances (hosted on YouTube), solve puzzles and submit creative works. Gaming interaction is a common modality of this method, resulting in a hybrid form of digital performance with digital puzzles, scavenger hunts and escape rooms. *Isklander*, by UK-based immersive entertainment company Swamp Motel, is a trilogy of online-based escape rooms where a team of viewers solve mysteries involving a missing person, an art heist, and a corporate espionage.[230] In an audience participatory variation of telematics, viewers can join from separate geographical locations and communicate with each other through a tailor-made video conferencing platform. Company websites, personal e-mails, Facebook pages, Google Maps locations, online library databases, and YouTube videos (some real, some made up for *Isklander*) form the multimodal piece from which viewers have to hunt-and-gather information in order to solve the mysteries.

Nevertheless, archival online theatre, Zoom Theatre, and multimodal theatre do not exist in isolation, with ample examples of real-life application incorporating principles, procedures, and tools from two or more methods. Many instances of Zoom Theatre and its variations are recorded and made available for later viewing, while livestreaming performances on YouTube and similar platforms allows viewers to pause, rewind and fast-forward as desired, both becoming archival online theatre. The Young Vic's *Best Seat in Your House Project* utilizes a robo-camera rig with multiple cameras to livestream all upcoming productions, with the Director's Chair feature allowing viewers at home to choose which camera angle to view at any given moment.[231] The program combines the mediated liveness of Zoom Theatre and the production value of archival online theatre, while allowing viewers to curate their own version

[229] *Theater in Place*, production and design by Jason Buzi and Smadar Krampf, online on https://theaterinplace.com/, 2020.
[230] *Isklander Trilogy*, production and design by Clem Garritty and Ollie Jones, online on https://isklander.com, 2021.
[231] "Best Seat in Your House," updated 2022, accessed April 5, 2022, https://www.youngvic.org/young-vic-digital/best-seat-your-house.

of the performance. There are also hybrid forms between Zoom Theatre and multimodal storytelling, such as in Creation Theatre's *Alice, A Virtual Theme Park* (Fig. *23*).[232] Viewers enter through a secret website, on which a digital Cheshire Cat presents them with links to various Zoom rooms. In each room, viewers encounter and interact with different characters from Wonderland, a few pre-recorded but mostly live; some participatory, others less so. They can learn a dance from the Hare, play Musical Statues with the Queen of Hearts, and even design and race hedgehogs. Creation Theatre, known for their site-specific and immersive works, transposed those attributes to the digital realm and took advantage of the affordances of online websites and applications. The transmedia theatre modalities of hunting-and-gathering, gaming interaction, social media and DUG dramaturgy have been deployed in conjunction with Zoom's mediated liveness to create a cohesive, immediate version of the Wonderland storyworld.

[232] *Alice, A Virtual Theme Park*, direction by Zoe Seaton, online on https://www.creationtheatre.co.uk/ and Zoom, August 1, 2020.

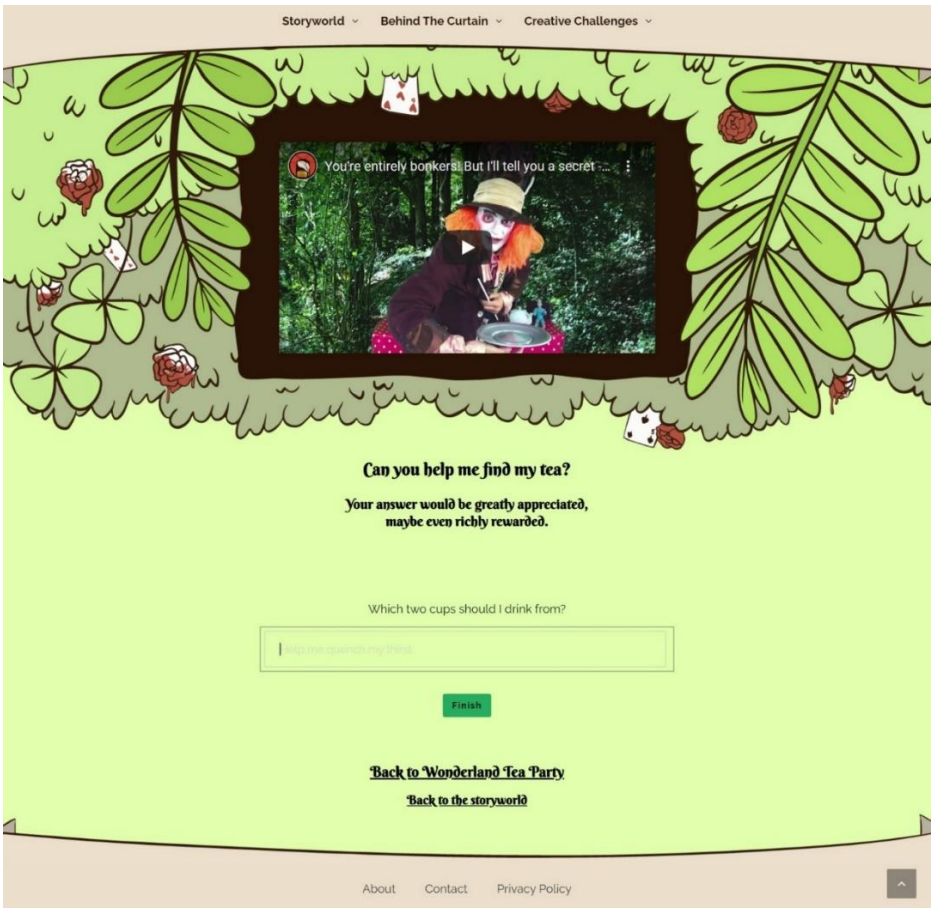

Fig. 22. One of the pages in the Wonderland storyworld in *Theater in Place* (2020), showing a pre-recorded video on YouTube and an interactive puzzle



Fig. 23. A promotional image for *Alice, A Virtual Theme Park* (2020) by Creation Theatre

The broader implications of the theatre world's shift to digital might far outlast the pandemic itself, even as the latter is still ongoing at time of writing. Eleni Timplalexi notes the shift for viewers when watching a theatre performance online is akin to streaming a film or TV episode on Netflix. Theatre loses its experiential supremacy as viewers' attention is more easily divided by interruptions (digital or otherwise).[233] On the critique and discourse side of theatre, she frames the ontological questions surrounding these emerging digital forms within the Peggy Phelan/Philip Auslander debate of liveness and mediation. Timplalexi argues that since digitally-mediated theatre has seemingly retained its ontology as theatre during the pandemic, any past ontological distinction between live performance and mediated performance—including its perceived artistic superiority—has been rendered non-existent. Auslander's and Dixon's notions of liveness and presence, defined temporally rather than spatially as they have been in broadcast media and now in *live*streaming, have held true. Pascale Aebischer offers another dimension to the liveness question, applying Erin Sullivan's concept of 'aliveness' to her

[233] Eleni Timplalexi, "Theatre and Performance Go Massively Online During the COVID-19 Pandemic: Implications and Side Effects," *Homo Virtualis* 3, no. 2 (2020), https://doi.org/10.12681/homvir.25448.

watch parties of livestreamed performances of Shakespeare during lockdown.[234] Immersion and connection with performers were achieved through digital proximity, while a sense of community was gained from direct interaction among audience members rather than with performers. Theatre-makers and theatre audience were forced to quickly recalibrate their expectation of what constitutes a satisfactory "theatre performance".

Another implication of COVID-19 and theatre companies putting their work online, however, is the notable increased accessibility of theatre performance. In many cases, geographical barriers to theatre ceased to exist as long as viewers have internet connection and the appropriate device. The National Theatre's NT at Home program, for example, reached 15 million views from online viewers in 170 countries across its 17 filmed productions.[235] Even temporal restrictions became less of a concern as many digital performances, particularly archival online theatre, can be viewed any time, allowing pauses and fast-forwards if necessary. The flip side of the aforementioned loss of theatre as a special event through Netflix-ization is that it might be better poised to compete in a super-charged attention economy. In such times of upheaval, when working parents suddenly had to homeschool their children and time on the web is divided between shopping for necessities and family reunions, theatre perhaps needs to be available in installments and at a click of an advertisement banner. Financial hurdles that often limit access to performance were similarly reduced as theatre companies made their library available online free of charge, some asking only for donations.[236] The required internet connection and internet-capable devices means this unprecedented level of accessibility remains out of reach for a significant portion of the world population.[237] And yet, the pandemic also increased theatre's accessibility for another often-marginalized group. For audiences with disabilities, digital performances can more easily include captioning and audio description. In

[234] Pascale Aebischer, *Viral Shakespeare: Performance in the Time of Pandemic* (Cambridge: Cambridge University Press, 2022), Cambridge University Press, https://www.cambridge.org/core/elements/viral-shakespeare/1C3CAB68557567F7D0C8E24E0010C953, https://doi.org/DOI: 10.1017/9781108943482.
[235] Akbar, "The Next Act: How the Pandemic is Shaping Online Theatre's Future."
[236] Aebischer, *Viral Shakespeare: Performance in the Time of Pandemic*.
[237] International Telecommunication Union, "2.9 Billion People Still Offline," news release, November 30, 2021, https://www.itu.int/en/mediacentre/Pages/PR-2021-11-29-FactsFigures.aspx. This press release by the United Nation's agency for information and communication technologies revealed the findings from the latest report that 2.9 billion of the world's population is still offline, roughly 96% of which live in developing countries.

2020, Australia's Disability Royal Commission heard from a woman in Melbourne who had been bedridden for 20 years with multiple disabilities—she was able to watch more live theatre and musical concerts than she had in decades during the pandemic.[238] Theatre companies like the National Theatre and the Young Vic, with plans in place to retain their digital arm even after the pandemic, are sustaining these higher levels of accessibility and the democratization of theatre.

Overall, the pandemic revealed the potential for theatre companies to connect with previously unreachable audiences through digital performance. JCA Arts Marketing conducted research on audiences of digital performances across 13 online productions from six organizations across the United States from April to September 2020.[239] They found that 43% of the viewers surveyed had never purchased tickets for an in-person performance from the organization presenting the online performance. On average, a significantly smaller portion of digital audience is made up of subscribers (17%) compared to that of an in-person audience (40%). The study also reveals that the average yield for a digital ticket is 42% less than that for an in-person ticket. Total revenue was three times higher for pre-recorded performances (online archival theatre) compared to live-streamed performances (Zoom theatre and its variations), and yet the revenue per performance was higher for the latter. The firm even recommends that theatre companies consider making live-streamed performances available for future online viewing—interestingly, transmedia modalities may provide a middle ground for this conundrum, making some paratexts available while keeping others ephemeral. Financial and logistical considerations have seemingly collided with the ontological re-definition of theatre during the pandemic, opening up endless possible avenues of digital exploration.

[238] Antonette Collins, "Disability Royal Commission Hears from Woman Who Has Been Bedridden For 20 Years," *ABC News* (August 19 2020). https://www.abc.net.au/news/2020-08-19/disability-royal-commission-hears-chronic-fatigue-evidence/12573450.
[239] JCA Arts Marketing, *Digital Performances in Their Infancy*, JCA Arts Marketing (New York, 2020), https://www.jcainc.com/resources/ebooks/tab-digital-performances-in-their-infancy/.

D. The Impact of COVID-19 on This Research

As outlined above, the COVID-19 pandemic affected the broader field of theatre and performance in significant ways, which in turn brought about specific ontological and contextual repercussions on this research. It is notable that earlier on, 'transmedia theatre' was defined as a piece of multiplatform storytelling involving a live theatre performance at its core. While the term 'live' was never limited to in-person performance in a specified physical space, the transmedia theatre examples cited thus far, particularly in the case study section, would point to such a definition. The pandemic-driven emergence of the aforementioned methods of digital performance has indeed pointed at co-temporality as the defining characteristic of liveness, though the spatial dimension arguably still contributes to the sense of co-presence and community. After all, the term Zoom Theatre points at specific digital space (Zoom rooms) through which live theatrical performance has often been mediated. The same applies to websites like Creation Theatre's Wonderland or Swamp Motel's video conferencing interface in *Plymouth Point*, where viewers would congregate at a specific time and engage with a theatrical performance. It is important, therefore, to clarify that the definition of live theatre performance at the core of transmedia theatre includes digitally-mediated live theatre.

Consequently, the intermediality found within the transmedia piece would be different in one where both theatre performance and paratexts are digital in nature, as opposed to one where the theatre performance is in-person. As discussed above, digitally-mediated performance lends itself better to interruptions, which can be deliberately implemented as part of the experience design. For example, in *Alice, A Virtual Theme Park*, viewers are allowed, if not encouraged, to leave one instance of live performance to visit other Zoom rooms. Even with a clear distinction between core text and digital paratexts, a transmedia theatre piece with digitally-mediated live performance at its core would better allow an experience design that has viewers jumping back-and-forth between performance and paratexts. Not to say that an in-person performance prohibits such a design, but it would translate to viewers needing to carry and interact with a digital device to engage with paratexts at a physical performance venue.

This would naturally limit the design of the paratexts that theatre-makers can include in the piece, as social and cultural practices around in-person theatre performance have traditionally dictated undivided attention and uninterrupted viewing. On the other hand, when live performance is digitally-mediated, viewers are already on their devices. Navigational buttons, web browser tabs and hyperlinks, among others, allow for rapid and effortless switching between core text and paratexts. Transmedia paratext engagements would therefore be less limited to pre-performance and post-performance—they can occur almost concurrently with viewing the theatre performance. In fact, with digitally-mediated live theatre, transmedia modalities can be easily integrated into the performance itself.

This ontological re-definition opens up the discourse around transmedia theatre to more recent examples and possible case studies. The online scavenger hunt *Isklander: Plymouth Point* (Fig. *24*), for instance, presents an interesting case, as actors' performances mainly occur in pre-recorded videos, pictures and social media posts. There are mediated live elements, however, mainly in the viewers' interactions with the fictional character Katherine Stewart. At the start of the performance, in a pre-recorded video featuring actress Illona Linthwaite, the character introduces the mystery behind her niece's disappearance. Yet in much of the piece, viewers also chat with Katherine Stewart, who guides them in deciphering hints, investigating suspects and uncovering the truth. The character also helps with any technical issues or any perceived dead ends, asking viewers to share their screen if needed. These chat messages are presumably sent in real-time by an unseen guide, who 'performs' in text format as Katherine Stewart. They even feign lack of technological savvy, referring to "something called Screen Share" as something just learned from their "tech-whizz" niece (Fig. *24*, bottom). If the guides' messages qualify as mediated live performance, then the piece falls under the transmedia theatre definition of this research. Like *tts* and *2097*, the performance itself (the text chat) is interactive and immersive, but viewers also intermittently break from it to engage with integrated digital paratexts like YouTube videos, social media profiles, as well as puzzles and riddles.

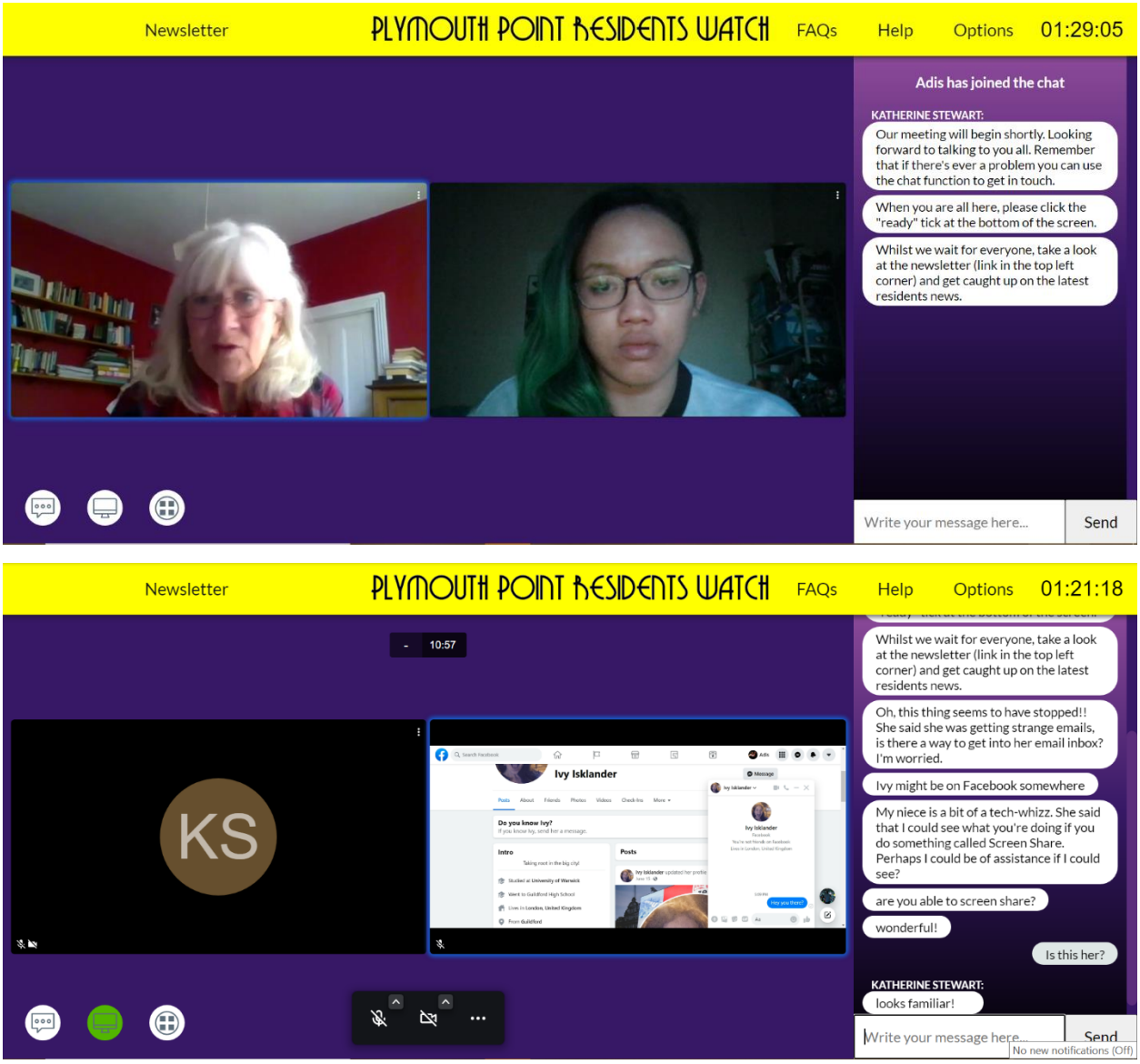

Fig. 24. Interactions between viewer(s), pre-recorded video and live guide on *Isklander: Plymouth Point* (2021) by Swamp Motel

The digital performance paradigms that emerged during the COVID-19 pandemic period therefore resulted in more frequent use of transmedia storytelling principles to theatre, whether intentionally or not. In turn, the relevance of this research now includes further explorations of the potential of digital and hybrid performances. After all, a stricter application of transmedia theatre modalities, as outlined by this research, on digital performance would

provide yet more avenues of audience engagement beyond the performance itself. Pre-show and post-show interactive opportunities, such as through digital games or social media, can be better embedded with digital performance compared to the in-person incarnation (perhaps using a unified digital platform and/or portal like DigiStage). The next stage of the research provides an opportunity to investigate the design considerations in crafting a transmedia theatre piece involving mediated live performance and digital audience engagement.

CHAPTER 7: STAGE 3 – Q THEATRE'S *OUR HOUSE*

A. Introduction

Building upon the previous stages of the research, the third stage originally sought to continue the iterative design process, implementing findings from the second stage to construct high-fidelity prototype and refine the entire transmedia theatre piece. Similar to the second stage, another round of cultural probes and audience research would be conducted on one season of the show, producing further insights and further revisions to the prototypes. The end of this stage would also form the end of the practical component of the research, with a final output being released to a general audience. As discussed in the previous chapter, however, the COVID-19 pandemic necessitated significant changes, not just to all aspects of the research method, but also the intended outcomes and actual outcomes of the stage.

As mentioned in Chapter 5, after the collaboration on the 2019 Adelaide season of *Man Covets Bird*, the research team along with Slingsby Theatre had planned to work on the company's adaptation of *The Boy Who Talked to Dogs*. The performance was scheduled to take place in the first half of 2020, which would give the research team between 3-6 months to conduct stage 3. An initial meeting was conducted in November 2019 to discuss the findings from stage 2 and preliminary ideas for stage 3. A few weeks later, PI1 communicated that due to internal company decisions, they were postponing the development *The Boy Who Talked to Dogs* to late 2020 at the earliest. The resulting lack of certainty in the production timeline was not conducive to research collaboration. In a subsequent meeting, PI1 and the research team discussed changing the process to focus stage 3 on their next upcoming Australian season: a staging of *Emil and the Detectives*. *Emil and the Detectives*, an adaptation of the 1929 children's novel by Erich Kästner, is a popular repertory piece for Slingsby Theatre and the

season would take place in Melbourne in July 2020. The final output would have been released in a subsequent season of *Emil and the Detectives* later in the year.

B. Company and Collaboration

Whilst the pandemic provided unanticipated opportunities for this research, it unfortunately also led to negative logistical impacts, particularly in the ongoing collaboration with Slingsby Theatre. The planned July 2020 season of *Emil and the Detectives* at Arts Centre Melbourne was postponed indefinitely, and then canceled, due to ongoing restrictions. While there were initially hopes for a touring season of the show, by the end of the year there were no definitive plans. Plans to continue collaboration on *The Boy Who Talked to Dogs* (which premiered in early 2021) fell through due to the complexities of COVID-19 regulations. In February 2021, the CI began searching for another theatre company to collaborate with, eventually making contact with Q Theatre in Penrith, New South Wales. The company is currently functioning as part of Penrith Performing & Visual Arts, funded and facilitated by the Penrith City Council. Q Theatre's programs are geared towards the Western Sydney community—the company works with local artists to develop new works, many of which have explored digital elements in performance.

A new research collaboration with Q Theatre was arranged in March, with plans involving the rescheduled season of their 2020 Originate program, *Lights in the Park*. The Originate program is an annual workshop where the company brings together a number of early career artists and theatre-makers to collaborate and develop a performance from the ground up under the guidance of an established director. Due to uncertainties surrounding scheduling and resources, Nick Atkins, the Director of New Works at Q Theatre (Primary Partner Investigator for stage 3, hereafter referred to as PI1) proposed a different performance down the line. By May 2021, this was confirmed to be Q Theatre's 2021 Originate season, *Our House*, scheduled to start production in June. Centering the next stage around *Our House* would mean working

with the artists from the ground up, similar to the planned collaboration with Slingsby Theatre on *The Boy Who Talked to Dogs*. On the other hand, since there would only be one run or season of *Our House*, the iterative design process could not be executed in the manner proposed in the initial research method. Rather, the shortened pre-production and development timeline meant that the second stage of cultural probes would need to happen concurrently with the public-facing implementation of the transmedia theatre piece. In addition, Q Theatre's target audience is comprised more of adults rather than school-aged or young adults. Insights gained from the previous stage of the research (*Man Covets Bird*) would be relevant only in the broader terms of drama and performance—anything specific to drama education and younger audiences would be less applicable.

The spread of the Delta variant of COVID-19 and the resulting lockdowns in New South Wales began the week before the scheduled workshop period. When the eight Western Sydney artists finally met via Zoom, Q Theatre's production team presented the options of either canceling the season, postponing to 2022, or shifting the work to digital theatre. Like many theatre-makers have done during the pandemic, the group agreed on the final option. The planned shift to producing a digital piece presented a challenge—neither the workshop artists nor the director (Sophie Kelly, Secondary Partner Investigator, hereafter referred to as PI2) had much experience with shaping digital theatre. The perceptional and procedural changes from crafting an in-person performance to digital would be enough of an obstacle without the added difficulty of working remotely under stay-at-home restrictions. Due to the expected theoretical and technological know-how required, the *Our House* production team recruited the CI in a digital artist role. This meant that along with building, testing and implementing transmedia engagement prototypes as a research collaborator, the CI was now also tasked with facilitating the digital fabrication of *Our House*. The overlap between the two roles provided the opportunity to design a more integrated transmedia theatre experience between the core digitally-mediated performance and the transmedia paratexts.

C. Transmedia Ideation and Construction

The overall design and construction process included the same elements as the previous stage (*Man Covets Bird*), except now it is highly interwoven with the construction of the performance itself. Due to the absence of an iterative design process, as well as the involvement of the general audience as research participants, the terms 'prototypes' and 'activities' from the previous stage are dispensed with in favor of plain 'paratexts'. In addition, the goal of the overall research is to explore different audience experience designs for transmedia theatre. As such, the CI wanted to design, build and test both transmedia paratexts that were integrated into the digital performance itself and paratexts that take place outside (pre- and post-) the performance. The former will hereafter be referred to in this exegesis as 'internal (transmedia) paratexts' and the latter 'external (transmedia) paratexts'. Since the cultural probe testing was now integrated into the public implementation of the artistic output, there was no separate digital cultural probe tool (PWA, in the case of DigiStage). The design and building process would therefore involve only the platform(s) on which the performance and paratexts occurred.

The overall design process was as follows:

1. The design of the performance and any internal paratexts, which involved:
    - Interaction design, including user experience and interface (UX/UI design) of the platform
    - Visual and content design
    - Building/developing the platform

2. The design of the external paratexts, which involved:
    - Interaction design
    - Content design and writing
    - Building/developing the platform

I. Designing the Performance and Internal Paratexts

The process of designing the performance and internal paratexts was largely subject to two major concurrent processes: the development of the dramatic text itself as well as the development of COVID and its impact. The former resulted mainly in narrative and dramaturgical considerations, and was highly dictated by the purpose and goals of the Originate workshop—the latter largely involved logistical considerations. Technological considerations stemmed mainly from the community that makes up Q Theatre's audience base, which in turn was affected by COVID restrictions in New South Wales. In deciding the format of the digital performance, the first major consideration involved the question of 'liveness'. As one of the key goals of the Originate workshop was to showcase the artists' capabilities as theatre performers, PI1 suggested that the performance retains its temporal liveness, even while digitally mediated. This would first and foremost provide the artists with the risks, excitement, and ephemerality associated with live theatre. It would also allow for an appointment event, creating an opportunity for co-presence among the community of Q Theatre's audiences. This eliminates archival online theatre as a design option, leaving Zoom theatre as the main possibility.

Another consideration arose, however, when the artists, in their second year of stay-at-home restrictions and having spent substantial amounts of time on Zoom, voiced their aversion towards the platform. The artists and production team were meeting, creating, and rehearsing over Zoom, and most if not all of them have felt the fatigue associated with it quite early in the process. Like the scholars cited in the previous section, the artists noted Zoom's UI and UX design as a contributor. From the boxes of faces with names of conference participants underneath to filters and breakout rooms, Zoom's interface in particular have grown instantly recognizable and unmistakable since the platform's rise at the start of the pandemic. Applying Bolter and Grusin's concepts of immediacy and hypermediacy on digitally-mediated performance, Zoom's design renders transparent immediacy impossible. Most Zoom Theatre instances, for example, involve theatre companies providing viewers with links to Zoom rooms.

Upon clicking on this link, the viewers are prompted to download the Zoom application, logon, fiddle with settings, and so on. The CI, therefore, suggested the alternative approach of hypermediacy, calling into attention the fact that viewers are at home on their devices, watching a 'live' theatre performance. In addition, as the artists began to draw on the workshop's theme of what makes a house a home, a narrative emerged of a sharehouse as a metaphor of community. Based on this development, the CI proposed an UI/UX design that is dramaturgically driven: a digital house with digital rooms.

The next major consideration in the design process was mainly technological and logistical, as the resources required to achieve the design and build of a tailor-made digital performance platform would be significant. The design would have to integrate existing platforms, prompting the CI to consider and present several options (refer to Appendix I). These include a website with simple hyperlinks acting as different rooms in the house, a PWA similar to DigiStage, YouTube livestreaming, 3D and VR chatroom Mozilla Hubs, as well as pixel art-based video chat platform Gather.Town. The last two, in particular, would allow avatars of performers and even audience members to spatially explore virtual rooms, resulting in a rather literal dramaturgical interpretation of *Our House*'s theme (Fig. *25*). Whichever platform was chosen would largely determine what parameters within which the performance could be further developed. The decision would have significant impacts on narrative, dramaturgical and secondary logistical considerations (mainly having to do with the labor division for the production team and the onboarding of audiences, which will be discussed more in-depth in the next chapter).

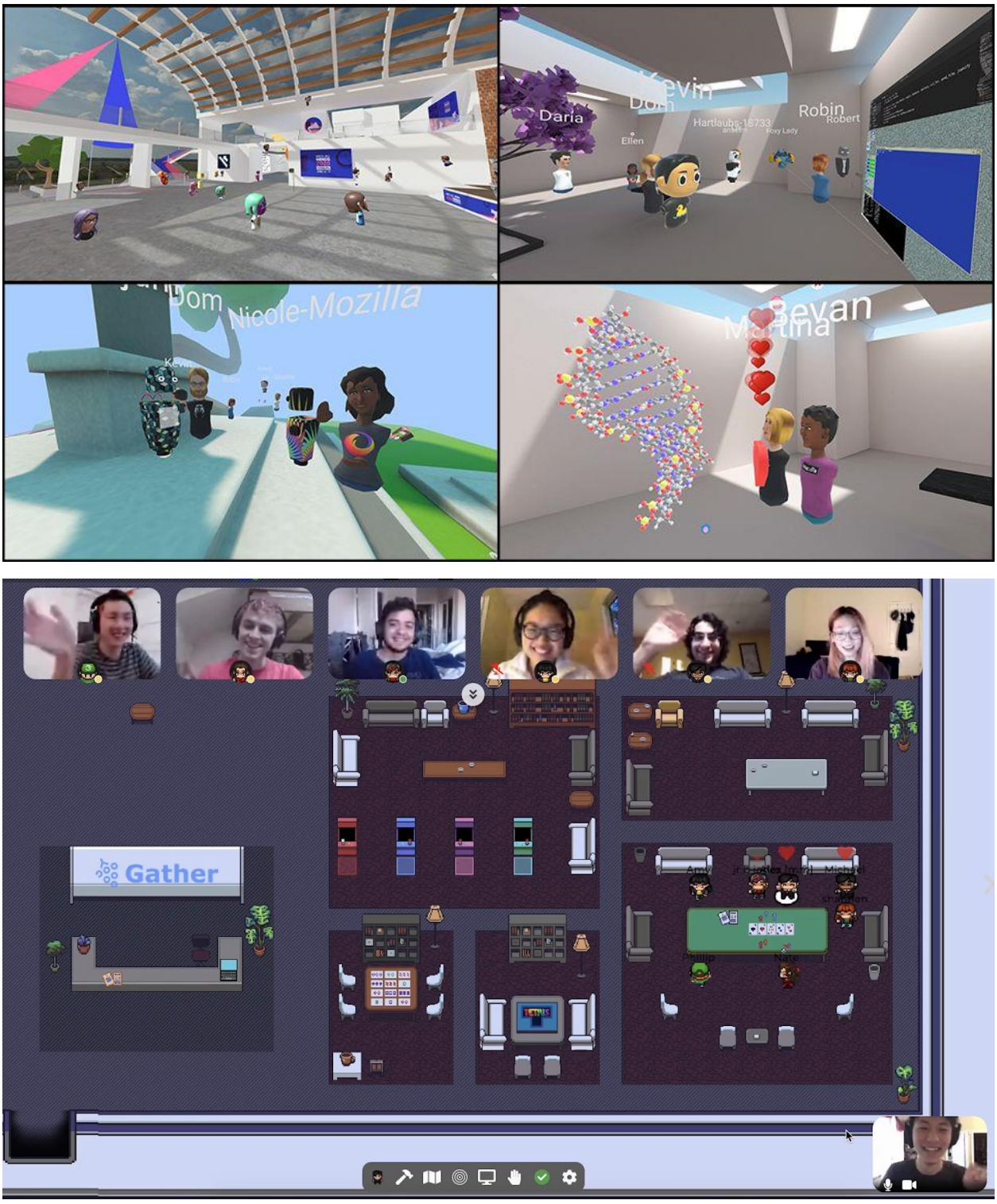

Fig. 25. Promotional images for Mozilla Hubs (top) and Gather.Town (bottom), which were considered as options for the *Our House* digital performance

Features and functionalities considered (and which non-technological considerations would be impacted) including:

- Customizability of the UI/UX, including the level of transparent immediacy and visual design allowed – *narrative, dramaturgical and logistical*
- Comment/chat/messaging function – *narrative, dramaturgical and logistical*
- Notification capabilities – *narrative and dramaturgical*
- Whether audience members could directly interact with objects and media embedded into the performance – *narrative and dramaturgical*
- Whether other online platforms like social media or livestreaming can be easily linked and integrated – *dramaturgical and logistical*
- Whether audience members can inherently "see" (be aware) of each other's presence – *dramaturgical and logistical*
- How viewers can navigate around the "rooms" – *dramaturgical*
- The use of avatars and possible perspective of the viewers (first person or third person) – *dramaturgical*
- How long the platform has been around, whether there are potentially many bugs still and what level of technical support is available – *logistical*
- Familiarity of CI with the platform, potential learning curve, and whether templates are available – *logistical*
- Popularity of the platform and familiarity of the average audience member – *logistical*
- Learning curve for the average audience member unfamiliar with the platform – *logistical*

In the end, a combination of PWA and YouTube livestreaming (and live chat) was chosen for several reasons. The main argument for this decision is that it would allow for a digital performance that remediates many of the characteristics of an in-person performance, beyond just temporal liveness. The team decided, first of all, that having an avatar and, consequently, a third-person perspective of the experience, creates an unnecessary layer of performance *by* the audience. The viewers have to decide what their avatar looks like, constantly viewing this

virtual facsimile of themselves as they try to engage with the performance and other viewers. Watching a YouTube livestream means viewers can see the performers but not vice versa, and viewers cannot see one another, similar to being in a darkened theatre. And yet, the live chat function enables them to communicate via text if they so choose, or to simply observe communication among other viewers and/or performers, or to turn it off entirely. The feature allows for audience members to be aware of one another's co-presence in this designated time and place, providing a sense of communal experience for those who desire it. It integrates transmedia theatre's social media modality into the performance itself through real-time participation and conversation within the *Our House* storyworld.

Second, the UI and UX of a PWA would be far more customizable than Mozilla Hubs or Gather Town (or Zoom, for that matter). Even when using templates like those of GoodBarber's, the team could still decide on the visual design of the virtual house, as opposed to being bound by Mozilla Hubs' or Gather Town's graphic and animation styles. How pages link to one another and how viewers would navigate through the house can be executed in more interesting ways than hyperlink texts or navigational buttons. PWA's push notification function also presented an interesting opportunity for communication from the production to the viewers, prompting them to perform a certain action or move from room to room. In addition, embedding YouTube livestream into a PWA made the experience contained in the tailor-made platform, allowing greater immersion in the storyworld. Potential distractions like YouTube's sidebar of recommended videos or Zoom's reminders of impending appointments would be absent. At the same time, YouTube's player window is one most users would have frequently interacted with, rendering them more familiar with its layout, buttons and chat function (which is similar to its comment function for non-livestream videos).

In terms of production logistics, the PWA-YouTube livestream combination presented the least risky option. Aside from YouTube's ubiquity, a PWA is similar to most websites (and mobile sites) in UX, which translates to a shorter learning curve and plug-and-play experience for most viewers. As mentioned in the previous section, PWAs work well on all types of devices and

operating systems, and so does the YouTube player window. Neither require the computing power and memory to render an optimal experience of Mozilla Hubs, for example. In addition, there is also a lower requirement of technical know-how to design and build content on both platforms. Both GoodBarber and YouTube are relatively stable with few bugs, reliable infrastructure and technical support for designers, builders and content creators. Having worked on DigiStage earlier in this research, the CI was already quite comfortable with GoodBarber's PWA features and design possibilities. Meanwhile, there is plenty of resources and open-source software designed to work with YouTube livestream given its large user base. Finally, YouTube's livestream function is completely free, while *Our House* could also take advantage of the existing GoodBarber subscription for DigiStage. All of these translated to a lower monetary cost and resources for Q Theatre and the production team compared to the alternatives.

Since the development of the text occurred simultaneously with the development of the digital performance, the dramaturgical process and the design process went hand-in-hand. Technological and logistical considerations affected narrative and dramaturgy as much as the other way around. The artists, for example, began formulating a cohesive and coherent story about one house, but they would have to perform from their own homes due to the restrictions. Unlike Creation Theatre or Sermon et al.'s telematic explorations, Q Theatre lacked the resources to set up green screens at eight performers' houses, create graphic or animated backgrounds, and employ real-time chromakeying and compositing techniques. The scenic design would have to involve the artists' actual houses, with various rooms that cannot overlap with one another. As such, the artists came up with a story about a Western Sydney sharehouse with multiple bedrooms. Another important dramaturgical element coming out of the workshop process was the idea of a community coming together, so a house party event was woven into the storyline where the audience are invited as guests. The CI also discussed with the artists the different transmedia theatre modalities that could be explored to complement the digital nature of the piece. The narrative storyworld was therefore shaped by the knowledge that the piece would be multi-platform and participatory.

Once the narrative of the sharehouse, now dubbed 75 Lorikeet Lane, began to take shape, the production team began assembling other paratexts to add to the storyworld. The plot involved the sharehouse residents and their friends, played by fictionalized versions of the artists, throwing a birthday party for their beloved housemate, Nigel. Nigel never showed up at his own party, prompting the housemates to reveal the hidden tensions in their relationship with Nigel, each other, and ultimately, their house. Unlike the external paratexts, which will be discussed in the next section, the internal paratexts were developed not to expand the storyworld but to fill in the gaps. Visual design decisions, in particular, were made consciously to bring eight or more disparate performers and settings together into one believable storyworld. For group scenes in the Lounge, PI2 worked with the artists to create visual cohesion using disco ball lighting effects (Fig. *26*). The effect, while not entirely cohesive, was deemed enough to reinforce the viewers' suspension of disbelief.

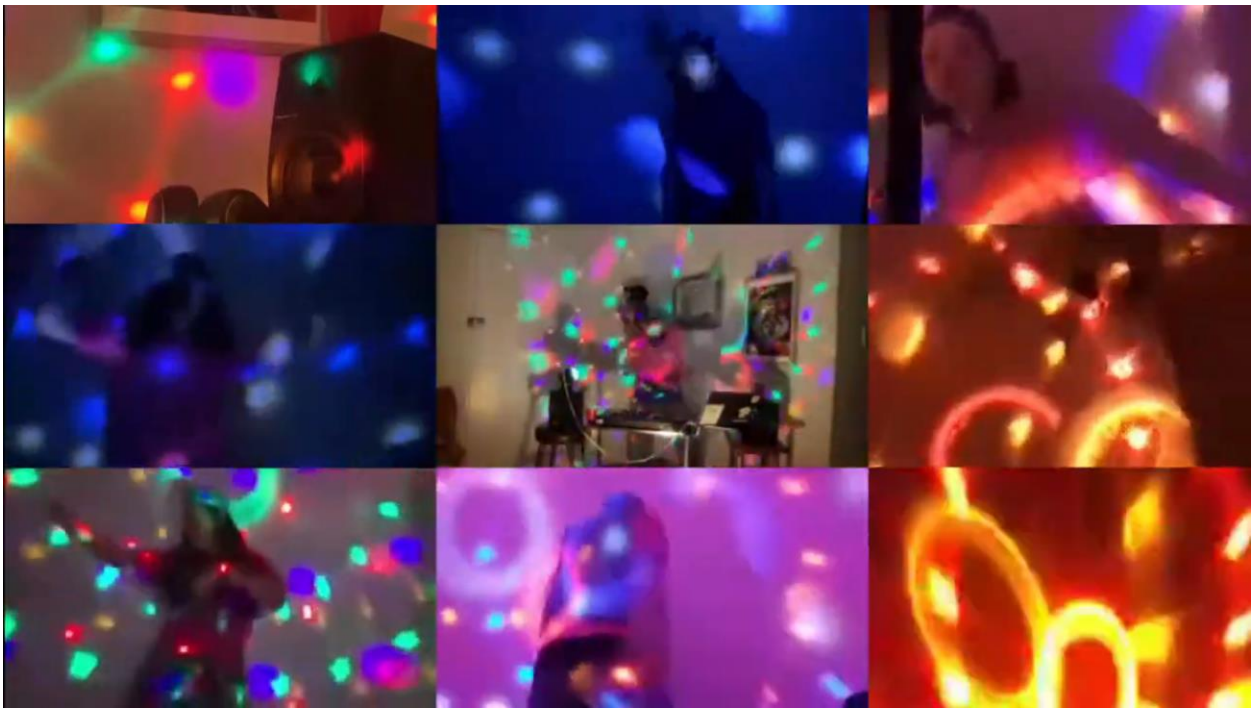

Fig. 26. The disco ball lighting and split-screen effects in *Our House*'s group scenes

Another way of creating visual cohesion was by providing viewers with an illustrated storyworld of 75 Lorikeet Lane, rendered in the same hand-drawn style. The CI created digital illustrations of the façade of the house itself, based on a real-life former Western Sydney sharehouse (Fig. *27*), as well as illustrations of the rooms in the house that mimic the performers' respective houses and settings (Fig. *28*). In addition, a groundplan was provided, also based on the same real-life house, showing how the rooms connected to one another geographically (Fig. *29*). Different considerations affected one another in the construction of this illustrated storyworld, as well, to ensure that the storyworld is cohesive and believable. For example, Ingrid (the performer) was only able to livestream her scene from the backyard of her family's home, where she was staying during the Delta variant lockdown. On the other hand, Leighton's scene in *Our House* was placed right before Ingrid's, and he was meant to "throw" to the next scene by noticing Ingrid sitting by herself in the Backyard. Leighton's Room, therefore, had to be placed on the lower level with the windows facing the backyard. The Kitchen, on the other hand, was located right next to the Lounge according to the ground plan, with no doors separating the two. Claire (the performer), whose scene took place in the Kitchen, was instructed to set the volume of the party on her feed noises louder than in the other Rooms in the house—she also chose a scene with no dialogue. The illustrated storyworld were spread over the transmedia piece not just on links in the navigational menu, YouTube thumbnails and title cards, but also on external paratexts and promotional materials. They were meant to prime the audience visually and enhance their immersion in the 75 Lorikeet Lane storyworld.



Fig. 27. The illustration of the façade of 75 Lorikeet Lane

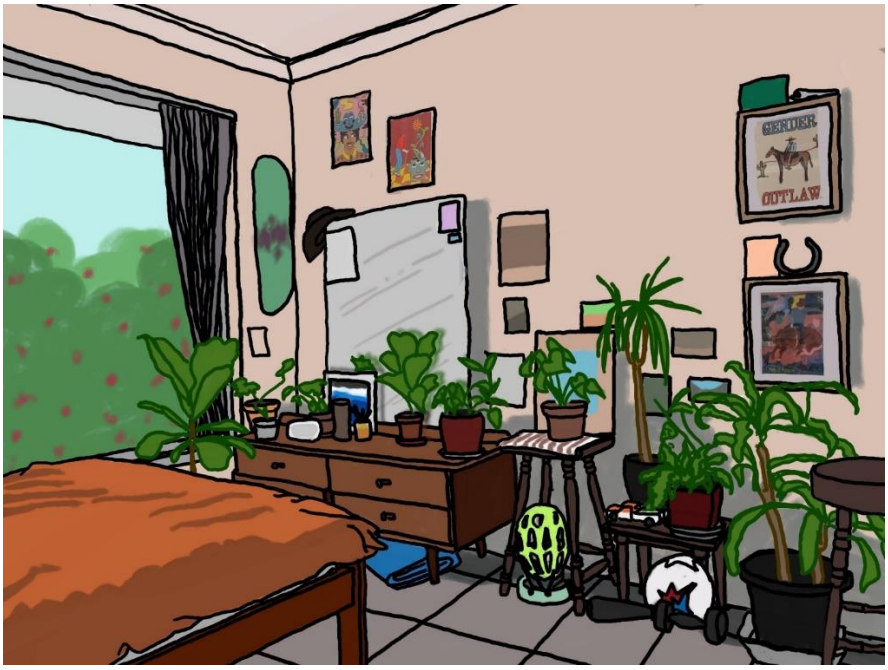



Fig. 28. The illustration for Haz’s Room (top) and a screenshot from the livestream (bottom)



Fig. 29. The illustrated groundplan of 75 Lorikeet Lane

The internal paratexts of *Our House*, therefore, included the following:

1. Hunting-and-Gathering

As in previous examples, the hunting-and-gathering modality was inherently part of *Our House* as a transmedia piece, as viewers followed narrative threads across multiple Rooms,

livestreams and performances. In addition, however, they were able to hunt for narrative information from illustrations, background details and even sounds. For example, the title card for the Kitchen stream when there was no live performance said "no access" due to "birthday surprise preparation" with a picture of a cake. If viewers caught this, when they viewed Claire's scene, they would have realized that Claire was surreptitiously eating Nigel's birthday cake. The Experience Page was also one example of this modality, providing background information and the groundplan of the sharehouse. While simply viewing the livestreamed scenes in order was sufficient to comprehend the plot, gathering more bits of the storyworld would have made a richer experience of the overall narrative.

2. Social Media

The internal social media interaction in the piece occurred in the YouTube live chat, where viewers were able to converse with one another through text comments and emoticons while watching the performance. There were initially plans for viewers and (some of the) performers to communicate to each other through live chat. The storyworld constructed for *Our House*, however, excluded any possibility of the performers typing on a device while performing—they were meant to be in the Room with the viewers. The live chat would have facilitated only one side of the conversation: viewers "talking" to the characters. The performers, in turn, would respond through real-time action and spoken dialogue. One performer, Leighton, wanted to engage the viewers in a game of truth or dare, using YouTube live chat's polling function to allow viewers to choose between the two options. This viewer-performer interaction would have emphasized the mediated live nature of *Our House*, similar to interactive Zoom Theatre. Unfortunately, as technical rehearsals began, the team realized that it was incredibly challenging for the performers to read the live chat on their device, in some cases from uncomfortable angles, while trying to perform their scenes. Given the time constraints, the team was not able to solve the issue and the viewer-performer interactions were removed entirely. Nevertheless, the live chat provided a chance for viewers to voice their thoughts and theories, adding speculative elements to the established storyworld for participating viewers.

3. Gaming Interaction

The gaming interaction modality in the piece, similar to that in *Man Covets Bird*, was initially planned to be in CYOA format. There were going to be sections in the performance where all eight artists are performing simultaneously, and viewers could choose which room to visit and which character's story to focus on. In these sections, each concurrent scene would not have carried much significance narratively but would shed more light on the characters and explain their relationship to the rest of the house. Unfortunately, due to the logistical consideration of the older and/or more traditional segment of Q Theatre's audience, these sections were omitted. In the final iteration of the performance, the narrative journey of the viewers was more streamlined and chronological, moving from Room to Room in a strictly guided manner. Each individual scene would be the only one performed at their allotted point in the show, during which most other livestreams were "locked". Two Rooms remained open during the individual scenes, however—Nigel's Room and the Lounge—and viewers were able to wander into these rooms at any point in the show. Nigel's Room remained empty the entire time, but a visual detail in the room's illustration and YouTube video would have given eagle-eyed viewers a hint at Nigel's whereabouts.[240] Aside from the group scenes at the start and end of the performance, the Lounge showed pre-recorded looping footage of the party's DJ booth. Viewers who remained or wandered into the Room, however, would hear songs from a Spotify playlist submitted by participating audience members—the output of the external DUG Dramaturgy modality.

The design and development of the PWA + YouTube Live platform also overlapped with the interaction design as well as content and visual design processes. For the PWA, the CI re-designed the DigiStage PWA on GoodBarber, now re-named Our House on Lorikeet (OHOL), from a cultural probe tool containing only paratexts into the digital performance platform (Fig. *30*). The flow diagram of OHOL presented a major shift from the original flow of DigiStage,

[240] The illustration of Nigel's Room in both the navigational menu and the YouTube video thumbnail showed, hanging above his bed, the illustration of 75 Lorikeet Lane. Viewers would have seen the same illustration in promotional materials and the PWA for *Our House*. If viewers actually played the YouTube video, however, a framed picture of Cambodian scenery was hanging, skewed as Nigel had hastily replaced the illustration with the picture. The implication was that Nigel ran off to Cambodia, but took the picture of 75 Lorikeet Lane with him.

focusing on the viewers' navigational experience through the digital 75 Lorikeet Lane sharehouse (Fig. *31*). After accessing the PWA from Q Theatre's performance page (later dubbed the 'Experience Page'), they would encounter the Home page (referred to as the 'Entrance' to avoid confusion with house/home references). The Entrance would host a YouTube livestream welcoming viewers to *Our House*, along with brief instructions on how to use the PWA. Once the CYOA sections were removed and the viewers' journey became more streamlined, the Entrance livestream also showed title cards with directions on which Room to go to at any given point in the performance. From the Entrance, viewers could click on the 'Explore' button on the menu tab to enter the 'Hallway', a full-page navigational menu leading to the different Rooms in the sharehouse. Help and contact pages were provided to assist viewers in finding their way through the PWA.

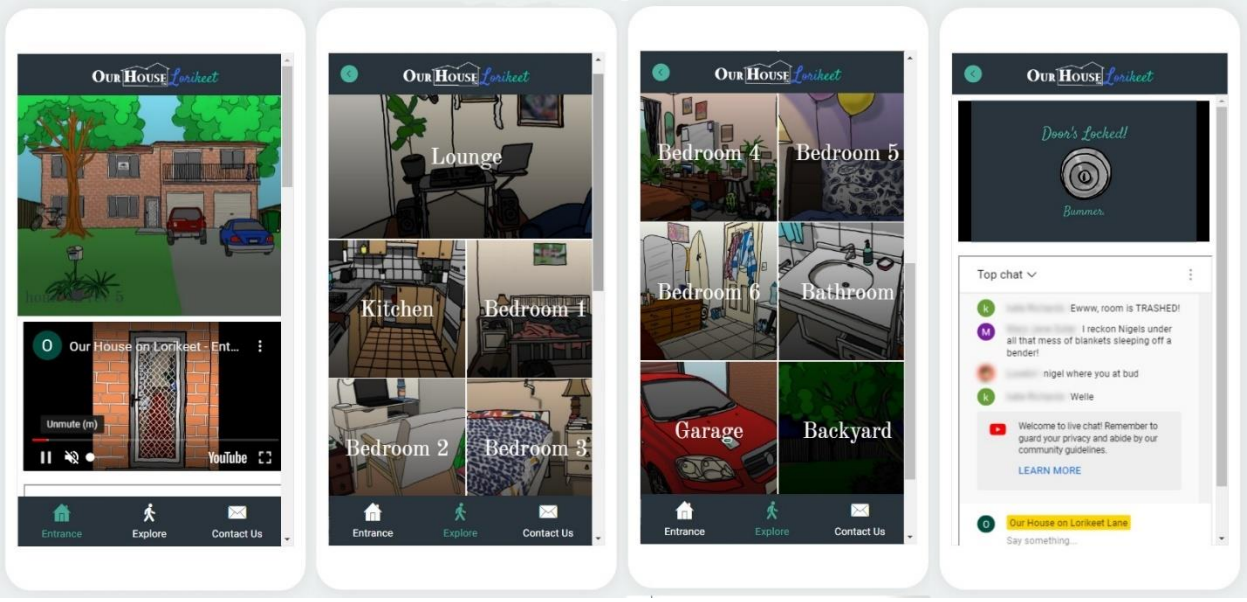

Fig. 30. The mobile User Interface of the Our House on Lorikeet PWA: the Entrance page (left), Hallway (center left and center right), and a page for one of the Rooms with the livestream media player and live chat (right)

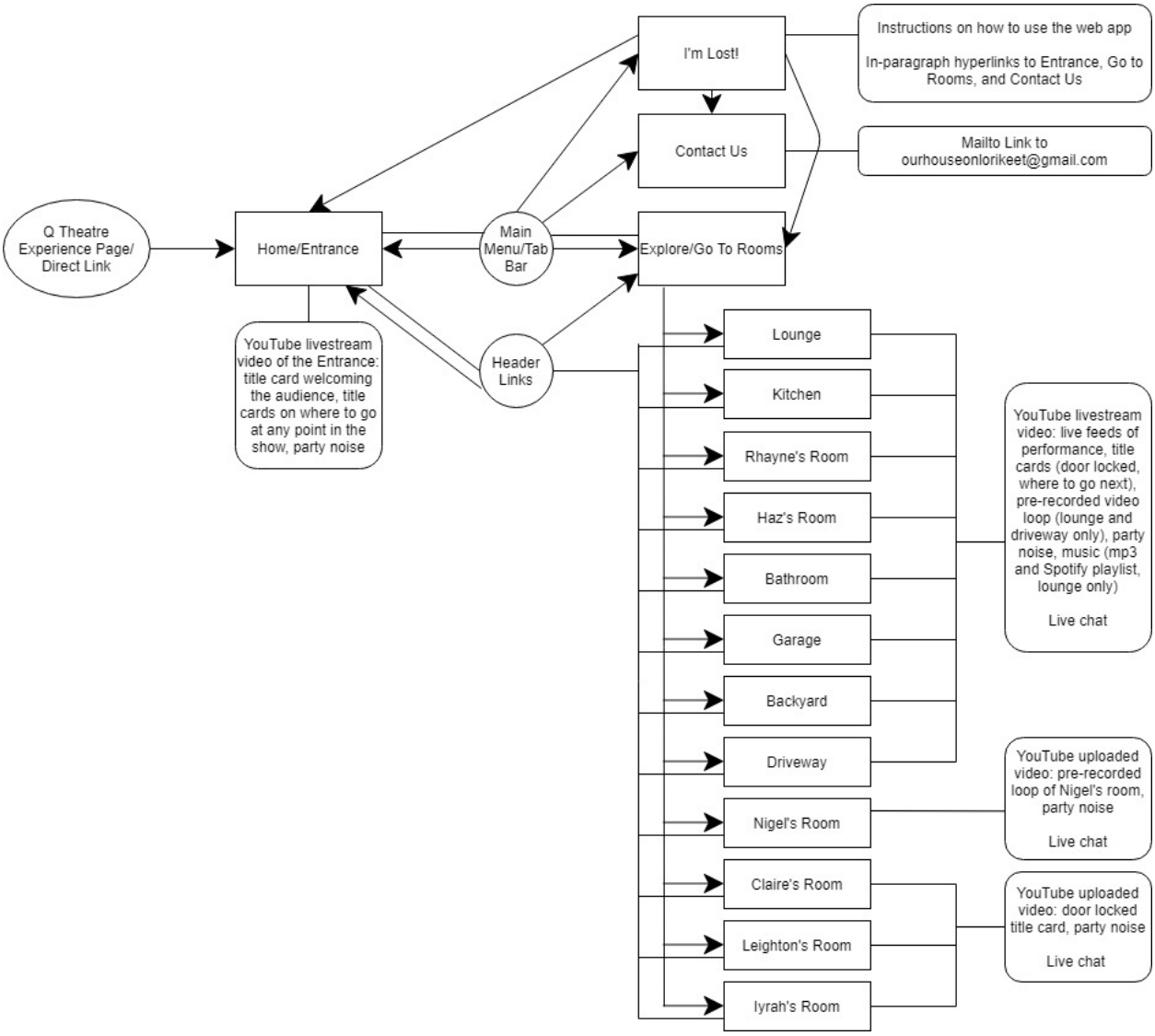

Fig. 31. The flow diagram of the Our House on Lorikeet PWA

For YouTube Live, on the other hand, a dedicated Our House on Lorikeet account was created. Each performer's individual scene used one instance of livestream, while the Entrance and the Lounge (for the group scenes) were separate instances. For every livestream, there were two modes: pre-show mode, show mode and off mode. Show mode meant that the performers were on-camera, performing their scene. Pre-show and off modes meant the performers were off-camera, either before or after the scene, respectively. In the pre-show and off modes, the livestream would be showing either a still image title card or a pre-recorded video loop. Pre-

show title cards would tell the viewers that either the door was locked or there was no access (Fig. *30*, right), while off-mode title cards instructed them to look for Nigel and point to the next Room in the chronological scene order. In addition, there were also non-livestreamed YouTube videos embedded into some of the rooms, including the pre-recorded video of Nigel's Room and a pre-recorded video of the "door's locked" title card. The latter was used for Rooms which were initially open and included in the groundplan, but ended up being closed when the CYOA sections were cut from the performance.

The production-side workflow of the digital performance was as follows: the artists would film their performances in real-time using either laptop/desktop web cameras or phone cameras. They then used livestreaming software (including the Streamlabs Open Broadcaster Software and Prism Live) to add graphics and sound effects. The output feed was then sent to YouTube Live through dedicated streamkeys, with the platform packaging it into a media player window and a live chat window. The CI then wrote custom HTML code to embed the two windows onto the performers' respective pages on the PWA. For group scenes where multiple performers were on-screen at the same time, interacting with one another, the artists sent their clean video feeds to a videoconferencing platform called Jitsi Meet. A Google Chrome extension was used to put together a clean split-screen feed (without Zoom's layout and interface). The feed was then similarly put through livestreaming software to add graphics and sound, then to YouTube Live for the Lounge livestream. A tech summary was prepared which outlines this workflow in greater detail (refer to Appendix J).

II. Designing the External Paratexts

Since the CI was working with the artists throughout Originate, the design and content of the external paratexts came out of the workshop's creative discussions and development. Nevertheless, the production team (PI1, PI2 and the producers) still considered them augmentation to the digital performance rather than part of an overall transmedia theatre

piece. Even though the CI could use the same creative materials and digital assets due to her additional role as digital artist on *Our House*, the design and construction of the external paratexts occurred separately from that of the performance. The insights gleaned from the previous stage were key in the development of external paratexts, namely: 1. A clearer narrative connection to that of the performance, 2. More visual rather than text-heavy content, 3. Greater degrees of interactivity and agency for participants, including an integrated social media interaction and DUG dramaturgy which affects the performance, 4. Focusing on post-performance paratexts and/or providing a preview of the performance along with pre-performance paratexts, and 5. Shorter time requirements for paratext engagement.

Similar to the development of the performance and internal paratexts, the initial question was which platform to use for the external paratexts. Since the PWA was now going to host the performance, it would have been the primary choice for the external paratexts, as well. During the workshop discussions, however, the artists ideated a Facebook Event for the 75 Lorikeet Lane house party. Facebook Event is a free calendar-based feature on Facebook where users can receive an invitation and RSVP to an event.[241] Event pages includes information about the event, such as time and date, venue (which now includes digital addresses such as Zoom or Google Meet links), images and other media related to the event. It also features a 'wall' for the event hosts and participating audience members (or 'guests') to post comments, questions, and other content. Once guests RSVP to an event, updates and posts from the Event page would appear on their news feed and, depending on their Facebook setting, they could receive notifications. The following diagram (Fig. *32*) details the relationship among external paratexts and the platforms they are on, with details discussed below.

[241] "Facebook Event," updated 2022, accessed April 5, 2022, https://www.techopedia.com/definition/15438/facebook-event.

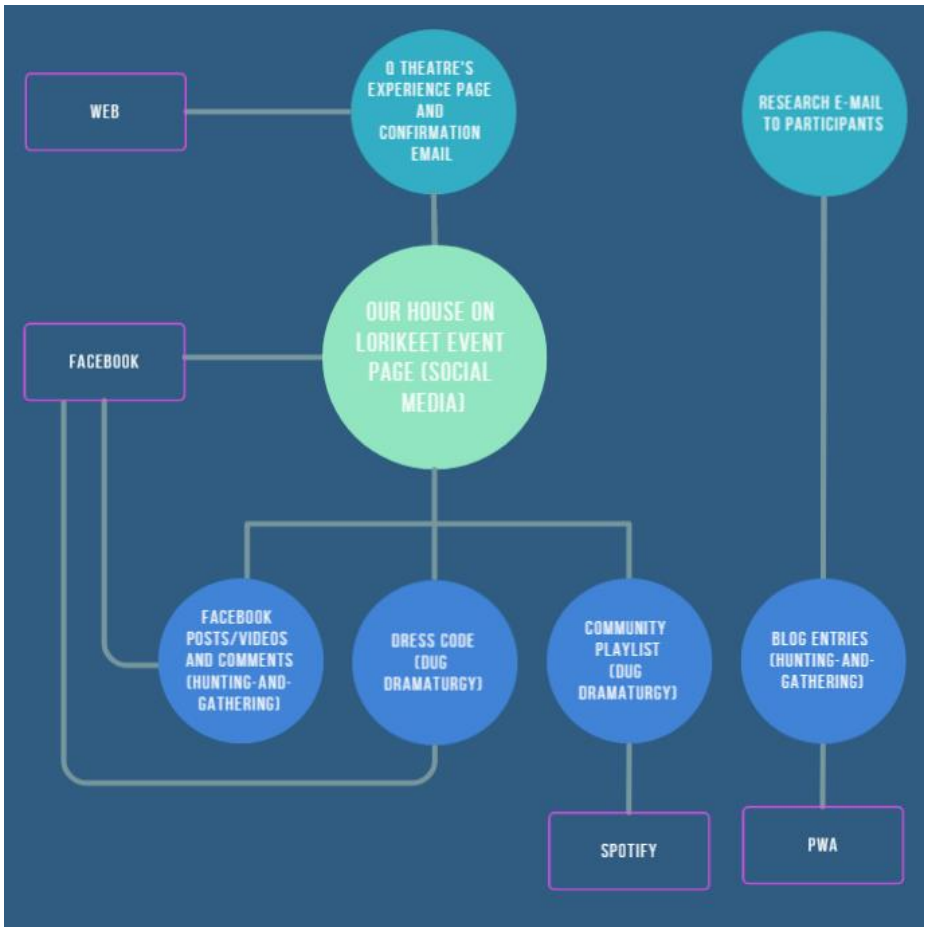

Fig. 32. Diagram showing the different external paratexts and how they related to one another, as well as their modalities and platforms

The artists initially discussed Facebook Event as a marketing tool, but the CI and PI2 saw the opportunity to inject parts of the storyworld onto the page in line with insight (1) from the previous stage. Compared to the PWA, Facebook would allow a greater variety in user-generated content like images, videos, and links, in line with insight (2). In addition, the notifications and news feed feature of the Event was deemed to be a more effective tool for creating awareness of the paratexts compared to the PWA's push notification system (which only worked on certain devices and browsers). The Facebook Event, constructed as an in-storyworld event page for Nigel's birthday party, was finally chosen as the gateway to the external paratexts (Fig. *33*). This resulted in an integrated social media interaction in line with insight (3) from the previous stage.

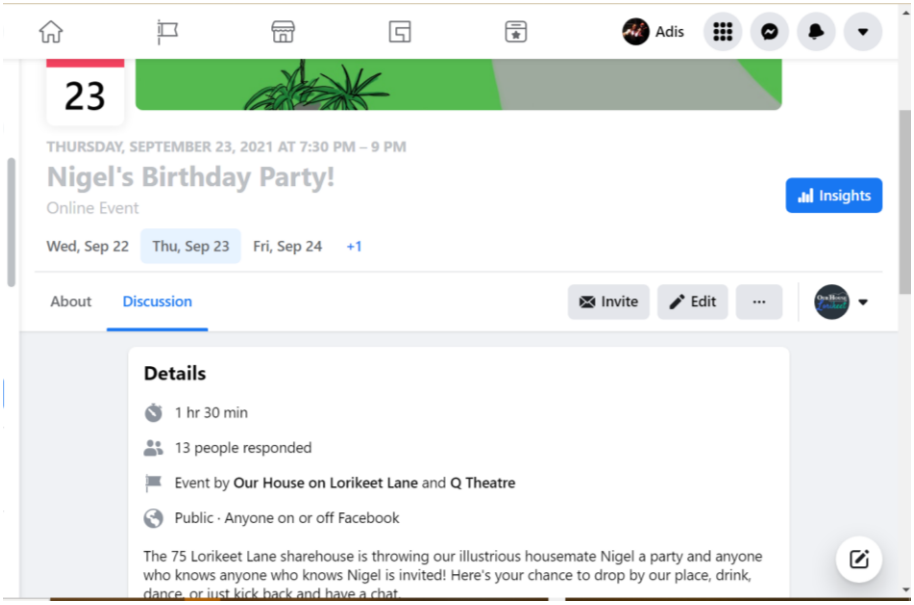

Fig. 33. The Facebook Event page for Nigel's birthday party, a gateway to the *Our House* external paratexts

From the artists' discussions during the workshop and consultation sessions with PI2, the following external paratexts were planned (note that in addition to the transmedia modalities identified below, the paratexts were also Social Media by nature):

1. Hunting-and-Gathering:

Videos and comments from the performers about the event would provide additional narrative threads of the 75 Lorikeet Lane storyworld, revealing the dynamics among the residents and their friends. As the artists were playing fictionalized versions of themselves in *Our House*, they would use their personal Facebook accounts but post in the voice of their characters. Guests were free to respond to these posts, either through the Facebook react function or replying to the comment.

2. DUG Dramaturgy 1:

A community playlist for the event on the music streaming platform Spotify would allow guests to add songs for the party (Fig. *34*). Since the character Haz was meant to be the DJ at the

party, they would post the link to the playlist on the Event page and invite guests to participate. During the performance, the songs added to the playlist would be playing on top of the video loop in the Lounge during the livestream's off mode, so viewers wandering into the Room would hear them. The output of the paratext would therefore affect the actual performance, in line with insight (3) from the previous stage.

3. DUG Dramaturgy 2:

The narrative of the performance involved all the characters dressing up as Nigel, an inside joke between the sharehouse residents and their friends. This paratext involved a post letting guests know of the characters' plan, inviting them to also dress up as Nigel for the performance and post pictures of themselves in costume on the Event page. While the output would not affect the performance itself, it would affect the guests' viewing experience, enhancing their immersion as a guest at the party.

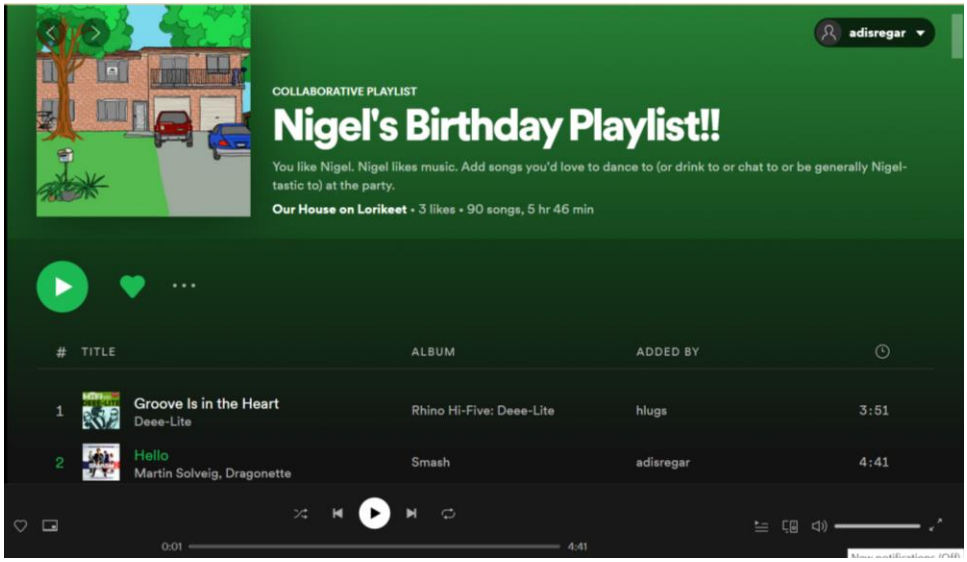

Fig. 34. Screenshot of the community playlist on Spotify

Due to the nature of the DUG dramaturgy modality, both the Spotify playlist and the dress-up guide were pre-performance paratexts. The Hunting-and-Gathering paratext was initially planned to include pre-performance and post-performance posts, but due to the low engagement with the Facebook Event (refer to the Audience Research section below), the latter

were omitted. Aside from acquiring the clothes to dress up like Nigel, engagement with these paratexts would take less than 10 minutes, in line with insight (5) from the previous stage regarding shorter time requirements.

The construction process involved first creating a Facebook Page (the platform's term for public Facebook accounts used by brands, organizations and public figures) for Our House on Lorikeet—the bio declared it as a page for the community of 75 Lorikeet Lane residents. This page then became the host of the Nigel's Birthday Party Event, along with Q Theatre's official Page as co-host. The content of the Page was written by the CI in consultation with PI2, with performers volunteering their time to post the scripted comments and videos. Visually, the Event page included illustrations by the CI, again forming part of the illustrated storyworld of *Our House* (*Fig. 35*). The Event page went live 2 weeks before the scheduled performance dates. In the end, however, the shortened pre-production period restricted how much time and resource could be spent on the external paratexts, especially as the performance was drawing near. By the end of the two-week pre-performance period, there were a total of seven posts on the Event, including three posts by the host (the Our House on Lorikeet Page) and four posts by the characters.



Fig. 35. The dress-up guide for Nigel's Birthday Party, rendered in the same style as the rest of the illustrated storyworld of *Our House*

Consequent to the low engagement on the Event page and the discontinued post-performance posts, the CI decided to add a private external paratext, solely for research purposes. This paratext was hosted on the Our House on Lorikeet PWA after the run of the performance, inaccessible to the public without a direct link. It involved two short blog posts written from the point of view of a guest at the party (Fig. *36*). One told about the writer's discovery of the sharehouse's history and the other of the writer's conversations with the characters regarding what happened to Nigel. It falls into the Hunting-and-Gathering modality, simply providing additional content that adds to the storyworld. It was meant to investigate how participants would have engaged with a post-performance paratext, whether they would have preferred external paratexts hosted on the same platform as the performance, as well as the merits of straightforward storytelling as paratext. The content of this paratext came from the CI's conversations with PI2 on possible continuations of the *Our House* narrative. This paratext was shared only with participants of the focus group discussion.

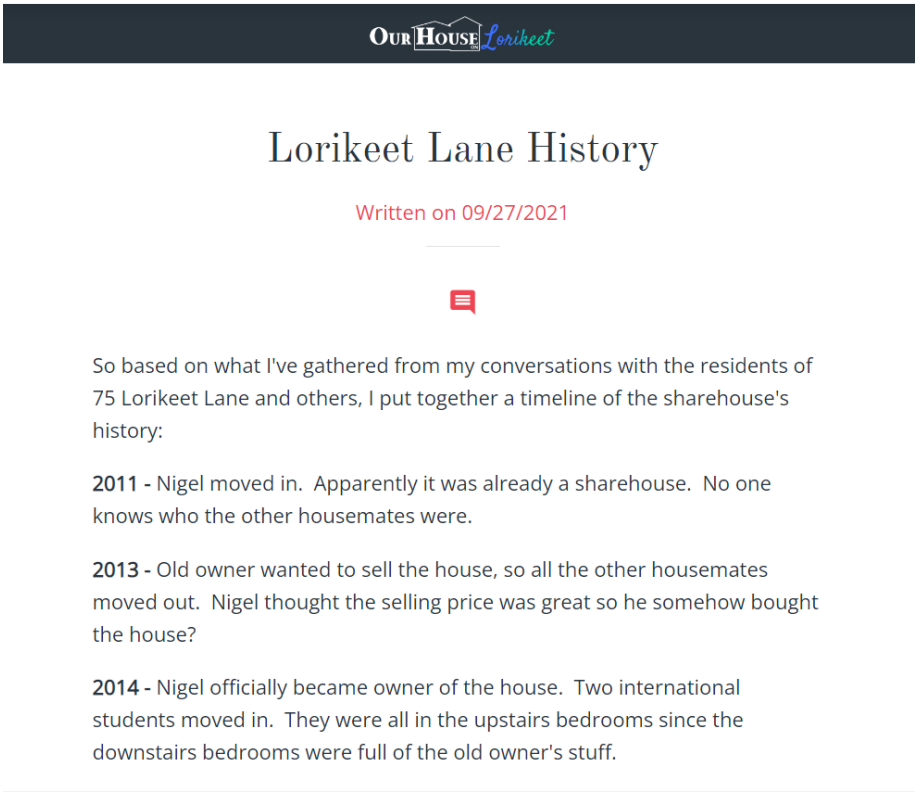

Fig. 36. The post-performance blog paratext on the Our House on Lorikeet PWA, provided privately for research participants

D. Participant Recruitment and Ethics

Since the iterative design process was shortened, rather than recruiting participants who would test prototypes and provide feedback, participants would engage with the publicly available output (with the exception of the private blog paratext). The research recruited participants from the general public, drawing from Q Theatre audiences who have signed up for tickets to *Our House*, guests who have RSPV'd on the Facebook Event page, and other avenues including the Higher Degree Research team at University of South Australia. The recruitment period started two weeks before the performance and lasted until the dates of the performance. As proposed in the ethics submission for this stage of the research, an e-mail was sent to prospective participants and a post was made on Event page with links to the sign-up form. The sign-up form was set up on the OHOL PWA, but only accessible through a direct link. Participants would indicate whether they would like to complete a survey, take part in a focus group discussion, or both. Registered participants were then contacted again via e-mail after the performance with participant information sheets, along with consent forms and scheduling links for focus group participants. Interview participants were recruited from the workshop artists and production team. At this point, the CI had applied for and were granted permission to make changes to the ethics approach for this research. At the end of the recruitment period, 13 participants had signed up to do the survey, with six participants also signing up to do the focus group discussion, while one artist and PI2 agreed to do the interview.

E. Creative Output: Performance, Internal Paratexts and External Paratexts

The performance of *Our House* was scheduled to run for three nights, on 23-25 September 2021, with tickets free of charge. The production team had a dress rehearsal on 22 September, during which PI1 voiced his concerns about the dramaturgical, technological, and logistical issues of the piece. After this rehearsal, the CYOA sections were cut, the show was made far

more linear, and more title cards were created and inserted into livestreams with clearer instructions for the viewers. The 23 September performance was canceled, with the night spent on another dress rehearsal. Viewers signed up to attend on 23 September were directed to attend either of the two remaining performances. On the day of the performance, viewers were e-mailed a link to the Experience Page, which included information on the workshop, the cast and crew, the narrative background of the show (including the illustrated groundplan), and the link to the OHOL PWA along with a how-to guide. Performances were scheduled to start at 7:30pm EST and were roughly 45 minutes in duration with no intermission. A full recording of the performance on 25 September (from the producer's device) is included in the appendix (refer to Appendix K).

While the total number of viewers for *Our House* is less relevant to the findings of the research, it contextualizes the frequency of engagement with internal and external paratexts. Similar to DigiStage in the previous stage of the research, Google Web Analytics was trained on the OHOL PWA and became an indicator of viewership for the performances. By tracking the number of active new unique visitors on the PWA at the beginning and the end of the show, it was able to provide a reliable estimate on how many viewers watched the entire performance. It is important to note that Google Analytics counts distinguishes between browsers and devices, and therefore does not account for multiple viewers watching on the same device. Additional engagement data was gathered through user-generated materials on YouTube, particularly the live chat comments.

Over the two nights, Google Analytics identified 148 unique visitors, with 85 unique new visitors on 24 September and 63 unique visitors on 25 September (Fig. *37*). Analytics also identified the geographical location of visitors by city, showing that the majority of viewers were from the Greater Sydney area. Outside of Sydney, there were visitors from Mudgee, Katoomba, Central Coast and Port Macquarie in New South Wales. There were also interstate visitors from Melbourne, Adelaide, Canberra, and the Gold Coast, as well as international visitors from Singapore and Indonesia. In the post-show debrief for the production team, PI1

stated that, even without accounting for multiple viewers from the same device, the number of visitors was higher than that of past in-person seasons of Originate. In addition, the show's geographical reach is further evidence of the advantage of online digital performance, even for local community-focused theatres.

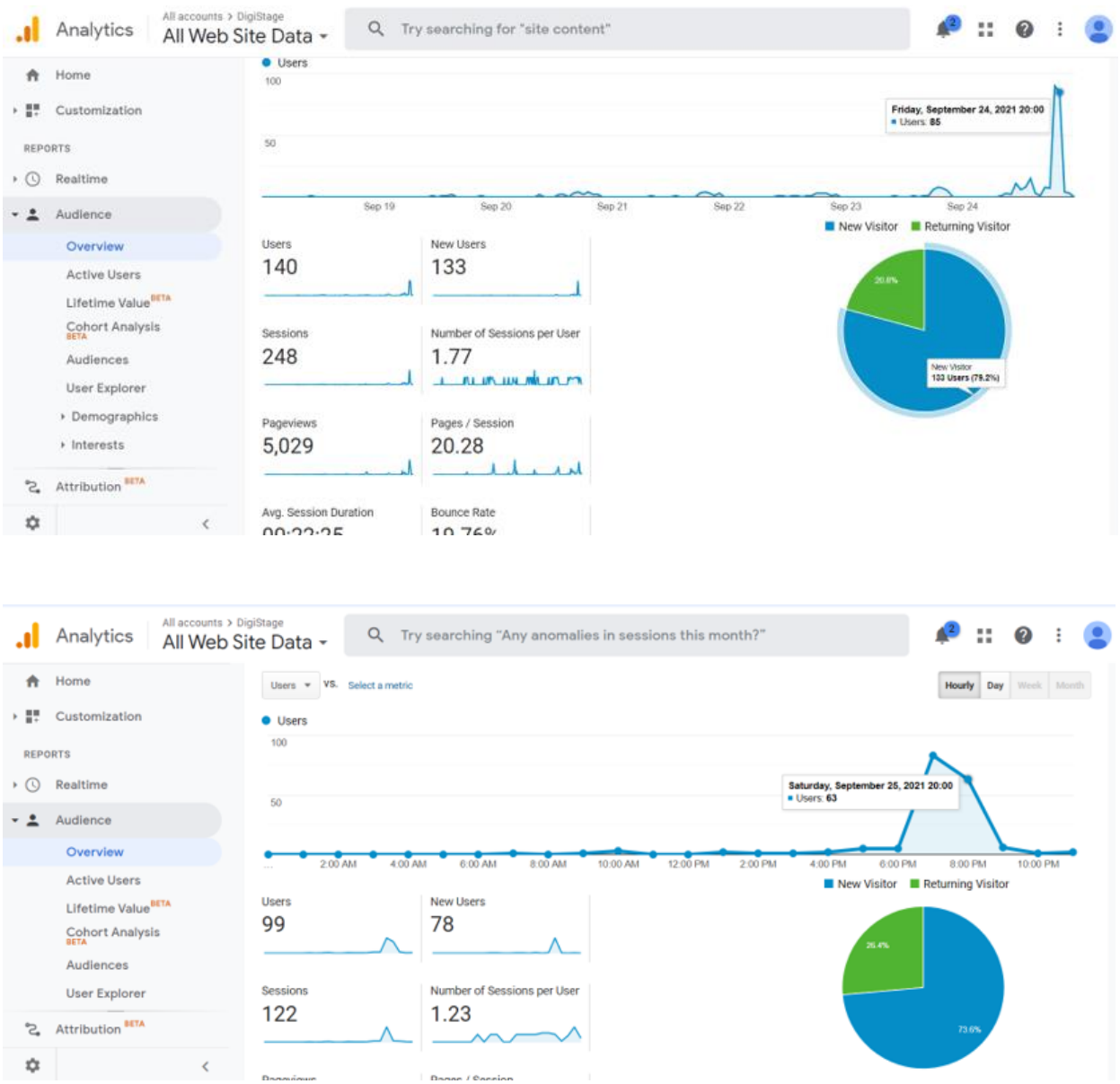

Fig. 37. Google Web Analytics data for *Our House* performances on 24 September (top) and 25 September (bottom)

A more surprising outcome was that of the YouTube live chat comments, for which the production team did not expect a high level of engagement. Over the two performances, there were 318 live chat comments from 43 unique YouTube accounts. This represents around 23% of the number of viewers (per Google Analytics) and roughly one comment every 17 seconds of performance on average. The live chat comments included remarks on the artists' performances, the overall design of the show, and the story conveyed in each scene. A sizeable portion of the comments, however, were theories about the relationships among characters and Nigel's whereabouts (Fig. *38*). On the Backyard livestream for the character Ingrid's individual scene, some commenters were speculating that she might have killed Nigel based on her visible frustration with him. Meanwhile, one viewer in the Haz's Room livestream, realizing that the characters were dressed up as Nigel, offered a meta-analysis that they were all Nigel and, as a result, the viewers had found him all along. The live chat function, perhaps more than any other feature of the performance, brought together the community of viewers through opportunities for co-presence, communication, and even collective meaning-making.

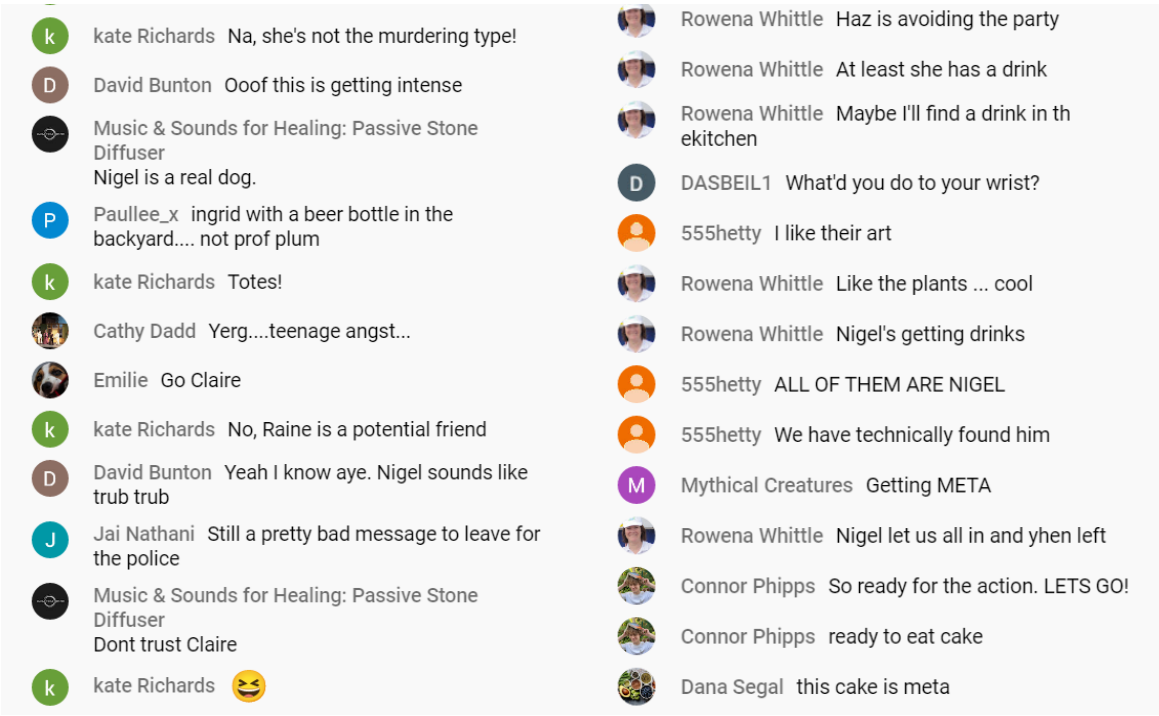

Fig. 38. Live chat comments from *Our House*, including speculation on what happened and the whereabouts of Nigel.

Unfortunately, the external paratexts had very low levels of engagement compared to the performance itself. 75 guests RSVP'd for the Facebook Event, marking either 'attending' or 'interested'. For all seven posts made by the host (the Our House on Lorikeet Page) and characters (performers' accounts), there were a total of 13 emoticon reactions and two comments from users unrelated to the production team. On the Spotify playlist, only two unrelated participants added a total of eight songs.

F. Digital Artefacts: Our House on Lorikeet PWA and Facebook Event

The link to access the Our House on Lorikeet PWA, including the navigational experience of the performance and the blog external paratext, can be found in the appendix (refer to Appendix L). The YouTube player window shows a recording of the livestream for the 25 September performance—viewers may need to scrub through the recording to find the artist's performance. The live chat function is unavailable. The link to access the Facebook Event can also be found in the appendix (refer to Appendix M).

G. Audience Research and Artist Interview Procedures

The survey was written on Typeform and similarly embedded into the OHOL PWA, accessible only through a direct link. Questions included demographic questions, questions regarding familiarity with digital performance and social media use, and questions on their engagement with the performance, internal paratexts, and external paratexts of *Our House* (refer to Appendix N). This time, the skip-logic function was used to avoid inconsistent answers and double-counting. The focus group discussion was moderated by the CI, who prompted participants for their thoughts about their engagement with the transmedia theatre piece. The artist and PI2 were also interviewed by the CI in a semi-structured interviews, focusing on their

experience on working on a digital and transmedia performance during the pandemic. The list of survey questions, focus group and interview questions can be found in the appendix (refer to Appendix O). Out of the 14 participants signed up to do the survey, only seven completed it; while out of six people signed up for focus group discussions, only three initially completed the scheduling form and attended the single session. An additional focus group participant responded to the scheduling e-mail after the focus group discussion session had been completed. As they were the only participant left, the CI conducted a semi-structured interview instead, with similar prompts to those for the focus group.

H. Results, Findings, and Evaluation

The results of the second round of design, prototype testing and implementation are largely limited by lack of direct participation and engagement in the research. This, in its own, provided insight into the requirements of designing a transmedia theatre experience, which will be discussed in the next chapter. While the following results are statistically insignificant, they can similarly be treated as case studies and provide a framework for future design explorations. The full results can be viewed in the appendix (refer to Appendix P for survey responses and Appendix Q for focus group and interview recordings).

I. Survey Responses

- *Demographics:*

The majority (four) of the survey respondents were 25-39 years old, one respondent was 18-24 years old, one was 40-54 years old, and one was older than 55 years old. Six out of seven respondents resided in the Greater Sydney area but outside of Penrith, while one resided outside of New South Wales.

- *Theatre Attendance and Digital Performance:*

When asked about their annual pre-COVID theatre attendance, three respondents answered 0-1 performances on average while three respondents answered 2-5. Four of the respondents had not attended any digital/online performances since the beginning of the pandemic, while two respondents had attended 1-2. One respondent, however, attended more than 12 theatre performances per year before the pandemic and had attended 3-5 digital performances since.

- *Engagement with Performance and Paratexts:*

All seven respondents viewed the *Our House* performance on the PWA, with three respondents also visiting the Experience Page on Q Theatre's website. Five respondents visited the Facebook Event page, two of which also visited the community playlist on Spotify.

- *Internal Paratext – Gaming Interaction (Sharehouse Exploration):*

Six out of seven respondents said that during the performance, they explored rooms they were not explicitly directed to go to, in what resembled a CYOA experience. When prompted for reasons behind this, all six said they sought more insight on the story and/or characters, while one respondent said they also sought more information regarding the PWA. When asked what they actually gained from the interaction, three respondents said they did learn more about the story and/or characters, two respondents said they learned more about the PWA, while one respondent said they gained nothing as the rooms were closed or empty.

- *Internal Paratext -- Social Media (YouTube Live Chat):*

All seven respondents said that during the performance, they followed the comments on YouTube live chat, and two said they also left comments. When asked what they gained from the engagement, four respondents chose the option "fun way to interact and feel a sense of community among audience members", two respondents chose the option "a place to voice your thoughts and opinions about the performance or read others'," while two chose "additional information or insight about the story or characters". When asked whether they

hoped to interact directly with the characters and read their responses, two respondents said yes.

- *Internal Paratext – Hunting-and-Gathering (Experience Page):*

Of the three respondents who visited the Experience Page, two did so immediately preceding the performance while one did before, but not immediately preceding, the performance. Aside from finding the link to the OHOL PWA on the page, two respondents said they also gained the (non-narrative) background and purpose of the performance and instructions on how to experience it. None of the respondents said they gained additional story or character insights from the Experience Page.

- *External Paratext – Social Media (Facebook Event):*

All five respondents who visited the Facebook Event did so before viewing the performance and none after. Three respondents learned about the Event through word-of-mouth, two respondents through Facebook or other social media posts, while one did so through Q Theatre's event page or the Experience Page. When asked about their engagement with the page, four respondents said they clicked on the 'going' or 'interested' button, one respondent read posts and comments on the page, one respondent said they posted or left comments on the page, while two respondents said they clicked on links to other activities like the Spotify playlist. Only two of the five respondents said they saw posts from the Event on their news feed and/or received notifications from the Event. Of the two respondents who did not visit the Event page, one said they were aware of its existence and the other said they were not.

- *External Paratext – DUG Dramaturgy (Spotify Playlist):*

Both respondents who visited the community Spotify playlist added songs, but only one respondent claimed they actually expected to hear the songs at the performance. Of the five respondents who did not visit the playlist, one respondent said they were aware of its existence. Two respondents said they were not aware of its existence and would have added

songs if they had been, while the other two respondents said they would not have added songs even if they had been aware of the playlist.

- *Evaluation of Internal and External Paratexts:*

When asked if the inclusion of digital transmedia elements within the *Our House* performance positively enhanced their experience, four respondents answered strongly agree, two responded agree, while one respondent was neutral. When asked the same about external paratexts, five respondents were neutral while two responded agree.

- *Future Transmedia Theatre Participation:*

When asked whether participation in the paratexts should remain optional rather than mandatory, four respondents answered strongly agree while three responded agree. When asked whether they would participate in similar transmedia theatre experience in the future, four respondents answered strongly agree, one responded agree, one was neutral, and one responded disagree.

- *Open-Ended Feedback:*

Finally, participants were asked if they have any suggestions, thoughts and ideas for improving future transmedia theatre elements and experience. Four respondents pointed at the CYOA aspect of the performance, wanting a more open-ended CYOA experience with multiple Rooms being open at once. Another respondent mentioned direct interaction with characters, while another said they would like "more compelling reasons to interact rather than just switching rooms."

II. Focus Group Discussions

- *Participants and Demographic*

For the focus group discussion session, the participants were David, a product designer from Sydney; Andrea, a reception and administrative worker at a human resource company, also from Sydney; and Jai, a psychiatrist from Perth. All three participants were in the 25-39 age group. Another participant, Thais, a librarian from Sydney (lower Blue Mountains area) in the >55 age group, was interviewed at a later session. The group participants learned about *Our House* from Facebook and WhatsApp, and attended the Friday performance.

- *Theatre Attendance and Digital Performance*

Andrea and Thais attended theatre regularly, with Andrea mostly attending student performances as she herself studied theatre at university. Jai and David were occasional theatregoers. David had never attended a digital performance before, Jai had attended an in-person performance with digital elements, while Andrea had attended 2-3, as well as participated in a digital performance production at university. Thais considered herself a regular theatregoer, attending more than 12 productions per year prior to the pandemic and had attended multiple digital performances before.

- *Liveness*

When asked whether they were aware that the performance was live (in temporal terms), Andrea agreed, but the rest of the participants said they were unaware. Jai said he expected direct interaction from the performers through the live chat, but since it did not occur, he did not sense that it was live and it could have been pre-recorded. David said the directions to go from one Room to the next created the impression that it was live. Thais said she understood that it was "live" in the sense that it was not accessible outside of the performance times, but thought the scenes could have been pre-recorded. She also said knowing the performances were live (temporally) would likely not have changed her experience.

- *Narrative and Dramaturgy*

The focus group participants were confused about the lack of resolution on Nigel's whereabouts. Jai pointed out that none of the on-screen characters seemed to like Nigel (despite throwing him a birthday party). David said encountering the characters helped him sympathize with Nigel, as he learned how "bizarre" the living situation was at the sharehouse. Jai said he expected the performance to be a murder mystery, and found the lack of a puzzle to solve was disappointing. Andrea was under the impression the guests had to look for Nigel and would have preferred to receive directions from the performers (as part of the dialogue). David said he did not expect a puzzle and would not have liked having to solve one, but still would have preferred a more open-world experience. Thais remarked that the performance seemed "realistic" and she learned more about the generation that the characters were part of.

- *Internal Paratext – Gaming Interaction (Sharehouse Exploration)*

All focus group participants said they spent time exploring other rooms (beyond the linear instructions given) before, during and after the individual scenes. Andrea and Jai both visited Nigel's Room but were disappointed to find nothing of significance in it. Thais similarly explored the rooms, even staying long after the performance and enjoyed the music in the Lounge. She also visited Nigel's Room and noted that it was messy, and that he could have gone in a hurry or even been kidnapped. She said it would have been challenging for the production to create a more open-world experience with multiple concurrent performances happening live.

- *Internal Paratext – Hunting-and-Gathering (Experience Page)*

When asked whether the groundplan on the Experience Page affected her experience, Thais said she did not recall it during the performance. She did visit the page again after the performance, however, and connected the different locations she had seen together based on the groundplan.

- *Internal Paratext – Social Media (YouTube Live Chat)*

Jai pointed out that the live chat was the best aspect of the show for him due to the funny comments that guests were leaving. He compared it to watching a film or performance with a group of friends, or being at a real house party. Jai said the live chat did not add additional insight to the story or the characters, but it had entertainment value. David said the live chat added another layer to the performance, providing an opportunity for viewers to discuss the performance and the characters. Andrea did not participate in the live chat as she was watching the show with friends. Thais, who said she did not use social media, did not participate in the live chat but did read the comments (including after the performance ended). She said it showed the different parts of the performance that audience members were connecting with, whether story, visual elements, or even the performers. When asked about their expectation of direct interaction with performers, both David and Jai said they were not disappointed that it did not occur.

- *External Paratext – Social Media (Facebook Event)*

When asked if they engaged with the Facebook Event, none of the focus group participants said yes. David and Thais did not use Facebook at all, but Jai and Andrea were Facebook users yet neither were aware of its existence. Thais was shown the posts and paratexts on the Facebook Event page, and said she would engaged with some of the paratexts if they had been on a different platform (such as the PWA).

- *External Paratext – DUG Dramaturgy (Nigel Dress-Up)*

The focus group participants were shown the illustrated guide on dressing up like Nigel for the performance. When asked if seeing the guide would have changed their experience, Andrea said it would have helped her learn the theme of the party earlier. David and Jai said they would not have thought this was a guide for the audience since they would not be on-camera or visible. When asked if they would have dressed up if the performance was in-person, Andrea said she would (and she had attended similar immersive performances in the past). Jai said he was more likely to have dressed up in-person, seeing other audience members en route to the

venue. Ultimately, he said it was highly dependent on his familiarity and investment with the story or the characters (for example, a franchise like Harry Potter).

- *External Paratext – DUG Dramaturgy (Spotify Playlist)*

The group participants were aware of the playlist, but Jai and Andrea said they were not interested in participating. David said he forgot to add songs but would have, as he found value in subjecting others (particularly the performers) to his song selection. Thais did not participate in the paratext but, as noted above, did enjoy the resulting playlist in the Lounge after the performance ended.

- *External Paratext – Hunting-and-Gathering (Blog Posts)*

Jai and David read the private blog posts, with David stating he expected a continuation of the story. When asked if they would have preferred the blog providing the real answer to Nigel's whereabouts, David said he would have liked it as either part of the performance itself or a proper sequel (in the same format) as *Our House*. Jai said he liked the idea of multi-platform storytelling, but found the actual content of the blogs as not offering much additional insight to the story. Thais said she generally enjoys narratives being expanded through paratexts and would have liked to read the blog posts, including if the performance was in-person.

- *Transmedia Storytelling*

Thais felt very positively about the format of the digital performance, remarking that it offered something novel. Jai also greatly enjoyed the overall format of the show, including navigating through Rooms and external paratexts—unfortunately, he was disinterested in the actual narrative. He said with the pandemic restrictions in place, the format provided a great alternative to digital performance. When asked if they would have liked getting more storyworld information before or after the performance, Andrea said she would have been more interested in engaging in paratexts if she had been aware of the overall transmedia format. David said he would have preferred shorter and less demanding paratexts as they would feel like "homework". Andrea said the production would need to sustain interest

throughout the entire period of paratext distribution. Jai said a more plot-driven narrative would have been more conducive to such format, citing *The Blair Witch Project* (1999) and associated ARG (alternate reality game) experience as a positive example. When asked if it would have helped if the piece had been framed as transmedia or multi-platform from the start, David said expectation management is important (but without spoiling the content of the performance). He also mentioned that his investment, particularly the effort required for active participation like dressing up as Nigel, would have been higher for an in-person performance.

III. Q Theatre's Post-Event Survey

In addition to the audience research conducted by the CI, Q Theatre also distributed their own post-event survey to audience members who provided their e-mail addresses. 27 respondents completed the survey, which Q Theatre shared with the research team (refer to Appendix R), as follows:

- *Demographics*

26 out of 27 respondents resided in New South Wales, with 18 respondents from the Western Sydney and Blue Mountains area (where Q Theatre is based). One respondent was from Perth, Western Australia.

- *Our House Experience*

When asked if they would recommend the experience to a friend, 14 respondents answered "strongly recommend", nine respondents answered "might recommend, two respondents answered "not sure if I would, while two answered "would not recommend". When asked if they would participate in a similar experience in the future, 17 respondents answered "highly likely", six answered "somewhat likely", three answered "somewhat unlikely", while one answered "not at all likely". When asked if they would buy tickets to a similar experience in the

future, seven answered “yes - $15”, eleven answered “yes - $10”, one answered “yes – under $10, while seven answered “would only attend if free”.

- *Feedback and Comments*

The feedback to the open-ended comment prompt was largely positive, with the majority of the respondents praising the novelty and creativity of the format. Overall, the use of technology was viewed positively, particularly as a solution to presenting a theatrical work during lockdown. Two respondents pointed out that the performance was less suited for older audiences, with one of them saying they left early. One respondent said the live chat “satisfied the audience desire to talk to OTHER audience members, compare notes about the characters, the narrative resolution and share witty remarks without disrupting the performance." Two respondents remarked that they would have liked direct interaction with characters, with one of them also wanting the ability to browse the Rooms freely. One respondent had several criticisms for the performance, including the narrative, performers, and technical glitches. They pointed out the lack of cohesive party atmosphere, the lack of interaction between performers and audience, and the Rooms which were closed or unused, as the failings of *Our House*.

IV. Discussion of Results and Key Findings

Synthesizing the results of audience research yielded some key findings that can be applied to future efforts in designing transmedia theatre experiences. First of all, the transmedia format was received positively by the audience, particularly where internal paratexts were involved. Within the context of the pandemic and the resulting need for theatre to shift to digital offerings, the audience of *Our House* generally considered its format as providing a novel variation. The artists’ goal of avoiding a Zoom Theatre experience, with all its associated cultures and procedures, were met. One drawback of the use of livestreaming compared with Zoom, however, was that many audience members were unaware that the actors were performing live. While this is potentially not an issue in other productions, it was for *Our House*

given the stated goals of the Originate workshop. The artists likely still experienced the risks and excitement of live performance, but those in the audience who thought the performances were pre-recorded would not have shared those sentiments. One dramaturgical consideration when presenting a transmedia theatre experience with mediated live performance at its core, therefore, is how to signal or indicate co-temporal liveness. As noted above, one solution could have been the inclusion of direct, real-time interaction between performers and viewers, with the characters responding to the live chat comments (either through their own comments or in their performance).

The live chat remained the feature/paratext that received the most attention and garnered the highest proportion of viewer engagement. It provided community and co-presence through a foyer experience that lasted throughout the entire performance. It was less intrusive than having audience participate through video or audio form, particularly since the live chat window was separate from the media player and could be minimized from the screen altogether (by maximizing player window). On the other hand, both survey and focus group participants expressed that the live chat did not expand the storyworld of the piece. Despite its entertainment and communal values, it did not provide the audience with any additional insight to the story or characters. This can be improved in the future, not just by having direct interaction with on-screen characters, but also by deliberate dissemination of the narrative in the live chat and other endeavors to set parameters of engagement. In *Our House*, for example, since the viewers in the live chat were meant to be guests at the party, the production team could have added live chat-only characters, similar to the peripheral characters in *Midsummer Night's Dreaming*. These characters can make comments hinting at additional stories involving Nigel and/or the on-screen characters. In turn, the on-screen characters can mention the live chat characters to create narrative cohesion.

Another significant insight from audience research revolves around the CYOA and immersive nature of the gaming interaction modality, in the sharehouse exploration feature of the performance. The decision to remove the CYOA segments, which also resulted in locked and

unused Rooms, was largely logistical. Based on the feedback, however, many in the audience would have liked the opportunity to freely 'roam' the sharehouse. While some of the factors to consider in resolving this issue would indeed be logistical (e.g. whether non-linear storytelling would be suited for the target audience, or whether the actors were equipped to perform on-screen for the entire duration that their Room is open), there would be dramaturgical considerations, as well. It is important that the production decide the nature of immersive and/or participatory experience the performance should have, whether it is a murder mystery to solve, a scavenger hunt, or simply an observation of characters responding to a certain situation. In the case of *Our House*, the repeated instructions encouraging the audience to find Nigel created an ambiguity of experience. Some audience members expected to find hints of his whereabouts, resulting in disappointment when there were none and Nigel was never found. The chosen experience needs to be conveyed clearly through the narrative, both in script and performance. More specifically, in a transmedia theatre piece involving gaming interaction, the ludic qualities of the interaction needs to be clearly outlined.

Regarding engagement with external paratexts, the audience research revealed that one reason for this was lack of awareness and access. While some audience members did not use Facebook or any social media at all, the larger issue was that the majority were not aware of the Facebook Event or, even if they were, they did not receive notifications regarding posts or comments on the page. Resolving this issue involves technological consideration, as the ideal platform would notify users of any new content and make them easily accessible. Another consideration would be logistical, involving the sheer number of paratexts and whether the production team had enough personnel and resources to execute them. In the case of *Our House*, asking the performers (who already had to worry about finalizing the script, rehearsing their scenes, and learning the technical know-how to livestream from their homes) to take on the responsibility of posting on the Facebook Event resulted in the lack of content.

Another major consideration, however, is once again dramaturgical and narrative in nature. Audience members need to be aware of the transmedia format of the piece and, more

importantly, be receptive to it. The active participatory nature of transmedia theatre requires commitment from audience members, which is highly dependent on their initial level of investment. As one focus group participant said, this would be more readily achievable when the piece involves established characters and stories in adapted works, like in the use of Wonderland by both Creation Theatre and Theater in Place. For original scripts like *Our House*, the level of investment needs to be built by having narrative-driven pre-performance paratexts. For example, instead of videos of the characters simply inviting viewers to the party, the Hunting-and-Gathering modality could involve videos of full scripted scenes showing past conflict between the characters. Alternatively, the production team could focus on post-performance external paratexts, relying on the performance itself to build audience investment.

Overall, the number of viewers, the level of engagement (especially in the live chat), and the results of audience research indicate that *Our House* was a successful artistic output in the form of a designed transmedia theatre experience. Aside from key findings that can be applied to future design efforts, there were broader lessons to be gained, not just from designing *Our House*, but from the overall practical component of this research. These will be discussed further in the next chapter.

CHAPTER 8: ANALYSIS AND DISCUSSION

A. Introduction

This chapter synthesizes the findings of the overall research by building upon existing theoretical and practical frameworks that have been laid out in earlier sections. Given the iterative nature of the RtD method, the discussion of the research discoveries centers upon the results of the design exploration process up to *Our House*. While each stage of the research has produced its own set of findings, there are three key themes that can be traced throughout, which will be discussed in the following sections:

1. The definition of transmedia theatre and why it is relevant to the scholarship of theatre performance and digital media;
2. The application of experience design principles on transmedia theatre and the broader area of digital performance;
3. The ideation and construction of new forms and platforms of theatre.

B. Transmedia Theatre: An Evolving Definition

At the outset of this research, an integral part of the process was creating a strict definition of transmedia theatre—not just what it *is*, but also what it is *not*. The chosen definition was "a work of transmedia storytelling with a live theatrical performance as the core text."[242] The 'work of transmedia storytelling' component was further defined as a work where the narrative was "told across multiple media (or texts) in a cohesive manner." Each text (be it core performance text or paratext) needs to be self-contained, but also needs to bring something new to the storyworld. This means said text cannot be a simple adaptation or remediation of

[242] Refer to Chapter 2C (Transmedia Theatre Definition and Scope)

another text within the overall piece. The nature of intermediality also featured in the definition, which required the paratexts to exist outside of the theatre performance. The paratexts themselves were prescribed to be both digital and interactive, even if the latter simply requires viewers to choose among multiple texts. Finally, the initial definition included what could be referred to as intentionality: the piece, including the theatre performance, needs to be deliberately planned to be transmedial, rather than a pastiche of sequels, extensions and/or adaptations arising from the success of the initial text. The examples mentioned and discussed in the outset of the research (the contextual review and case studies) were largely pre-selected to fulfill these criteria—indeed, the strict criteria helped narrow down possible cases suitable for in-depth analyses. The practice-based stages, however, resulted in these definitive criteria being challenged and, in most cases, expanded.

I. Cohesiveness

The ontological knowledge base was meant to reflect, among others, the above criteria of transmedia theatre, each corresponding with one or more of the fields of characteristics of identified examples. Even before Jenkins identified the principles of transmedia storytelling, Lisbeth Klastrup and Susana Tosca have identified 'cohesiveness' as a key characteristic of the form, defining transmedial (story)worlds through the mental image the 'worldness' that has to be shared by the audience and designers.[243] While the case study analyses have discussed cohesiveness in a case-by-case manner, the knowledge base helped codify what the concept entails. A key characteristic of a cohesive storyworld in a transmedia theatre piece is an overlap of plotlines, characters, settings, and/or other narrative details. However, what the case studies also revealed is how an overlap of production elements (particularly visual ones) contribute to cohesiveness. The comparison between *Midsummer Night's Dreaming* and *2097: We Made Ourselves Over* reveals that using the same actors, sets, and costumes helps reinforce the multitextual synthesis of the storyworld. In the knowledge base, cohesiveness is expressed

[243] Lisbeth Klastrup and Susana Tosca, "Transmedial Worlds - Rethinking Cyberworld Design" (paper presented at the Cyberworlds, Tokyo, 2004).

as a wide spectrum of possibilities through fields like Storyworld Link, Storyworld Overlap and Production Overlap, rather than a binary. Transmedia theatre storyworlds are therefore inherently cohesive, just to varying degrees.

II. Liveness

As outlined in the chapter on *Our House*, the COVID-19 pandemic and its impact on theatre resulted in the shift of what 'liveness' might be considered to mean. It does appear that in the post-Zoom Theatre era, co-temporality is the main prerequisite for liveness, and digital mediation does not diminish the experiential quality of theatre performance. In the cited examples of transmedia theatre pieces involving mediated live performance (like *Alice, A Virtual Themepark*),[244] as well as the design output of *Our House*, the digital nature of the performance did not end up affecting any of the other criteria or characteristics. While in most cases the paratexts were embedded or integrated into the performance, *Our House*'s external paratexts showed that it was possible to keep them separate even if the performance was digitally mediated. Storyworld cohesion, interactivity, narrative additionality and self-containment, intentionality, as well as intermediality would not have been precluded by the mediated liveness of the theatre performance. The criterion has not changed—'live' theatre performance at the core—but due to the expanded definition of 'liveness', pieces that previously could have been excluded by the definition would now be considered transmedia theatre.

III. Intermediality

The original scope of the transmedia theatre definition included a prescriptive application of intermediality—it required that digital paratexts be viewed outside the live (in-person) theatre

[244] *Alice, A Virtual Theme Park*, direction by Zoe Seaton, online on https://www.creationtheatre.co.uk/ and Zoom, August 1, 2020.

performance. This originally created an intermedial relationship defined by choice, as opposed to the alternative where digital media are part of the theatre performance. The latter case is often marked by compulsory viewing and, in the case of interactive media, participation. One example is Christopher Kondek's *Dead Cat Bounce*,[245] which was featured in *Mapping Intermediality* as an example of "a shift in the intermedial conceptions of time and space."[246] The performance uses telematic communication, projection screens, trading software and even television broadcast, to create a gaming interaction where a pot of money (from ticket sales) was invested in the New York Stock Exchange in real time. Even though telematics allowed digital content to be transported across geographical distance to the venue, the viewers' consumption of said content was intertwined with the performance itself. The projections and broadcasted pictures were visible by all audiences present at the venue—they were integral and inevitable to their viewing experience. Even the opt-in gaming interaction, where viewers were allowed (but not required) to vote on buying and selling shares, was partially compulsory. While the act of voting itself was optional, the voting process was something everyone present at the venue was exposed to. How performance and digital media relate to each other in shows like *Dead Cat Bounce* provides a contrast to that in *Midsummer Night's Dreaming* and *2097*. In the latter examples, live performance audiences could simply ignore the Google+ page or the interactive episodes should they choose to, simply because they were temporally and spatially isolated (on a different platform) from the performance. This takes full advantage of digital media convergence, returning narrative and interactive agency back to the audience.

Throughout the practice-based research process, particularly after the COVID-19 pandemic, the application of intermediality on transmedia theatre was again transformed by the growing necessity for and subsequent ubiquity of digital (online) performance. As shown in the exploration of post-pandemic examples and design of *Our House*, live theatre performances taking place in the digitally mediated spaces of internet browsers and mobile applications, do

[245] *Dead Cat Bounce*, direction by Christopher Kondek, Theater am Halleschen Ufer, November 2005 (among others).
[246] Birgit Wiens, "Instance: Christopher Kondek, Dead Cat Bounce (2005)," in *Mapping Intermediality in Performance*, ed. Chiel Kattenbelt et al. (Amsterdam: Amsterdam University Press, 2010), 101.

not precipitate the same intermedial relationships as *Dead Cat Bounce*. Current devices and platforms allow for greater customization of experience, allowing viewers to navigate between pages and links, switch between windows and tabs, or focus on different parts of their screen. Internal paratexts, as referred to in the prototyping stage of *Our House*, can be integrated into digital performance and still be entirely opt-in. Recent transmedia theatre examples like *Alice, A Virtual Theme Park* and *Theater in Place*[247] encourage viewers to tailor their viewing experience by choosing which texts to engage with. Similarly, in *Our House*, viewers who did not want to explore different rooms could simply follow the linear directions. Those who were not interested in the live chat could set their YouTube player windows to full-screen and opt-out from not just responding to the live chat, but even from viewing it. As a result, choice or agency once again characterizes intermediality in these transmedia theatre experiences, not just between texts, but also in summation of all the different texts. This reflects more closely Kattenbelt's updated approach to intermediality from "in-between" to "both-and" media, as explored in the Theoretical Framework section of this exegesis.[248] [249] The scope of transmedia theatre is once again widened, allowing digital media to function as paratexts within a digital(-ly mediated) theatre performance.

IV. Digital (and) Interactivity

This research has also focused on transmedia theatre experiences that involve digital and interactive paratexts to ensure immersion in the storyworld through Janet Murray's principle of media convergence. The term 'digital' has always covered a wide range of meaning, but Dixon defines digital performance as "all performance works where computer technologies play a *key* role rather than a subsidiary one in content, techniques, aesthetics, or delivery forms."[250] He

[247] *Theater in Place*, production and design by Jason Buzi and Smadar Krampf, online on https://theaterinplace.com/, 2020.
[248] Kattenbelt et al., *Mapping Intermediality in Performance*, 17.
[249] Refer to Chapter 2B (Theoretical Framework)
[250] Steve Dixon, *Digital Performance: A History of New Media in Theater, Dance, Performance Art, and Installation*, ed. Roger F. Malina (Cambridge: The MIT Press, 2007), 3.

lists the examples of digital projections, robotic and virtual reality, computer sensing/activating equipment, telematics, and "performative works and activities that are accessed through the computer screen." The earlier examples of digital paratexts included a multitude of digital offline media, from the *Enter the Matrix* game to the *tts: recruit* DVD. The term 'digital' has increasingly referred to online or internet-based technology, however, and even Prensky's 2004 article identifies 'digital natives' as young people participating in a "rich online world."[251] As this exegesis examines more recent phenomena and examples of transmedia theatre and digital performance, the term 'digital' has also increasingly referred to online media, specifically. In the post-pandemic theatre landscape, most digital performance and paratexts do not simply involve online media, but are based on online platforms, conveyed entirely through web browsers, mobile applications, or social media networks. This shift in the meaning of 'digital' is important to note, with transmedia theatre experiences becoming more and more reliant on internet access and the availability of web-enabled devices.

Again, Jenkins' and Ryan's discussions on transmedia storytelling render works that involve choosing between texts to consume as inherently interactive through the hunting-and-gathering modality. The practical component of this research also drove home the idea that the digital nature of the paratexts, particularly on online platforms, also generates interactivity. In her discussion of educational opportunities in transmedia practices, Laura Fleming states that the internet is inherently interactive.[252] The context for this statement is the example of the digital novel *Inanimate Alice* as transmedia storytelling, combining multiple platforms to create an "immersive learning landscape."[253] By placing paratexts on a web browser or mobile app, viewers are expected to navigate their entry and exit into each narrative thread. Based on this technological consideration, whether and how viewers can successfully navigate this interactivity, or learn how to navigate it, was a factor to consider in designing the transmedia

[251] Prensky, "Digital Natives, Digital Immigrants," 1.
[252] "The inherently interactive nature of the Internet, in tandem with its capacity to meet our learners where they are ready to learn, can lead to groundbreaking pedagogies in media-rich environments" (Laura Fleming, "Expanding Learning Opportunities with Transmedia Practices: Inanimate Alice as an Exemplar," *Journal of Media Literacy Education* 5, no. 2 (2013): 370-71.)
[253] Fleming, "Expanding Learning Opportunities with Transmedia Practices: Inanimate Alice as an Exemplar," 371.

experience of *Our House*. This added layer of interactivity creates not only more opportunities for learning, but also for actively engaging with and exercising agency through the transmedia theatre experience.

V. Intentionality

Here, 'intentionality' refers to whether a multiplatform piece is intended to be transmedial in nature, where the story is deliberately distributed among multiple texts for the viewers to choose from and thread together. In the initial definition, this element of the definition primarily served to identify what is *not* transmedia theatre (remediation, adaptation, cash-grab sequels). The practical stages of the research have shown, however, the importance of intentionality in designing a transmedia theatre experience. For artists and theatre-makers, having the intention of creating such an experience, which is inherently interactive in the multitude of ways previously discussed, should lead to the application of user experience design principles on theatre performance and multiplatform storytelling. This will be expanded upon in the next section.

C. Transmedia Theatre and the UX Design of Digital Performance

As discussed in previous chapters, the COVID-19 pandemic and resulting restrictions have given rise to the prominence of digital performance. One of the key goals of this research is exploring the way theatre-makers can design a transmedia theatre experience, applying user experience design principles on transmedia storytelling and theatre performance. The practice-based stages revealed that in designing a transmedia theatre experience, the experience design process and the dramaturgical process (of shaping a performance) are deeply intertwined. It is insufficient to treat only the transmedia paratexts as a digital system for users to interact with, creating isolated prototypes for testing and refinement later in the creation process. If a theatrical work is deliberately constructed as transmedia theatre, the whole piece needs to be

treated as a digital system from the outset, including the performance at the core (even if it was an analog, in-person performance).

When this research commenced in 2018, there were limited scholarly resources discussing the intersection between UX design (or Human-Computer Interaction in general) and theatre performance. Benford and Giannachi's discussion of UX design in *Blast Theory*'s creative process, along with works on experience economy, was identified earlier on. They recognize "artist-led research" as an iterative research process where mixed-media performance experiences are deployed to audiences during a theatre tour and studied, feeding back into subsequent iterations.[254] Jocelyn Spence's writing on performative experience design is a key text, offering the main implications of framing performance processes through a HCI perspective and vice versa.[255]

More recently, Siobhan O'Flynn wrote about e-literature and experience design—namely how an understanding of the latter can reframe textual understanding and analysis of the former.[256] She defines (user) experience design as a discipline that views the interaction between media-affluent users with digital media (artefact, interface, or environment) as a key design factor.[257] While O'Flynn's article is framed through the lens of textual analysis rather than the theatre-making and design process, her discussion of the complex interaction between multiple interfaces and semiotic systems in transmedia works mirrors the findings from the experience design experiments in this research. She makes a distinction between UX design and Reader Response, as the latter focuses on evaluating cognitive engagement with text, while the former uses measures of human (user) response to design performative interactivity. She champions game designers and digital media producers' UX-based approach of interface design, interaction cues, and game mechanics, over theorists' focus on the text as a static artefact. As

[254] Benford and Giannachi, "Interaction as Performance," 41.
[255] Spence, *Performative Experience Design*.
[256] Siobhan O'Flynn, "Media Fluid and Media Fluent, E-Literature in the Era of Experience Design," *Hyperrhiz*, no. 20 (2019), https://doi.org/10.20415/hyp/020.int03.
[257] O'Flynn uses the term 'experience design' rather than 'user experience design' and states her preference for the term 'interactor' rather than 'user', but these terms correspond to each other in the practical sense.

this research has revealed, such an approach is even more relevant to artists and practitioners working in the non-linear, multiplatform transmedia storytelling.

The following sections discuss the procedural elements involved in applying UX design principles on theatre-making, as part of the design and construction process of a transmedia experience. It is important to note, however, that the guidelines provided are, ultimately, part of theoretical discourse rather than practical requirements. They are predicated on certain assumptions of artists' and theatre-makers' intentions in creating a transmedia theatre piece. Nevertheless, the discussion is salient as more theatre companies seek to engage (and retain) audiences through digital and hybrid performances.

I. Theatre-Making as an Iterative Process

The RtD method employed in this research prescribes a phenomenon-first exploratory-focused iterative design process for the practical component *of the research*. As such, in the meta-design investigation into how a transmedia theatre experience can be designed, the iterative process involved looking at existing phenomenon, creating exploratory prototypes, and gathering qualitative feedback to inform the next stage. The findings from this investigation revealed, however, that the experience design process also needs to involve the counter-method identified by Stappers, Visser and Keller.[258] This method, notably applicable to research in design context, is theory-driven and involves hypothesis-testing. The iterative design process, therefore, does not only concern itself with exploring design possibilities (what might work), but also finding out whether, in each use case, the design produces the desired interaction (why it does or does not work). This research, therefore, deviates from the tenets of Spence's performative experience design in that it acknowledges the importance of usability in crafting interactive digital theatre experiences.[259] It would argue that equally as important as

[258] Stappers, Sleeswijk Visser, and Keller, "The Role of Prototypes and Frameworks for Structuring Explorations by Research through Design," 3-5.
[259] Spence, *Performative Experience Design*.

the exploration of aesthetic and cultural processes is the question at the center of first and second wave HCI—whether the design successfully facilitates the purpose.

In designing the *Our House* experience, for example, the creative team was excited to find that YouTube's live chat function could be embedded into the livestreamed performance, creating possibilities of communication and community-building. Nonetheless, whether viewers would actually interact with it and *how* was never tested until the day of performance, mainly due to time and resource constraints (although this is likely a limitation for many productions, considering staging the performance itself often takes priority). As a result, the live chat functioned as more of a wild west where anyone could discuss anything. This is not necessarily a bad thing, but a proper iterative design process perhaps would have revealed greater narrative and interactive potential through the use of polls, pinned comments, and even character comments.

In addition to the design of each individual text in the transmedia theatre piece, the intermedial relationship between the texts should also be subject to the iterative design process. The intermedial factors identified in the knowledge base (such as production timeline, narrative timeline, production overlaps, and even the different technologies and platforms involved) can benefit from going through the testing and revision process. In *Our House*, for example, the use of Facebook Event as a portal to access external transmedia paratexts (and the digital performance core text) proved ineffective as viewers were not receiving notifications of new comments and content posted on the Event page. Also, a number of viewers were not active on Facebook and there was confusion as to whether the Facebook Event was for a real-life party unrelated to the performance. The iterative design process might have revealed these issues earlier on, allowing for an alternate platform, notification system, or method of audience onboarding (further outlined below). There is currently no set procedure in integrating such extensive iterative design process into the standard theatre pre-production process, but this research has identified the elements below as key to optimizing the transmedia theatre experience.

II. Usability Testing and Dramaturgy

While feedback-and-revision is often part of creative endeavors, both formally (for example, an editor assigned to an author by their publisher) or informally (such as a theatre director inviting friends to watch an early rehearsal of a performance), it is seldom framed as a formal testing process. Indeed, usability testing has been implied to be a key part of transmedia planning in guides to transmedia creation, if only in passing due to their focus on creators-as-users rather than audience-as-users. Andrea Phillips, for example, proposes charting audiences' narrative paths as part of transmedia planning, although she includes only a vague suggestion of testing these paths on "someone who doesn't know much about [the] story."[260] She also implores creators to test any new technology exhaustively with external users to ensure the usability of the interface.[261] The novelty of a medium plays a role in the perceived necessity of testing—O'Flynn states that nobody 'play-tests' a novel or book.

In product design (and subsequently, user experience design), usability testing is a key part of the iterative design process. In his guide to usability testing, James R. Lewis writes that there are two fundamental conceptions of usability which leads to two separate goals.[262] The formative goal is to diagnose and repair any usability issues, while the summative goal is to set specific quantitative usability measurements for the product to meet, both of which are meant to result in a more usable product. In designing a transmedia theatre experience (or any experience of an artistic and narrative work), the product's usability ultimately hinges on the overall narrative being conveyed to the audience. O'Flynn argues that even the earliest guidebook on narrative construction, Aristotle's *Poetics*, contains an experience design model, formulating the optimum storytelling design that elicits "the most heightened and resonant

[260] Phillips, *A Creator's Guide to Transmedia Storytelling: How to Captivate and Engage Audiences across Multiple Platforms*, 107.
[261] Phillips, *A Creator's Guide to Transmedia Storytelling: How to Captivate and Engage Audiences across Multiple Platforms*, 167.
[262] James Lewis, "Usability Testing," in *Handbook of Human Factors and Ergonomics*, ed. Gavriel Salvendy (New York: John Wiley, 2006).

effect and affect possible—expressed as catharsis."[263] This means storytelling or narrative usability can be applied to even the most naturalized form of media, be it novels or opera. In theatre-making, applying UX design principles means that the dramaturgical process—finding out whether the viewers can comprehend and respond to the overall story through everything that exists on stage and/or other media—would now involve specific goal-setting and quantitative assessment.

For every transmedia theatre piece, there would be multiple types of usability testing involved. The first has to do with the internal usability of each text (or textual usability) in the piece, and includes technological/interface usability, participatory usability and narrative usability. Technological or interface usability is concerned with how easy it is for viewers to navigate the technology and access the full range of narrative and interactive functionalities of any given text. This ranges from the most minuscule UI design elements on all digital platforms involved, such as where icons are located and what pressing enter on the chat window does, to more overarching technological concerns, such as whether to use existing platforms or what the site's privacy policy should be. Participatory usability refers to any interactive engagement with the text itself, from gaming interaction to social media comments and even user-generated content. Most importantly, narrative usability takes its cue from the *Poetics*, measuring whether the design of the text allows the viewers to grasp and respond to the story to the maximum extent. In line with what has been said earlier about intermediality in the iterative design process, the second stage of usability testing has to do with the intermedial usability within the overall transmedial piece. This can be further categorized into production usability and storyworld usability. The former measures how easy it is for viewers to access each text in relation to one another—are there links included in one paratext that takes them to the next paratext, or does a line in the live performance hint at a narrative continuation in the paratexts? Storyworld usability relates to narrative usability, and revolves around how viewers can synthesize the different narrative threads and visual elements in the various texts to into

[263] O'Flynn, "Media Fluid and Media Fluent, E-Literature in the Era of Experience Design."

one cohesive storyworld, connecting the different stories together. As seen in the knowledge base, this may involve shared settings or characters, costumes or other visual details, and so on.

The challenge lies not just in the amount of usability testing that needs to be performed (depending on how many separate texts form the transmedia theatre piece), but also in designing and conducting each test. The former creates logistical considerations, including recruiting testers, allocating time and place, creating test prototypes and other resources required, within the constraints of the production. The latter involves determining usability testing priorities, the appropriate and objective measure of usability for each element tested and the tasks given to usability testers. Lewis summarizes fundamental measurements for usability tasks into the following: successful task completion rates (measuring effectiveness), task completion times (measuring efficiency) and participant satisfaction ratings.[264] Again, tailoring usability tasks and measurements for a narrative-based product means focusing on effectiveness and efficiency of communicating narrative. It requires understanding which elements can be objectively tested while still respecting the viewers' agency of experience and interpretation. The think aloud method, where the tester is asked to verbalize what they are doing as they are doing it, can assist in discovering problems, particularly in evaluating comprehension. The table below (Table *1*) lists the different categories of usability testing and examples of usability elements, tasks and measurements that could have been utilized in the experience design of *Our House*. If the creative team had sufficient time and human resource, testing sessions could have been performed after the initial performance and paratext design ideation. External testers would have been invited to test low-fidelity prototypes and each subsequent iteration up, with the technical and dress rehearsals doubling as final usability test sessions.

[264] Lewis, "Usability Testing," 9-10.

Usability Category	*Our House* Example	Usability Task	Measurement
Textual Usability			
Technological/Interface Usability	Usability of YouTube's live chat function in the livestreamed performance	Leave a comment on a specific live chat (e.g. Backyard livestream)	Completion rate, completion time
Participatory Usability	Usability of the Spotify playlist interaction	Visit the Spotify playlist and engage as you see fit	No. of plays, no. of songs added, no. of shares
Narrative Usability	Usability of the blog post narrative	Read a blog post and take comprehension quiz	Comprehension quiz score
Intermedial Usability			
Production Usability	Usability of the Facebook Event as transmedia portal	Go to the Facebook Event page and visit all the different activities available	Completion rate, completion time, no. of activities identified
Storyworld Usability	Usability of the storyworld geography (sharehouse)	View the Facebook Event page, the illustrated groundplan, and the blog post, then take sharehouse quiz	Sharehouse quiz score

Table 1. Possible usability testing elements, tasks and measurements in *Our House*

III. Transmedia Storyworld Onboarding

While usability tests may help the production team produce the optimum experience design and rectify any issues that might surface, transmedia storyworld onboarding can help prevent potential issues by preparing viewers for the experience. In UX design, user onboarding refers

to "a set of design principles (e.g., make users engage right from the start but do not overwhelm them with tasks that are too demanding) that help new visitors to become familiar with the service that a digital platform offers and guide them to become registered (i.e., activated) users."[265] The term was adopted from human resources, where it refers to the process of assimilating new hires to the culture and procedures at their new workplace. Audience research results for both DigiStage and *Our House* shows that lack of familiarity with the concept of transmedia resulted in the absence of expectation. Several participants have cited being unaware of the paratexts' functionalities, and sometimes their existence altogether, as their reason for not engaging with them. In transmedia theatre experience design, storyworld onboarding refers to the methods and tools to introduce the concept of transmedia storytelling to would-be viewers, help them become familiar with the paratexts, and encourage them to actively engage in the experience.

There are scant academic resources about what user onboarding entails, but an article by designer and technology writer Paul Jarvis lists three components: accommodation (giving users the tools to use the product they signed up for), assimilation (helping new users feel like they belong), and acceleration (helping them quickly enter the existing community).[266] Storyworld onboarding can similarly involve, first and foremost, guiding first-time viewers into the storyworld by communicating, in simple terms, what transmedia theatre is, the core text and paratexts involved, and the range of possible experiences and engagement to expect. Phillips emphasizes the need to tailor transmedia experiences for the target audience, but onboarding has the potential of reversing the process—preparing the audience to the transmedia experience offered.[267]

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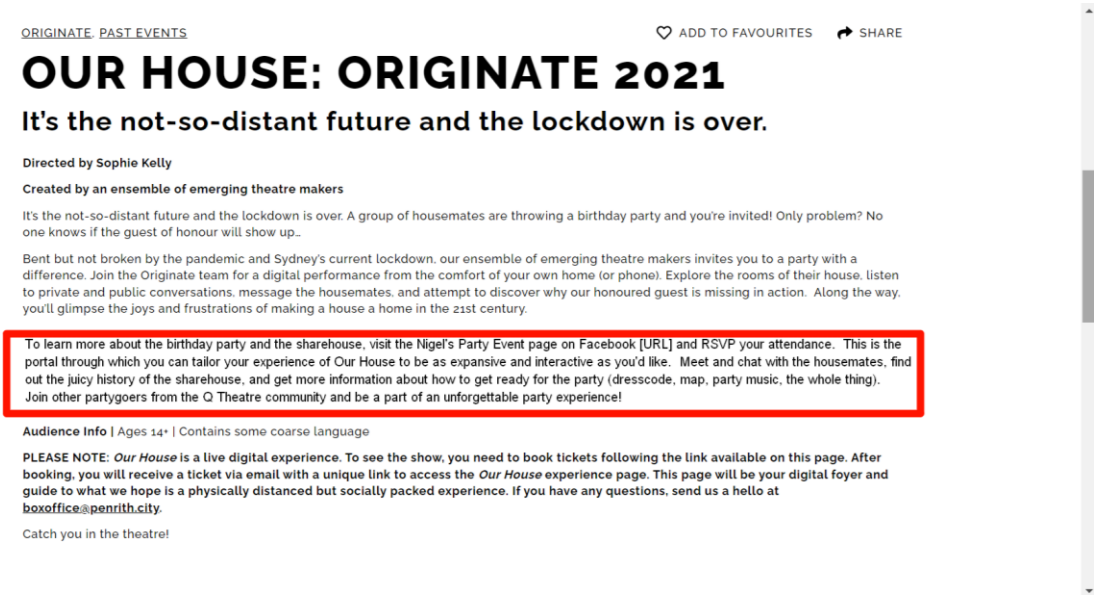
[265] Konstantin Roethke et al., "Social Influence Tactics in E-commerce Onboarding: The Role of Social Proof and Reciprocity in Affecting User Registrations," *Decision Support Systems* 131 (2020), https://doi.org/10.1016/j.dss.2020.113268.
[266] Paul Jarvis, "User Onboarding: Not Just for HR and Growth Hackers," *HuffPost* (August 25 2014). https://www.huffpost.com/entry/user-onboarding-not-just-_b_5708299.
[267] Phillips, *A Creator's Guide to Transmedia Storytelling: How to Captivate and Engage Audiences across Multiple Platforms*.

The Digistage app, for example, had the About the Activities page explaining the research and what each activity entailed, while *Our House* had the Facebook Event page. In both cases, however, these pages were available only once viewers have decided to attend the performance, and were not advertised to all viewers. Ideally, an introductory paragraph is available for viewers trying to decide whether to attend the performance at all, such as on the performance page on the theatre company's and ticket vendor's website. The example below (Fig. *39*) shows a mock-up of what such a paragraph would look like on Q Theatre's *Our House* page. It conveys the idea of transmedia theatre experience (opt-in, interactivity), lists the different paratexts, and lets viewers know they are joining other viewers like themselves. This introductory information can be followed up in purchase confirmation and e-ticket e-mails once viewers have decided to attend the performance. These efforts would prepare viewers to immerse themselves in a transmedia storyworld beyond the performance they were initially interested in, spread over multiple texts and interactivities.


ORIGINATE, PAST EVENTS

ADD TO FAVOURITES SHARE

OUR HOUSE: ORIGINATE 2021

It's the not-so-distant future and the lockdown is over.

Directed by Sophie Kelly

Created by an ensemble of emerging theatre makers

It's the not-so-distant future and the lockdown is over. A group of housemates are throwing a birthday party and you're invited! Only problem? No one knows if the guest of honour will show up...

Bent but not broken by the pandemic and Sydney's current lockdown, our ensemble of emerging theatre makers invites you to a party with a difference. Join the Originate team for a digital performance from the comfort of your own home (or phone). Explore the rooms of their house, listen to private and public conversations, message the housemates, and attempt to discover why our honoured guest is missing in action. Along the way, you'll glimpse the joys and frustrations of making a house a home in the 21st century.

To learn more about the birthday party and the sharehouse, visit the Nigel's Party Event page on Facebook [URL] and RSVP your attendance. This is the portal through which you can tailor your experience of Our House to be as expansive and interactive as you'd like. Meet and chat with the housemates, find out the juicy history of the sharehouse, and get more information about how to get ready for the party (dresscode, map, party music, the whole thing). Join other partygoers from the Q Theatre community and be a part of an unforgettable party experience!

Audience Info | Ages 14+ | Contains some coarse language

PLEASE NOTE: *Our House* is a live digital experience. To see the show, you need to book tickets following the link available on this page. After booking, you will receive a ticket via email with a unique link to access the *Our House* experience page. This page will be your digital foyer and guide to what we hope is a physically distanced but socially packed experience. If you have any questions, send us a hello at boxoffice@penrith.city.

Catch you in the theatre!

Fig. 39. A mock-up of what the introductory paragraph on Q Theatre's website might look like as part of storyworld onboarding

In addition to Jarvis's components, Roethke et al. explores two social influence tactics in e-commerce onboarding that may be applicable to storyworld onboarding: reciprocity

(particularly utility-based reciprocity) and social proof.[268] The former entails rewarding positive or negative actions with similar actions, with utility-based reciprocity referring to additional information or functional content. Both Phillips and Robert Pratten discuss the importance of rewarding audience participation as motivator, with the latter placing an emphasis on signaling the reward system.[269] [270] In a transmedia theatre experience, where viewers are seeking to engage with a narrative, the most effective reward is arguably more narrative—greater insight into story, characters and other storyworld details. The paratexts, therefore, inherently provide utility-based reciprocity—the onboarding process needs to involve communicating this reciprocity.

Social proof, on the other hand, is an e-commerce strategy to broadcast product demand and popularity, such as reviews and testimonials. When users are unsure about a product, they draw on social proof for guidance, so e-commerce websites use social proof to alleviate their concerns and build trustworthiness. Phillips defines social proof as "the demonstration that something has been done or thought of before by other people."[271] She points out that social proof would encourage participation in certain types of audience interaction, but a broader application of social proof to the entire transmedia form might actually be possible. In transmedia theatre experience, the production team can take advantage of social proof in storyworld onboarding by sharing instances of transmedia engagement with all viewers. For example, Q Theatre could send weekly electronic direct mails (EDMs) from Q Theatre before the performance to share viewer participation in *Our House*'s paratexts, such as the songs that have been added to the Spotify playlist or Facebook exchanges between the characters and viewers/guests (within the appropriate boundaries of privacy). These storyworld onboarding strategies would have shown other viewers the community that they could be part of and the rewards they stood to gain by actively engaging in the transmedia theatre experience.

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[268] Roethke et al., "Social Influence Tactics in E-commerce Onboarding: The Role of Social Proof and Reciprocity in Affecting User Registrations."
[269] Phillips, *A Creator's Guide to Transmedia Storytelling: How to Captivate and Engage Audiences across Multiple Platforms*.
[270] Pratten, *Getting Started with Transmedia Storytelling: A Practical Guide for Beginners*.
[271] Phillips, *A Creator's Guide to Transmedia Storytelling: How to Captivate and Engage Audiences across Multiple Platforms*, 156.

IV. The Synthesis and Division of Transmedia Labor

Naturally, the UX design principles and strategies suggested above translates to additional work hours for the production team. The instinct might be to assign those additional hours to UX-focused design hires, but even if the production had the capacity to hire them, in practice the labor division is more complex. In the case of *Our House*, for example, technically the CI and digital designer was the only person in charge of the experience design elements. In reality, the creation of transmedia paratexts, even the external paratexts, involved the creative and technical contribution of other members of the creative team, including the director, stage manager, and the artists/performers. The socially-distanced nature of the production was especially tough on the performers, who had to be their own livestreaming team. In a research article on the production dynamics of ARG, Elizabeth Evans states that this demand for flexibility and overlapping responsibilities is common in creative endeavors, but particularly in transmedia and pervasive media productions.[272] This is not surprising since, as discussed in previous sections, shared narrative and production elements help ensure cohesiveness across texts.

Evans's interviews with an ARG production team reveals that the rewards of such flexibility demand, such as the excitement of engaging with the audience and enhanced creative agency, can outweigh the challenges of increased work hours that they may not be entirely equipped for. On *Our House*, the artists were open-minded and generous enough to dedicate additional hours outside of the workshop to learning the livestreaming and telematics technologies required, testing them, and managing their livestreams during the performances (while acting). At the same time, the production of external paratexts also required their contribution both as performers (e.g. in-character video posts on the Facebook Event) and as writers (e.g. comments and blog posts that reveal more about their characters). The amount of work required of the artists, much of which was unexpected when they initially signed up to be part of Originate,

[272] Elizabeth Evans, ""We're All A Bunch of Nutters!": The Production Dynamics of Alternate Reality Games," *International Journal of Communication (Online)*, no. 8 (2014), https://ijoc.org/index.php/ijoc/article/view/2605.

meant they had to prioritize. As a result, the external paratexts, understandably at the bottom of their list, suffered from lack of their involvement. What the research has revealed, therefore, is that the flexibility demand has to be properly communicated to the workers involved ahead of time, with proper work hours allocated and compensation offered. This speaks to the importance of intentionality in transmedia theatre production, as the producers have to anticipate and plan for the skills and hours required for the piece (and hire talent accordingly).

D. Creative Output: New Methods of Storytelling

Aside from the insights gained into what constitutes transmedia theatre and how to design such an experience, the artistic output itself—the experience design of *Our House*—presents a novel form of digital performance. The ideation and construction process leading up to the final design is enabled by the formulation of the following methods of digital, interactive and immersive storytelling that can be utilized in future transmedia theatre works (and digital performance works, in general).

I. Dramaturgically Driven Digital Platform Design

As discussed in previous sections, the *Our House* team wanted to avoid Zoom theatre partly due to the platform's highly recognizable, possibly fatigue-inducing UI and UX design. In doing so, several platforms were proposed with different possible UI/UX designs, until the team settled on a PWA with tailor-made UI and UX. What all the proposed designs had, including the OHOL PWA in the end, was the common theme of 'rooms in a house'. Mozilla Hubs and Gather.Town both allowed digital renderings (3D and 2D, respectively) of rooms, resulting in a virtual space through which avatars of characters and viewers would be able to move and interact. The OHOL PWA lacks a navigable virtual space, instead relying on hyperlink interactivity, illustrated

geography and the viewers' imagination to create the idea of a cohesive house in which all the rooms in the livestreams are located. Nevertheless, the UI and UX design of the platform enforces the architecture of the house, with room illustrations on every livestream, a Hallway menu separating the different Rooms, and on-theme title cards. The rooms-in-a-house UI and UX design was driven by the dramaturgy of *Our House*, out of the artists' desire to convey a sharehouse where young people like themselves live and build relationships. Similarly, the UI and UX design for the paratexts was also driven by dramaturgy—that of a house party. After the pandemic and resulting lockdowns, the artists wanted to create an event that brought together the community. The live chat UX, with viewers who did not know each other banding together in a stream of meandering conversations, allowed the possibility of being in an open house party. The Facebook Event page and paratexts also aimed to sustain, perhaps to a lesser degree of success, the dramaturgy of the storyworld. Engaging with the external paratexts required participating in the procedures of preparing for a party: invitations, dress codes, music discussions, and party favors.

Our House was certainly not the first in basing the UI/UX design of digital performance and/or transmedia theatre experience on the dramaturgy of the storyworld—one could argue that immersive theatre was its analogue, in-person precursor. In her book on immersive theatre and audience experience, Rose Biggin writes that the term 'immersive', originally used in the context of technological development and VR environments, refers to a form of theatre notable for "audience movement within a structural geography that resembles a combination of promenade performance and art installation."[273] She cites productions by Punchdrunk as an example of immersive theatre, utilizing spatially innovative environment, non-chronological impressionistic narrative and interactivity to distinguish itself from traditional proscenium arch theatre. In *Sleep No More*, for example, viewers are free to walk around the performance space, a multi-story "hotel", built specifically for the show.[274] They may encounter scenes of embedded narratives, some of them looped multiple times throughout the duration of the

[273] Biggin, *Immersive Theatre and Audience Experience: Space, Game and Story in the Work of Punchdrunk*, 21.
[274] *Sleep No More*, script by Punchdrunk, direction by Felix Barrett and Maxine Doyle, first performed at Beaufoy Building, London, December 2003.

performance, as well as interact with the meta-narrative through viewing objects, entering rooms, having one-on-one sessions with characters and other similar opportunities for active engagement. Since their inception, Punchdrunk has continued to utilize dramaturgically driven immersive environments—a Victorian garden for Sophocles' familial tragedies, a 1930s hotel for the film noir rendering of *Macbeth*, a recreation of 1950s "small town" America for Goethe's *Faust*, among others[275]—and other immersive endeavors have followed suit. Adam Alston has likened Punchdrunk's environment design to Disneyland, both meant to cohere with a clearly defined aesthetic logic and transport audiences in processes of discovery.[276] The resulting immersive theatre offers personalized, non-reproducible experiences that consumers crave in the current experience economy.

Theatre scholars have pointed out the overlaps between virtual reality (VR) theatre and immersive theatre, with the latter perhaps functioning as the digital remediation and future incarnation of the former.[277] [278] [279] Indeed, virtual sets in VR theatre more closely approximates the structural geography of immersive theatre environments. In contrast, in *Our House*, the UI/UX design of the digital platforms themselves reinforces the dramaturgy, eliminating the need for the resource-intensive creation, maintenance and viewing of virtual environments. It opts for hypermediacy rather than transparency, using dramaturgically-driven design to point out the digitally-mediated nature of the interaction, rather than hide it. In addition, UI/UX design of non-VR digital platforms is not necessarily linked to geography and architecture, allowing greater range of dramaturgical elements to inspire design. Previous examples of transmedia theatre and digital performances have utilized this design method. Blast Theory's *Karen*, for example, uses self-help quizzes, life-coaching apps and telehealth interactivity as part

[275] Andrew Eglinton, "Reflections on a Decade of Punchdrunk Theatre," *TheatreForum*, no. 37 (2010).
[276] Adam Alston, *Beyond Immersive Theatre Aesthetics: Politics and Productive Participation* (London: Palgrave Macmillan, 2016).
[277] Laurane Marchive, "Virtual Sets and Vulnerable Selves: Reality and Fiction, Analogue and Digital: the Evolution of Immersive Theatre," *TLS. Times Literary Supplement*, no. 6070 (August 2 2019), Gale. https://link.gale.com/apps/doc/A631896187/AONE?u=unisa&sid=bookmark-AONE&xid=c3580af0.
[278] Marchive, "Virtual Sets and Vulnerable Selves: Reality and Fiction, Analogue and Digital: the Evolution of Immersive Theatre."
[279] Previously, Dixon, Popat Taylor, and other writers have also pointed out that immersive theatre takes many of its cues and procedures from virtual reality, while virtual reality is in itself foregrounded by theatre.

of the performance platform design, dramaturgically linked to questions of digital honesty and consent.[280] Richard Nelson's *What Do We Need To Talk About?*, on the other hand, was an example of Zoom theatre that was also dramaturgically-driven in its platform design (or selection, in this case). Indeed, the story of family intrigues in the middle of a pandemic would be dramaturgically enhanced by the Zoom interface, compared to that of Shakespeare's *The Tempest*, perhaps merely facilitated by the same platform. *Our House* and other similar outputs show that dramaturgically driven platform design for transmedia theatre could strengthen storyworld immersion and enable greater customization, key advantages in creating an engaging audience experience.

II. YouTube Live as a Tool for Embedded Telematics

Another discovery gained from constructing *Our House* as the creative output of this research is the use of YouTube Live for performance telematics. This method was set up with the goal of easily embedding livestream video from multiple locations simultaneously onto the webpages on the OHOL PWA. YouTube Live has primarily been used to facilitate live theatre performance as a re-broadcasting tool. Prior to the pandemic, this largely involved wholesale livestreaming of an in-person performance—a technique much more commonly used for live concerts and music festivals. There are very few livestream examples involving theatre performance still available from before the pandemic, but one example is Mikron Theatre Company's 2019 touring musical *All Hands on Deck*.[281] The company livestreamed the final performance on October 19, 2019 on YouTube, for no additional charge. The livestream consists of a multi-camera setup, likely fed through OBS or other similar broadcasting software (and possibly a physical switcher), and streamed on Youtube Studio to Mikron Theatre's YouTube channel.[282]

[280] Matt Adams, "How We Made Experiential Life-Coaching App, Karen," *The Guardian* (August 14 2015). https://www.nytimes.com/2015/04/05/arts/karen-an-app-that-knows-you-all-too-well.html.
[281] *All Hands on Deck*, script by Vashti Maclachlan, direction by Marianne McNamara, music and lyrics by Kieran Buckeridge, first performed at the Lawrence Batley Theatre, Huddersfield, 13 April 2019.
[282] MikronTheatre, "All Hands On Deck - Livestream - 19 Oct 2019," YouTube Video, 1:38:33, October 19, 2019, https://youtu.be/mGUQD0adQ9c.

The livestream, which seemingly had live chat disabled, is currently embedded onto Mikron Theatre's website, and might have been similarly embedded when it first went live to allow audiences to watch it directly on the site.[283] Since the pandemic, theatre companies and theatre-makers have used YouTube live to re-broadcast Zoom theatre. One channel, Livestream Theatre, joined YouTube in May 2020 and specializes on Zoom-facilitated socially-distanced performances (Fig. *40*).[284] As seen in the screenshot below, the Zoom interface, including the platform's logo, gallery layout and names, is easily visible on the livestream. In such instances of re-broadcasting, the telematics tool is Zoom and other similar online videoconferencing platforms, not YouTube itself—the Lounge stream on *Our House* is similarly a re-broadcast of telematics-assisted performance (using Jitsi Meet rather than Zoom).

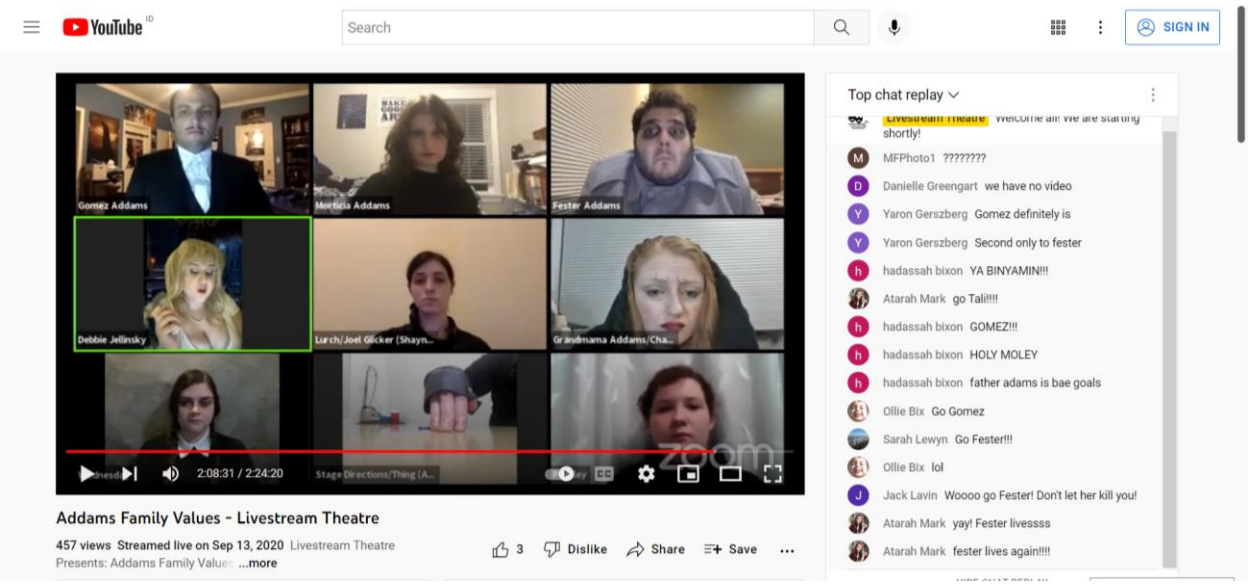

Fig. 40. Livestream Theatre's livestream of a Zoom performance of *Addams Family Values* (2020)

In contrast to YouTube Live as a re-broadcasting method, *Our House* used YouTube Live as a telematics tool. Multiple video feeds from separate locations are sent to the same YouTube

[283] "Live Stream," Mikron Theatre Company, 2019, accessed April 25, 2022, https://www.mikron.org.uk/about/live-stream.
[284] Livestream Theatre, "Addams Family Values - Livestream Theatre," YouTube Video, 2:24:20, September 14, 2020, https://youtu.be/PCzwk4MHrxw.

account and turned into simultaneous livestreams, all of which can be controlled by one person. The benefit of this method is that each video feed from each performer remains a separate livestream, each of which can be embedded into different pages on a website or app (or the same page, for that matter). This lends itself for a flexibility of viewing, where the choice of which livestream to watch at any given time can be put in the hands of the viewers. Unlike Zoom, YouTube Live and other social media livestreaming are mono-directional, where viewers do not have to indicate their presence in the livestream in any way—viewers can see the production, but the production cannot "see" the viewers. This suits the opt-in nature of transmedia theatre participation, again, as viewers can watch each livestream in a completely passive manner should they prefer to. Compared to Zoom rooms, YouTube player windows and live chat windows can be directly embedded onto web pages using simple HTML language, with functionalities like auto-play (upon page load), pausing, and skipping to live. With some creativity, such as tailoring a page containing all livestreams accessible only to performers and backstage crew, the performers should be able to see and respond to one another's performance. Using YouTube Live allows for a telematics method that is affordable, less labor-intensive, and with a shorter learning curve for cast and crew as well as viewers.

III. Transmedia Theatre Portal as 'Killer App'

In both practice-based stages of this research, transmedia theatre portals were developed, through which transmedia theatre paratext prototypes would be easily accessible to potential viewers. For *Man Covets Bird* it was DigiStage, while for *Our House*, both the Experience page (containing links to the OHOL PWA and some external paratexts) and the Facebook Event served as portals. One of the insights gleaned from audience research on DigiStage was the student participants preferring social media interaction on an established social media platform, rather than on DigiStage's internal microblog function. This led to the use of Facebook for *Our House*, in addition to its array of features and functionalities. Viewers did not engage with the Facebook Event page, however, due to lack of awareness and general

disinterest in using social media platforms to engage with a theatre performance. The Experience page and the OHOL PWA received higher views, so it is possible that if the other external paratexts were accessible from the page (without having to go through Facebook), they would have attracted more viewers to engage. Perhaps the ideal solution to encouraging engagement would be a tailor-made centralized portal app, similar to DigiStage, user-friendly and accessible to the public.

There is no reason Cameron and Anderson's "killer app" should only support drama pedagogy—this transmedia theatre portal app would also support storyworld building and onboarding. To that end, the app would still include social media integration, allowing social media content to be embedded as well as sharing of content and activities through social media platforms, but any social media logon would be optional. It would also contain either the digital performance itself or a direct link to the performance, or, in the case of in-person performances, information regarding the production (similar to a digital playbill) and even direct ticket sales. Depending on the target audience, additional teaching and learning resources can be hosted on the app, preferably in relation to the transmedia theatre paratexts. For example, a paratext where viewers submit songs for the creative team to play during the performance (like the community Spotify playlist) can also link to educational resources on the use of music in drama. Future iterations of the app might also allow one app to serve as portal to multiple transmedia theatre storyworlds and experiences. With proper iterative design process and usability testing during the app development, such a portal app has the potential to centralize digital engagement with theatre.

CHAPTER 9: CONCLUSION

A. Research Limitations

The limitations of this research encompass theoretical and practical limitations, arising from static factors and dynamic factors. The first limitation involves primary and secondary resources, particularly during literature review, case studies and knowledge base creation. Theatre performance, being a temporal art form, is ephemeral, rendering any study of past examples reliant on often-incomplete archival materials. While the cases with the greatest availability of secondary resources and academic discourse around them were chosen, there is still the difficulty of synthesizing available materials to achieve the most complete picture of a theatrical work. In transmedia theatre, especially, with multiple paratexts involved, it is difficult to capture the audience experience accurately. Even digital paratexts deteriorate—up until 3 years ago, the Flash game for Unlimited's *The Moon, The Moon* used to be available on ConeyHQ's website, but now the link to access it leads to a broken URL (with Flash itself having become redundant technology, unsupported by modern browsers). Considering the relatively low visitor numbers to such theatre-related web pages and digital resources, they are seldom archived by the Internet Archive and other similar digital libraries. One solution, which many theatre researchers employ, would be to get in touch with artists and theatre companies and request access to their archive materials. Unfortunately, the time constraints for this research, taking into account the practice-based stages, did not allow the time allocation required to source archive materials for all past cases and examples. As such, secondary resources were deemed sufficient for analysis.

This leads to the next limitation, which concerns logistical limitations brought about by the collaborative aspect of the practice-based stages. Due to the mixed methodology of the research, this research was not predicated upon existing agreements for collaboration. This

means collaboration with theatre companies was sought only after the proposal was approved, concurrent with the preceding theoretical stages (refer to Gantt charts in Appendix A). In the end, the collaborative efforts yielded relevant research insights, secondary knowledge and experience for the CI, and valuable artistic output. At the same time, additional time and resource constraints arose from the unforeseen circumstances that affected the collaboration. Scheduling changes experienced by both Slingsby Theatre and Q Theatre, for example, not only pushed back the iterative design processes, but also resulted in necessary changes in methodology. When Slingsby Theatre's *The Boy Who Talked to Dogs* was pushed back, changing the project to involve a school-focused staging of *Man Covets Bird* meant recruiting student-age research participants. This meant anonymizing and randomizing research responses, which resulted in the social media modality being tested through an internal microblog function rather than a genuine social media platform. A similar domino effect occurred with delays and changes resulting from the pandemic. While subsequent adjustments to research method is not rare in doctoral research projects, it still resulted in less-than-ideal testing and feedback mechanisms, producing potentially less accurate or incomplete results. In future research, securing the collaborative project beforehand, outlining goals and processes, as well as contingency plans, should help allay these logistical issues.

Finally, there were limitations due to the CI's lack of expertise in certain areas of the research. The CI's past academic background and work experience includes a combination of theatre practice, media studies, and UI/UX design training—she is proficient but not an expert in each of these areas. For example, while she understands the principles of UI and UX design, she is not well-versed enough in web development and programming languages to build an app from scratch. Both DigiStage and OHOL were built on the GoodBarber platform using available templates, which has its own limitations from cost to functionality. Similarly, the CI's lack of experience in quantitative research methods meant she was initially not versed in survey-writing methods. The audience questionnaire for DigiStage/*Man Covets Bird* did not employ skip logic, resulting in overlaps and ambiguities in participant responses. Outsourcing some of

these key tasks and responsibilities to their respective experts would incur significant costs, but would also likely increase efficacy and improve the results of the research.

B. Summary of Findings

This section summarizes the findings of this research in relation to the research questions listed at the start of the exegesis:

1. What is 'transmedia theatre'? How does transmedia theatre relate to digital media and convergence, participatory theatre, and intermediality?

The definition of transmedia theatre is one that has evolved throughout this research and will likely keep evolving in the future. The current definition involves a storytelling method where the narrative is deliberately distributed among a live (or mediated live) theatre performance at its core and digital interactive paratexts, forming a cohesive storyworld for viewers to experience. Transmedia theatre experiences rely on the convergence of digital media, which allows endless possibilities for different media and texts to merge, while giving audiences agency of choosing which texts to engage with and how. As such, transmedia theatre is inherently participatory, but there are layers of and different degrees of interactivity within each text and the overall piece. In addition, the way the texts interact with one another, both narratively and in production terms, is based on the principles of intermediality, which in turn informs the experience design of transmedia theatre pieces.

2. What are the different ways to integrate live theatre and digital media in transmedia storytelling? How do different technological and narrative affordances affect storytelling?

The research identifies the different ways live theatre performance and digital media paratexts can be integrated into transmedia storytelling in the form of transmedia theatre modalities and parameters. One method of integration might involve viewers simply encountering different paratexts related to the performance and choosing which ones to view and string together, while another involves viewers submitting user-generated information or narrative content that becomes integrated into the performance. Then, narrative, dramaturgical, technological and logistical considerations, further specified in the knowledge base parameters, inform how theatre-makers and theatre companies can accomplish such integration. The process involves not only the creation of a narrative storyworld, along with the construction of performance and paratexts to convey that storyworld, but also the design for viewers to engage in the storyworld to produce the desired experience.

3. How do we design a digital transmedia experience for theatre audiences? How can methods of experience design and audience research be employed in the design process?

Designing a transmedia theatre experience requires the application of an iterative design principles from the fields of UX design and HCI to the dramaturgical process of theatre-making and digital media creation. It involves storyworld ideation and prototype building followed by extensive usability testing, combined with audience research, to allow the design to meet narrative and interactive goals, as well as resolve any potential issues. Storyworld onboarding should help prepare viewers' expectations of a transmedia theatre experience while encouraging them to engage as actively as possible. Ultimately, the experience design process should focus on the different possibilities for viewers to immerse themselves in the transmedia storyworld, allowing them to tailor their own ideal experience of theatre.

Beyond the answers themselves, however, it is important to note that the process of investigating the research questions has revealed certain insights on the potentials and realities of designing audience experience of transmedia theatre. First of all, despite the CI's initial naïve excitement and design efforts, some of the transmedia theatre prototypes had very low engagements (in both practical stages). Andrea Phillips warns that the risk of interactivity, for the creators, is that no one participates, or that audiences participate in a different way than anticipated.[285] The same risk applies to researchers, and while the findings generated (like usability testing and storyworld onboarding) are expected to encourage greater participation, there is still no guarantee. As Jocelyn Spence proposes, it is important to acknowledge and remain open to possibilities throughout the final stages of investigation, and even beyond in future research attempts.

Another important finding from the overall research journey is that the design process outlined in this thesis ultimately represents only one part of transmedia theatre creation. While this thesis has argued that transmedia theatre can be viewed as an audience experience, rather than solely a form of artistic expression, it is ultimately an experience of storytelling. The narrative elements, including plot and characters, still dictate audience experience. The most well-planned audience experience design is unlikely to make up for a poorly constructed or poorly told narrative (though, conversely, bad audience experience design can result in poorly told narrative). This was proven true in both practical stages of the research where much of the audience feedback revolved around whether they liked the story being told, be it in the core text or paratexts.

Finally, the different processes of transmedia theatre creation can contradict one another—in fact, aspects of the audience experience design process are likely to run counter to the artistic process of theatre-making. One could hardly expect writers and theatre artists to compromise their vision and expression entirely (or at all) to cater to audience expectations or feedback. It

[285] Phillips, *A Creator's Guide to Transmedia Storytelling: How to Captivate and Engage Audiences across Multiple Platforms*.

would also not be surprising if some artists find the quantitative processes involved, from goal-setting to usability testing, web analytics to survey statistics, restrictive to artistic exploration. Designers hoping to apply such principles to theatre-making may have to prioritize certain aspects of audience experience design and compromise. The CI herself as a researcher also has to temper her expectation on how readily the broader theatre scholarship would adopt the experience design perspective.

C. Future Research

As is the case for most research endeavors studying a rapidly changing and developing phenomenon, additional questions for future research have emerged throughout this exegesis. First of all, it is almost certain that the possibilities of integrating digital paratexts with theatre performance are not limited to the four modalities identified in this research. More research is required to identify, codify and analyze other modalities, especially given emerging technologies. For example, do virtual reality, augmented reality, and mixed reality qualify as another modality (or several modalities)? Or are they simply technologies that facilitate one of the four modalities depending on how viewers engage with them?[286] Similarly, it would be useful to explore how transmedia theatre experiences can be built upon different narratives and narrative structures. A transmedia storyworld based on children's fairytales might produce different dramaturgical considerations compared to gothic literature, while a dance performance might integrate better with certain paratexts compared to a murder mystery theatre. A key question that arises from this research with regards to storyworld-building is whether a transmedia theatre piece based on a popular source material would inherently attract greater audience engagement.

[286] For example, a VR-based paratext that involves watching an animated episode and one that involves a combat simulation game might fall into hunting-and-gathering and gaming interaction modalities, respectively.

The previous chapter provides further prompts for future research in the area. These include how to evaluate the effectiveness of the suggested applications of UX design principles on transmedia theatre experience. For example, what usability tasks and questions would best determine the optimal paratext design, or whether the storyworld onboarding process could benefit from offline and/or in-person activities. Future research can also explore the question of labor division—the exploitation of affective labor through user-generated content is a common criticism of participatory media, and can be applied to transmedia theatre. The issue of inequalities surrounding transmedia theatre is worth investigating, considering access to digital paratexts can be determined by device ownership and internet connection.

Furthermore, the storytelling methods resulting from this research can be further tested and refined. The transmedia theatre portal, in particular, presents exciting opportunities not just for storytelling, but drama education, arts marketing and even digital humanities. Ultimately, transmedia theatre and the related audience experience present one of many emerging methods of communicating and telling stories. Future research on transmedia theatre should assist artists and theatre-makers in their use of digital technology to convey their storyworlds and keep audiences engaged in the experience economy.

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APPENDICES

APPENDIX A – Research Timeline Gantt Charts (next page)

Proposed Timeline

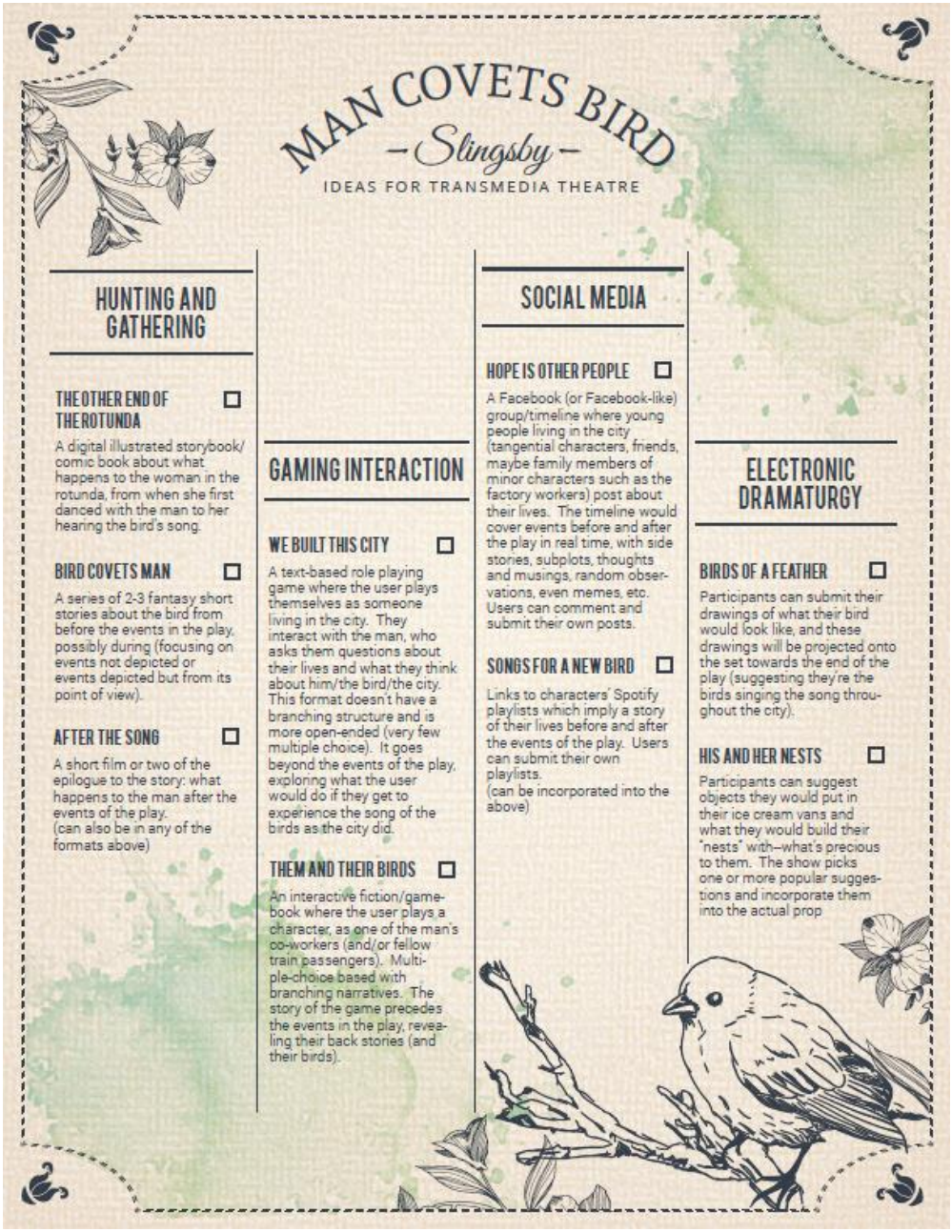
Research Semester	1	2	3	4	5	6
Year	Year 1 (2018-2019)		Year 2 (2019-2020)		Year 3 (2020-2021)	
Research Goals	Feb-July	Aug-Jan	Feb-July	Aug-Jan	Feb-July	Aug-Jan
Contextual Review						
Proposal Writing						
Proposal Submission and Review						
Ethics Approval						
Approaching Theatre Companies						
Case Study Reviews						
Interviews with Theatre-makers						
Analysis of Case Studies						
Low-Fidelity Prototype Building						
Probe Design						
Participant Recruitment						
Cultural Probes Deployment/Return						
Audience Research (Group Discussions)						
Response Analysis						
Prototype Refinement						
Final Design						
Implementation (Performance)						
Exegesis: Initial Draft						
Exegesis: Editing						
Exegesis: Polishing and Submission						
Final Presentation						

Final Timeline

Research Semester	1	2	3	4	5	6	7	8	9
Year	Year 1 (2018)		Year 2 (2019)		Year 3 (2020)		Year 4 (2021)		2022
Research Goals	Feb-July	Aug-Jan	Feb-July	Aug-Jan	Feb-July	Aug-Jan	Feb-July	Aug-Jan	Feb-July
Contextual Review									
Proposal Writing									
Proposal Submission and Review									
Ethics Approval									
Approaching Theatre Companies									
Case Study Reviews									
Database Building									
Low-Fidelity Prototype Building (Man Covets Bird)									
Probe Design (Man Covets Bird)									
Participant Recruitment (Man Covets Bird)									
Cultural Probes Deployment/Return									
Response Analysis									
Low-Fidelity Prototype Building (Emil… Detectives)									
Approaching Theatre Companies									
High-Fidelity Prototype									

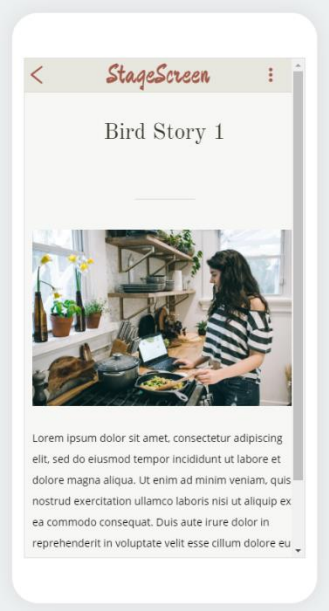
Building (Originate)										
Participant Recruitment/ Ethics Approval (Originate)										
Design Probe/ Implementation (Originate)										
Audience Research and Analysis (Originate)										
Exegesis: Initial Draft/Start Writing										
Exegesis: Editing										
Exegesis: Polishing and Submission										
Final Presentation										

APPENDIX B – Transmedia Theatre Ideas (originally presented to Slingsby Theatre personnel)



APPENDIX C – Transmedia Theatre Activities Plan (originally presented to Slingsby Theatre personnel)

1. **Hunting-and-Gathering**



Platform:

Blog entries (in-app), one per story

Content:

The first transmedia paratext will be a series of 3 short stories (1,000-1,500 words each with picture illustrations) exploring what happens to the woman in the rotunda. It begins after she first danced with the man and ends when she hears the songs of the birds at the end of the main storyline. The stories, paralleling the man's journey, are written in third-person voice and have a similar style to the play.

Timeline:

Pre- and Post-Show. The stories will be published in installments, one at the start of the cultural probe activity (1-2 weeks prior to performance), one at the opening of the show, and one after the show closes. All three stories will be accessible once they are published and will stay up until 2 weeks after the performance.

2. **We Built This City**

Platform:

Twine (linked, might be embedded)

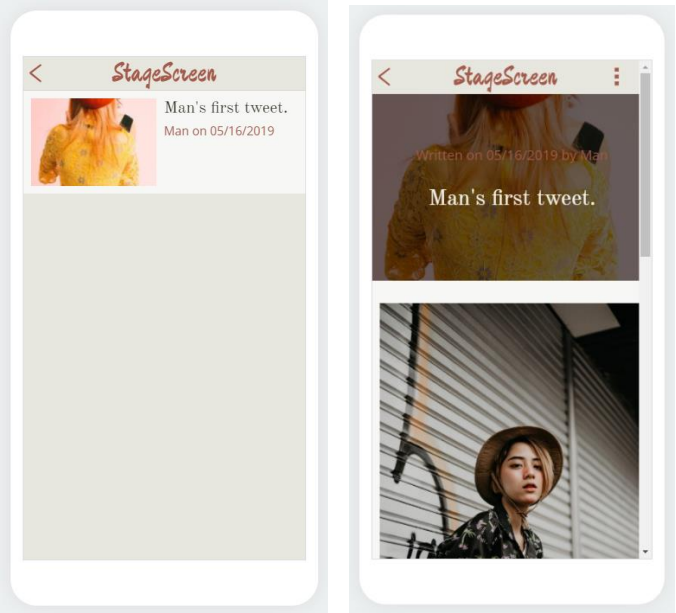
Content:

The second text is a gamebook exploring the lives of factory workers in the city, with multiple-choice questions and a branching structure. The user will play as one of the man's co-workers (even though this is never stated explicitly) and the game begins when they move to the city. They select which character to play by choosing where they lived prior to the move.
In a series of choices, the user decides where to live in the city, what their apartment looks like (with a possible cameo from the cleaner depending on decisions made), how they will make a living, as well as who to interact with and how. Some information from the play will be mentioned or hinted at. They ultimately end up working in the factory where they meet the man, and based on their previous choices, have varying reactions to this meeting.

Timeline:

Pre-Show. The game will be available at the start of the cultural probe activity and will be accessible until the show closes.

3. Lost and Found



Platform:

Micro-blog entries (in-app)

Content:

The third will be a series of micro-blog entries where young people living in the city post about their lives in a social media-like fashion. There will be five characters all connected to each other: the two people whose eyes met on the train in the play, the cleaner who cleans the man's apartment, the cleaner's wife (the daughter of the old man who works in the factory, the mother of the boy who wants ice cream, and a friend of one of the two train-riders), and the conductor's son (a songwriter and friend to the other of the two train-riders).

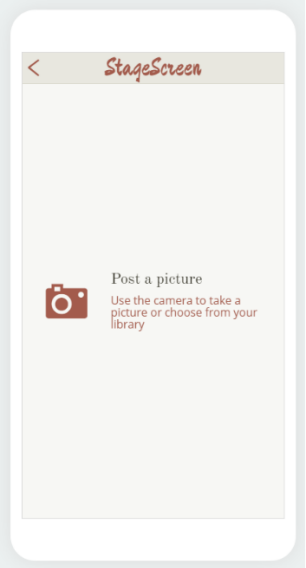
Each character will post 5-10 entries each, not more than a sentence or two and maybe a picture, forming micro-stories (though some will just be updates on their day). Some characters will comment on posts of characters they are related to—other characters from the play might also leave comments. The central story will be the little crush and, eventually,

budding romance between the pair from the train. Another involves the conductor's son realizing how interesting his father's job is, as well as the old man's daughter mending her relationship with her father.

Timeline:

Pre- and Post-Show. Entries (1-2 per day) will begin at the start of the cultural probe activity (1-2 weeks prior to performance) and continue throughout the run of the show (limited, so as not to "spoil" things) and after the show closes.

4. **Birds of a Feather**



Platform:

Picture submission (in-app), Muro (linked)

Content:

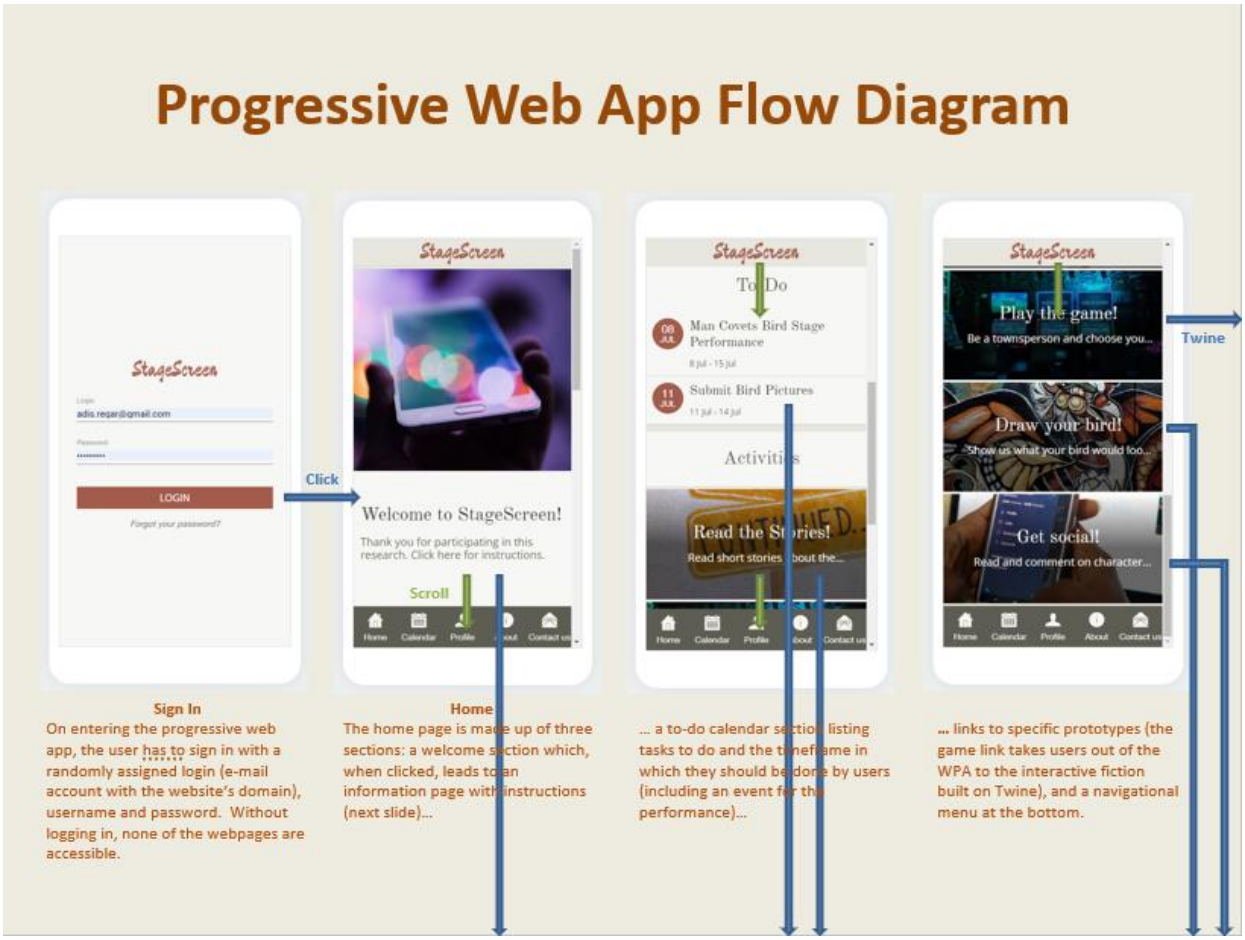
Finally, participants will be asked to imagine having a bird companion, draw their bird, and submit their drawings. There are two possibilities: one is the drawings are projected onto the set at the end of the performance (towards the end of the run) and the other is a picture gallery

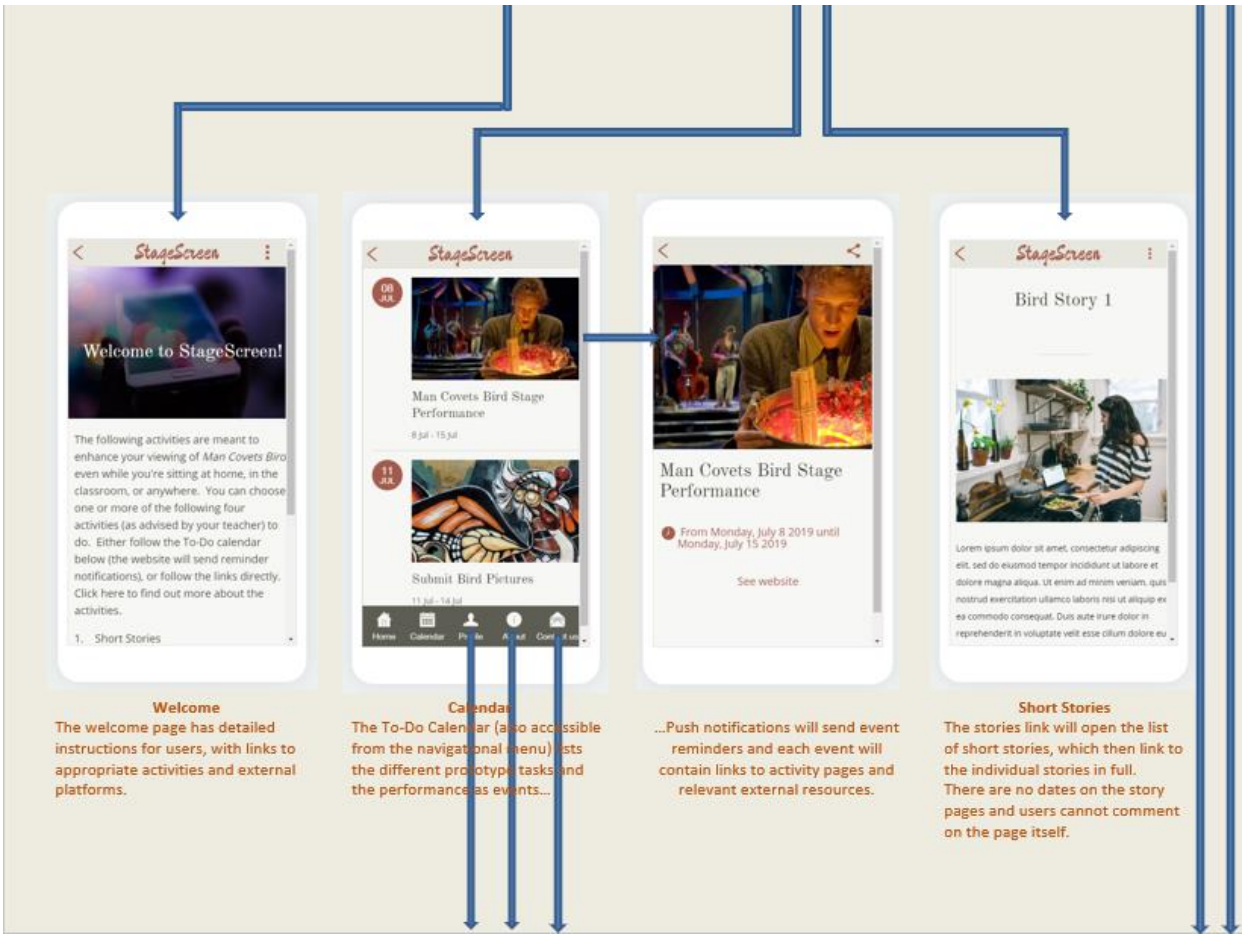
of the drawings combined with music/birdsong from the performance, both suggesting that they become the birds singing the song throughout the city at the end of the play.

Timeline:

Pre- and Post-Show. Submission will begin at the start of the cultural probe activity and continue throughout the run of the play. The gallery would be accessible after the show closes.

APPENDIX D – Detailed Flow Diagram of the DigiStage PWA (originally presented to Slingsby Theatre personnel)



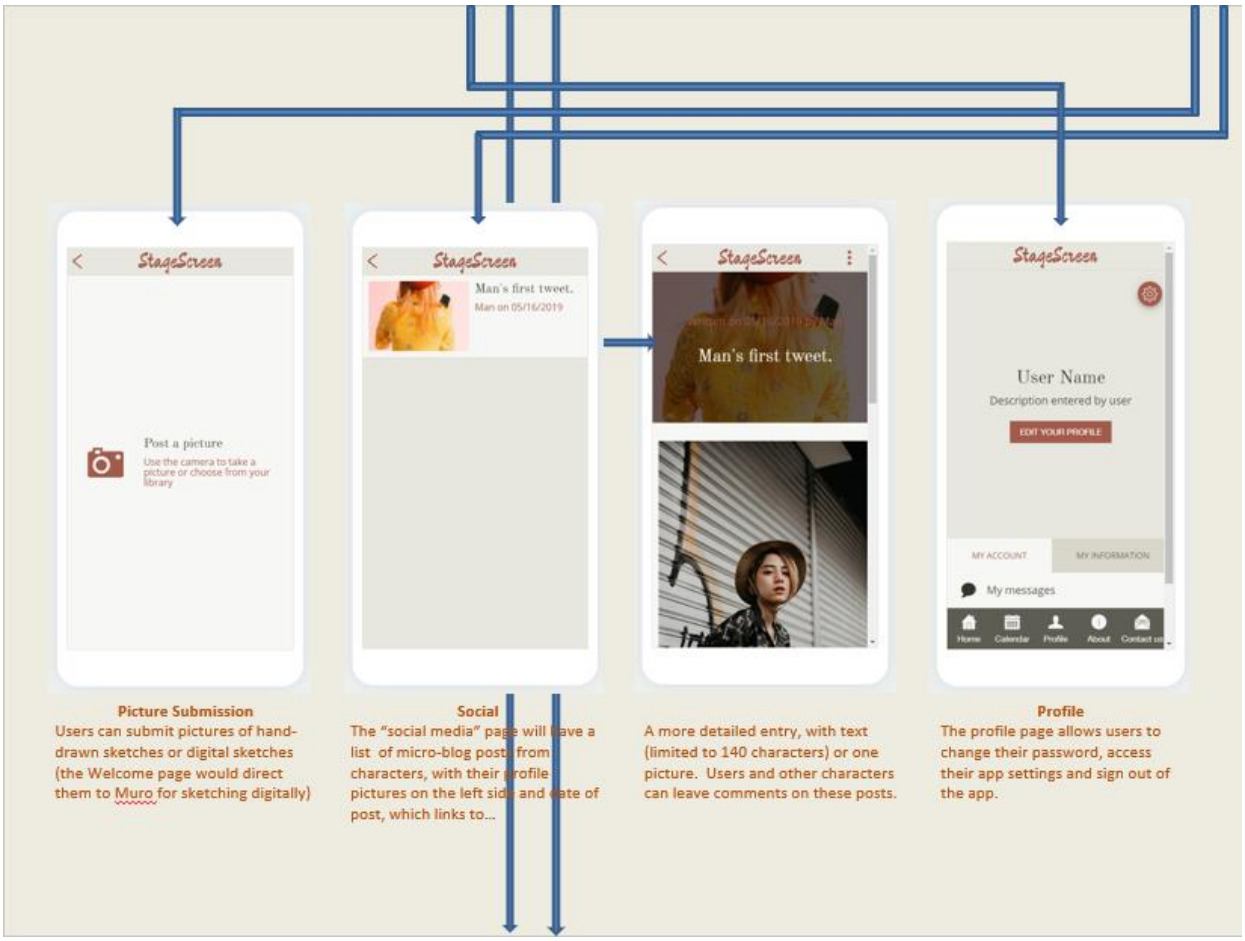


Welcome
The welcome page has detailed instructions for users, with links to appropriate activities and external platforms.

Calendar
The To-Do Calendar (also accessible from the navigational menu) lists the different prototype tasks and the performances as events...

...Push notifications will send event reminders and each event will contain links to activity pages and relevant external resources.

Short Stories
The stories link will open the list of short stories, which then link to the individual stories in full.
There are no dates on the story pages and users cannot comment on the page itself.

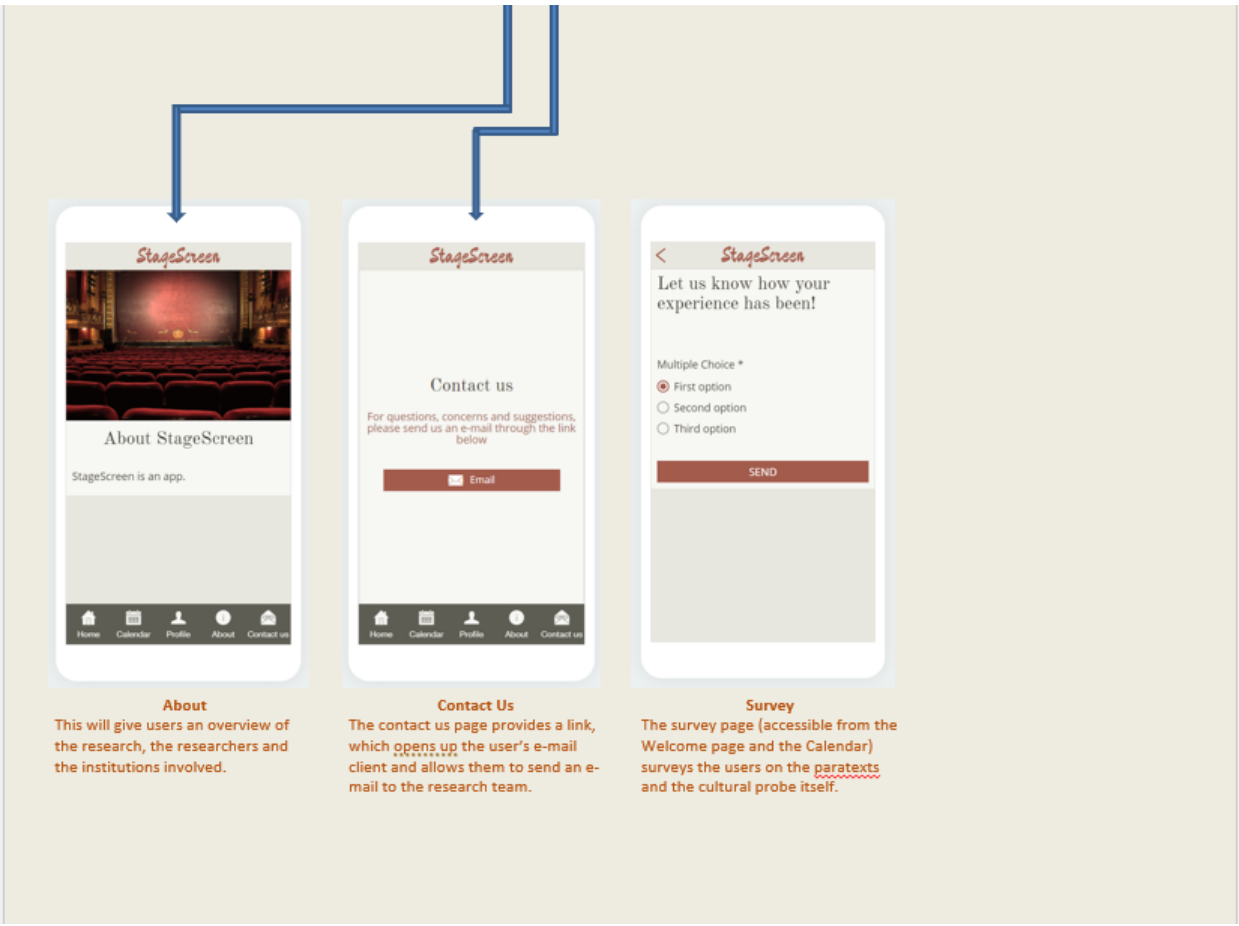


Picture Submission
Users can submit pictures of hand-drawn sketches or digital sketches (the Welcome page would direct them to Muro for sketching digitally)

Social
The "social media" page will have a list of micro-blog posts from characters, with their profile pictures on the left side and date of post, which links to...

A more detailed entry, with text (limited to 140 characters) or one picture. Users and other characters can leave comments on these posts.

Profile
The profile page allows users to change their password, access their app settings and sign out of the app.



About
This will give users an overview of the research, the researchers and the institutions involved.

Contact Us
The contact us page provides a link, which opens up the user's e-mail client and allows them to send an e-mail to the research team.

Survey
The survey page (accessible from the Welcome page and the Calendar) surveys the users on the paratexts and the cultural probe itself.

APPENDIX E – DigiStage Participant Survey Questions

Survey Questions

A. Intro: DigiStage

1. Have you used DigiStage in the past 3 weeks?
   a. Yes
   b. No

2. Did you attend a performance of Slingsby Theatre's *Man Covets Bird* in the past 3 weeks?
   a. Yes
   b. No

3. How often did you visit (open up) DigiStage in the past 3 weeks?
   a. Once a day or more
   b. 3-5 times a week
   c. 1-2 times a week
   d. Less than once a week

4. How clear were you on what DigiStage is for and what you can do on it?
   a. Very clear, I know exactly what DigiStage is for and what I can do on it
   b. Somewhat clear, I kind of know what DigiStage is for and I know what I can do with it
   c. Not very clear, I'm not sure what DigiStage is for and it took a while to figure out what I can do on it
   d. Not clear at all, I really have no idea what DigiStage is for or what I can do on it

B. General Activities

5. Which of the following do you think DigiStage has managed to do? (Select all that apply or leave blank).
   a. Told stories related to *Man Covets Bird*
   b. Given us a way to interact with the characters and explore the world from *Man Covets Bird*
   c. Provided fun and entertaining things to do before and after watching *Man Covets Bird*
   d. Helped us better understand the themes and lessons from *Man Covets Bird*

6. Which of the DigiStage activities did you try out or take part in? (Select all that apply or leave blank).

a. Birds of a Feather (submitting and viewing bird pictures)
b. And the City Greets You (playing the gamebook)
c. The Other End of the Rotunda (reading the short stories)
d. Lost and Found (viewing the microblog/social media posts)

7. Rank the following activities based on your preference (even if you haven't done them):
   a. Birds of a Feather (submitting and viewing bird pictures)
   b. And the City Greets You (playing the gamebook)
   c. The Other End of the Rotunda (reading the short stories)
   d. Lost and Found (viewing the microblog/social media posts)

8. Did you feel like you learned much more about the characters and the world from *Man Covets Bird*? Did you enjoy it?
   a. I feel like I learned much more and I enjoyed it
   b. I feel like I learned much more, but I didn't enjoy it or I didn't think it was necessary
   c. I feel like I didn't learn much more, but I would've enjoyed it
   d. I feel like I didn't learn much more, and I wouldn't have enjoyed it or I didn't think it was necessary

9. When did you do the activities on DigiStage? (Multiple Grid)
   a. Before I went to see *Man Covets Bird*
   b. After I went to see *Man Covets Bird*
   c. Both before and after I went to see *Man Covets Bird*
   d. I didn't read it

10. Did you enjoy doing the activities before or after watching the performance (or both)?
    a. Before
    b. After
    c. Both

11. If you could create your own activity relating to a theatre performance, what would it look like? (Select all that apply or leave blank).
    a. Activities where I can just read, watch or listen to stories (like short stories, videos, comics).
    b. Activities where I can be part of and explore the show's world (like games, interactive maps)
    c. Activities where I can interact with characters from the show (like social media-type posts, discussion forums)
    d. Activities where I can create or submit my own work (like drawings, songs, stories)

11a. If you have a specific idea for an activity, please describe below.

_____.

C. Specific Activities

12. Did you read the short stories in *The Other End of the Rotunda*?
    a. Yes, I read all the parts
    b. Yes, I read more than one story
    c. Yes, I read one story
    d. No, I didn't read any

13. Did you understand the story and characters in the short stories *The Other End of the Rotunda*?
    a. Yes
    b. Somewhat
    c. No
    d. I didn't read it

14. The story in *The Other End of the Rotunda* is about what happened during the events in *Man Covets Bird*, but from a different character's point-of-view. How did you feel about this?
    a. I enjoyed learning more about what happened to the character
    b. I didn't enjoy it/I didn't think it was necessary to know what happened to the character
    c. I didn't realize the connection between the story and *Man Covets Bird*
    d. I didn't read the story/I didn't go to the show

15. Any other suggestions for *The Other End of the Rotunda* that would help you understand the story, make it more enjoyable, or convince you to read it (if you didn't)?

    _____

16. How many times did you play the gamebook *And the City Greets You*?
    a. More than 5 times
    b. 3-5 times
    c. 1-2 times
    d. None

17. Did you try making different choices throughout the game?
    a. Yes, I became different characters and had different stories
    b. I think so, but I don't think it affected the character/story much
    c. No, I only played it once OR I always made the same choices
    d. No, I didn't play the game

18. Did you understand the story and characters in the gamebook *And the City Greets You*?
    a. Yes
    b. Somewhat
    c. No
    d. I didn't play the game

19. The events in *And the City Greets You* show what happened to certain characters before the events in *Man Covets Bird*. How did you feel about this?
    a. I enjoyed learning about what happened before *Man Covets Bird*
    b. I didn't enjoy it/I didn't think it was necessary to know what happened before
    c. I didn't realize the connection between the gamebook and *Man Covets Bird*
    d. I didn't play the game/I didn't go to the show

20. Did you like the Choose-Your-Own-Adventure/Role-Playing-Game format of the game?
    a. Yes, I think the format was great
    b. Yes, but I would have liked more choices and more characters
    c. No, I think a different format like puzzle, strategy, or fighting game would be better
    d. No, I don't like playing games at all

21. Any other suggestions for the game *And the City Greets You* that would help you understand the story, make it more enjoyable, or convince you to play it (if you didn't)?

    _____

22. How many microblog/social media posts did you view on *Lost and Found* (out of the total 45 posts)?
    a. 26-45 posts
    b. 11-25 posts
    c. 4-10 posts
    d. 1-3 posts
    e. I didn't view any

23. Did you know that you could comment on the posts and message the characters? Did you want to comment and message them?
    a. I knew, and I wanted to
    b. I knew, but I didn't want to
    c. I didn't know, but I would've wanted to
    d. I didn't know, and I wouldn't have wanted to

24. Did you understand the story and characters in the microblog/social media activity on *Lost and Found*?

a. Yes
b. Somewhat
c. No
d. I didn't view the posts

25. The posts in *Lost and Found* show what happened to certain characters after the events in *Man Covets Bird*. How did you feel about this?
    a. I enjoyed learning more about what happened after *Man Covets Bird*
    b. I didn't enjoy it/I didn't think it was necessary to know what happened after
    c. I didn't realize the connection between the posts and *Man Covets Bird*
    d. I didn't view the posts/I didn't go to the show

26. Did you like the use of modern language and social media elements (like memes, GIFs, videos, articles)?
    a. Yes, I liked both
    b. I liked the modern language but didn't like the social media elements
    c. I liked the social media elements but didn't like the overly modern language
    d. I didn't like either
    e. I didn't view the posts

27. Would you have liked it if *Lost and Found* had taken place on an actual social media instead of within the DigiStage application? Perhaps popular ones like Instagram, Twitter or Facebook?
    a. Yes, I would have preferred it on a real and popular social media platform like Instagram, Twitter or Facebook
    b. Yes, I would have preferred it on a real social media platform, but NOT Instagram, Twitter or Facebook
    c. No, I liked it on the DigiStage application
    d. No, the platform didn't matter, I just didn't like the whole social media thing

28. Any other suggestions for *Lost and Found* that would help you understand the story, make it more enjoyable, or convince you to participate (if you didn't)?

    _____

29. How many pictures did you submit through *Birds of a Feather*?
    a. More than 3
    b. 2-3
    c. 1
    d. None

30. Did you view the gallery for *Birds of a Feather*?
    a. Yes, I viewed all the pictures and read all the blurbs
    b. Yes, I browsed the pictures but didn't read the blurbs
    c. No, I didn't view the gallery

d. No, I didn't know it was there

31. What did you think of the blurbs?
    a. I liked them, I enjoyed reading them
    b. I liked them, but I wish we could've written our own
    c. I didn't like them, I thought they were unnecessary
    d. I didn't view the gallery/I didn't read the blurbs

32. What other forms of creative activities would you be interested in? (Select all that apply or leave blank).
    a. Writing your own stories or poems based on the show
    b. Composing songs based on the show
    c. Drawing pictures related to the show
    d. Creating memes/videos related to the show
    e. Other: _____

33. Would you have liked it if the pictures (or song, stories, etc.) were incorporated into the actual performance? For example, maybe the birds you submit are projected onto the set and become the birds that fly through the city at the end, or the songs you compose are played by the musicians onstage?
    a. Yes, I would have liked it more than just a gallery on the app
    b. Yes, I would have liked it, but I liked the gallery as well, both are good
    c. No, I would prefer the gallery, leave the performance as it is
    d. No, I don't like any of them

34. Any other suggestions for *Birds of a Feather* that would convince you to submit pictures and view the gallery (if you didn't)?
    _____

D. Questions about the App

35. How easy did you feel it was to use DigiStage?
    a. Very easy
    b. Quite easy
    c. Quite difficult
    d. Very difficult

36. How did you usually access the activities? (Select all that apply)
    a. Through the links at the bottom of the Home page
    b. Through the calendar/to-do list
    c. Through the notifications

37. Did you find the calendar useful?
    a. Yes, I did the activities according to the calendar

b. No, I never used it

38. Did you turn on notifications? Did you receive them?
    a. Yes, I turned it on and received notifications
    b. Yes, I turned it on but I didn't receive any notifications
    c. No, I didn't turn on notifications
    d. No, I didn't know notifications were part of DigiStage

39. If you received notifications, did you find them useful?
    a. Yes
    b. No
    c. I didn't receive them

40. Which of the following pages and sections did you visit? (Select all that apply).
    a. Welcome page (Welcome to DigiStage, NOT Home Page)
    b. About pages (About the Activities, Man Covets Bird, The DigiStage Team)
    c. Activities pages (And the City Greets You, Lost and Found, etc.)
    d. Calendar page
    e. Contact page
    f. Account/Profile page

41. What device and OS did you use DigiStage on? (Select all that apply).
    a. iPhone
    b. Android phone
    c. iPad/Mac computer
    d. Android tablet/Chromebook
    e. Windows computer

42. Would you have used DigiStage more if it was an Android or iPhone app as opposed to a web-based app (so you would open it like a normal app rather than through a browser)?
    a. Yes, I would use it more if it was an Android/iPhone app
    b. No, I would use it less if it was an Android/iPhone app
    c. It would not make a difference

43. Would you use DigiStage again in the future?
    a. Yes
    b. Maybe, depending on changes and improvements
    c. No

44. Would you use DigiStage and take part in the activities if you weren't attending the performance?
    a. Yes, I'd do the activities even without the performance
    b. No, the activities are only worth doing if you attend the performance

45. Any other comments or suggestions for the DigiStage team regarding the app, the activities, or the research?
    _____.

APPENDIX F – DigiStage Participant Survey Responses

Link to view Survey Responses on Google Sheets:
https://docs.google.com/spreadsheets/d/1wIjdr4pvUHTLsOgHMouwl3uoNBe32zNcf8zbMeF-oXM/edit?usp=sharing

APPENDIX G – DigiStage Activities (Digital Artefacts)

Link to view the short story *The Other End of the Rotunda* on the Our House on Lorikeet PWA (username: exegesis, password: exegesis1):
https://www.ourhouseonlorikeet.com/digistage-stories

Link to view the gamebook *And the City Greets You* on the Our House on Lorikeet PWA (username: exegesis, password: exegesis1):
www.ourhouseonlorikeet.com/digistage-gamebook

Link to view the microblogs *Lost and Found* on the Our House on Lorikeet PWA (username: exegesis, password: exegesis1):
www.ourhouseonlorikeet.com/digistage-social

Link to view the bird picture gallery *Birds Of A Feather* on the Our House on Lorikeet PWA (username: exegesis, password: exegesis1):
www.ourhouseonlorikeet.com/digistage-bird-gallery

APPENDIX H – DigiStage Audience Research Report (originally presented to Slingsby Theatre personnel)

Link to view Digistage Research Report on Google Drive:
https://drive.google.com/file/d/1B9zktmto_qWoSUq2ZxxGV-i0_NNCScny/view?usp=sharing

Link to view Digistage Research Report on the Our House on Lorikeet PWA (username: exegesis, password: exegesis1):
https://www.ourhouseonlorikeet.com/docs/exegesisappendices/DigiStage%20Results.pdf

APPENDIX I – *Our House* Platform Options (originally presented to *Our House* creative team)

PLATFORM	FEATURES	PROS	CONS
PWA (DIGISTAGE)	No avatars POV Notifications (push/message) Links/mapped links Customizable UI Embed different media sources Internal messaging function/chat No automatic user view	Can be very integrated Template ready Customizable look/transparency Tech support & resources Mobile-ready	Bigger learning curve for users Possibly buggy & needs extensive testing Object interactivity (mapped)
YOUTUBE	No avatars POV Notifications (message) Links Non-customizable UI Comment function/no chat or messaging No automatic user view	Small/no learning curve for users Should be less buggy Tech support & resources Mobile-ready	YouTube look/less transparency Not very integrated No object interactivity
WEBSITE	Avatars/no avatars POV/non-POV Push notifications Links/mapped links Customizable UI Embed different media Internal messaging function/chat No automatic user view	Can be very integrated Very customizable look/transparency Small/no learning curve for users	No template/build from scratch Possibly buggy & needs extensive testing No tech support & resources Not mobile-ready Object interactivity (mapped)
GATHER.TOWN	2D Avatars Non-POV Notifications (push/message) Links/mapped links Non-customizable UI Embed different media Internal messaging function/chat Automatic user view	Can be integrated Template ready Should be less buggy Tech-support & resources Mobile-ready	Customizable 2D look but in platform style/less transparency Bigger learning-curve for users Object interactivity (auto)
MOZILLA HUBS	3D Avatars POV/non-POV Notifications (push/message) Links/mapped links	Can be integrated Template ready Tech support & resources	Possibly buggy & needs extensive testing Customizable 3D look but in platform style/less transparency

	Non-customizable UI Embed different media Internal messaging function/chat Automatic user view	Not mobile-ready Bigger learning curve for users Object interactivity (auto)

Questions:

1. Do they see the house from their point of view? Do they have avatars?
2. Are viewers aware of each other? Can they see one another? Automatically?
3. Can they talk to one another? Voice or text?
4. Can they interact with objects? Send files?
5. Can they immediately see the whole house? Or should places be hidden?
6. Are all videos live or are some of the pre-recorded (within the narrative of the show)? E.g. vlogs? Are they all in the house? Perhaps audience can go into rooms and watch these videos on characters' devices? (voyeuristic) Perhaps they're dressed as videos on social media accounts or YouTube?

APPENDIX J – *Our House* Technical Summary (originally presented to *Our House* production team)

The technical elements of *Our House* involved three key segments: Web App, Livestream, and Additional Content.

A. Web App

The Our House on Lorikeet web app was a Progressive Web Application (PWA) created using the GoodBarber web-builder platform and hosted on their server. It was a re-skin of a PWA I had previously used for research (data collection) purposes called DigiStage, with an updated user interface. This web app was accessible mainly through Q Theatre's Experience Page and through a direct url (www.ourhouseonlorikeet.com). Subscription to the domain name was done through the registrar Namecheap, with whom I had existing subscription plans.

The PWA architecture means that the app was browser-based and accessible through most mobile devices and computers, but with user experience that approximates that of a native app including the ability to 'install' the app on users' devices.

In terms of UI, webpages on the web app act as 'Rooms', and in each Room was a livestream video with a live chat box. The livestream shows the users what is happening in each room, capturing live performance from the artists, while the live chat allows them to discuss what they see with one another. The live chat offers the capability for the audience members to interact with the artists, as well (the artists would view the live chat through Streamlabs OBS). This interaction was planned for some of the artists (Leighton, Anjelica, and others) but they elected not to use them in the end.

The main navigational menu of the web app includes the 'Entrance' page, which was the landing page for users, the 'Explore' page (later renamed 'Go to Rooms') with links to the different Rooms, and the late additions of 'I'm Lost', which was a page with instructions of how to use the app, and 'Contact Us', which provides a mailto link to Our House on Lorikeet's Gmail account. This menu is not available on the Rooms pages.

The header of the app, available on every page including the Rooms pages, also contains links to Entrance and Explore/Go To Rooms.

A user flow diagram of the web app is as follows:

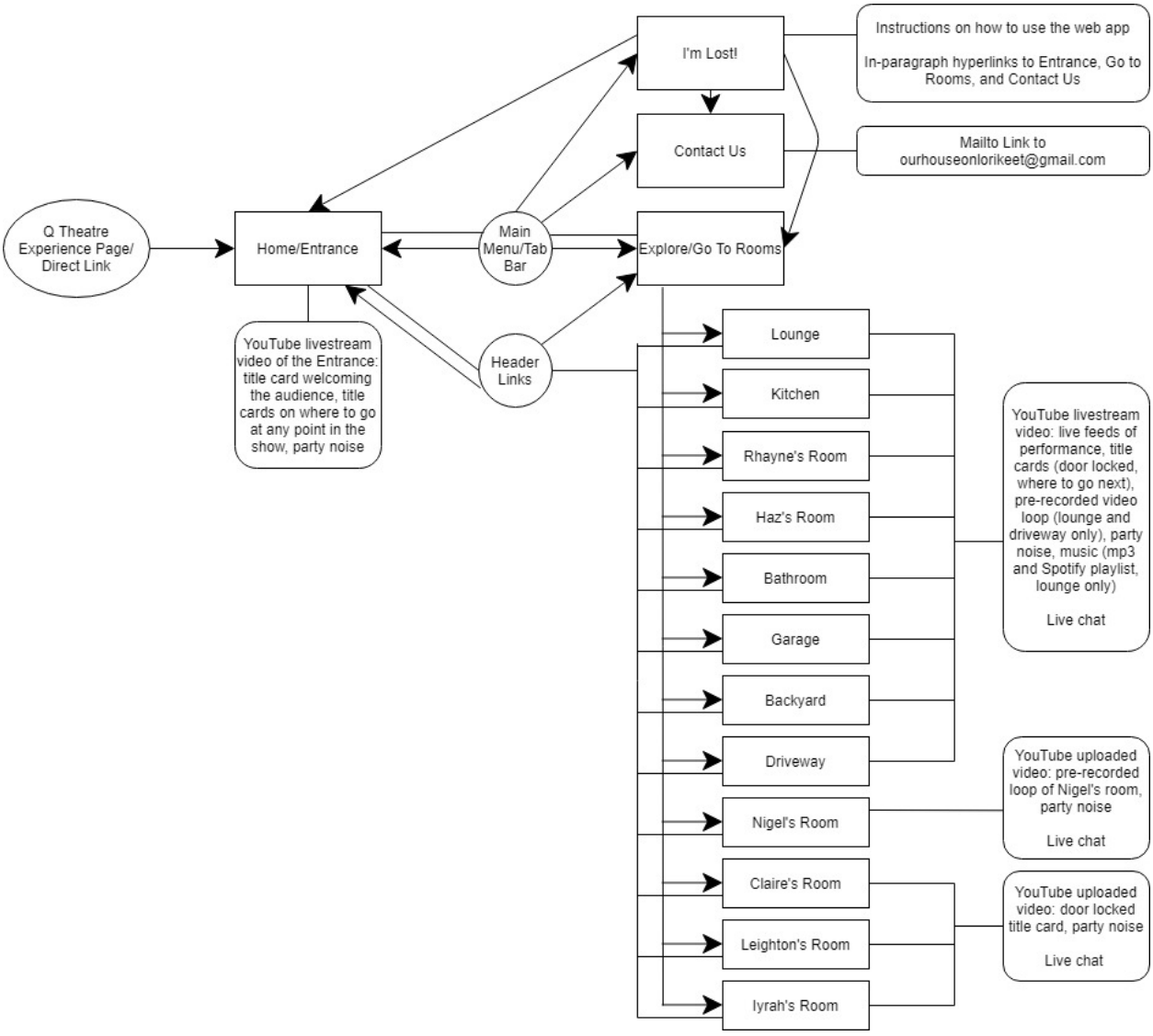


Diagram 1. User Flow of the Our House on Lorikeet Web App

A preview of the web app was also accessible through the Experience page and direct URL before the show opened. This preview contained only the Entrance page (a still image of the entrance with a welcome message), the Explore/Go To Rooms page leading to a single door locked image (i.e. the front door is locked), and a link back to the Experience page.

B. Livestream

In order to bring the artists' performances to the audience and allow user interaction on the web app, I designed a technical livestream workflow shown in the diagram on the next page.

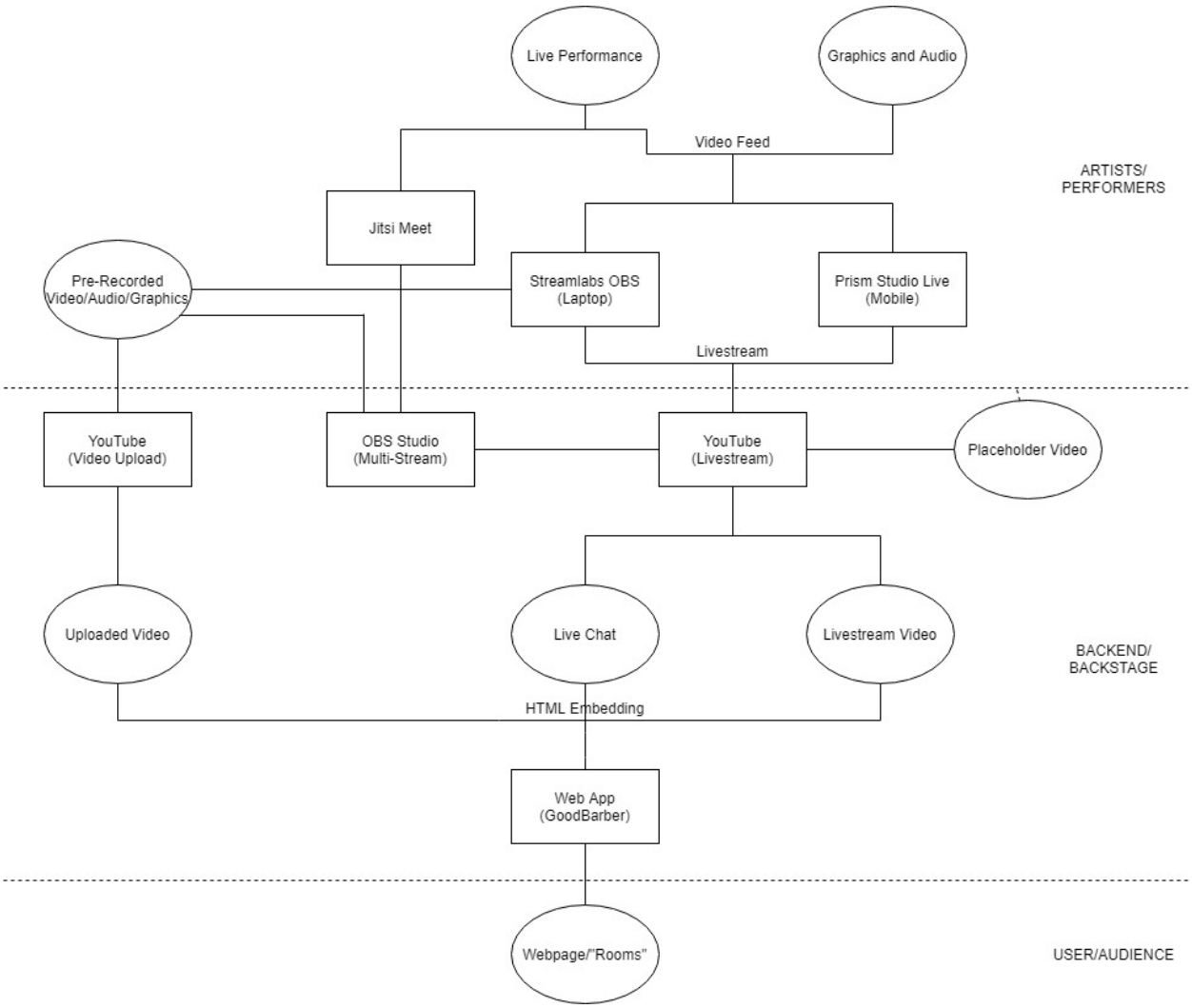


Diagram 2. *Our House* Livestream Flow

Software and Platforms

The software and platforms used are as follows:

1. YouTube
   YouTube was chosen as the livestream and video upload platform as it is completely free for both content creators and users. It allows creators to set up multiple simultaneous livestreams from one account through their livestream management console, a user-friendly live-chat function, and easy embedding. Given its popularity, most users would be familiar with its video player UI and many would already own a YouTube or Google account required to participate in live chat.

Facebook Live was considered as an alternative livestream platform but I thought the need to log onto Facebook to leave comments, which reveals users' personal identities, might discourage participation. Facebook is also less user-friendly for setting up simultaneous livestreams.

2. Streamlabs OBS
   Streamlabs OBS (SLOBS) was the streaming software used by the performers when livestreaming from their laptop. It is a free-to-use simplified version of OBS Studio which would be more user-friendly. It also allows them to add graphics and audio on-the-fly.

3. Prism Live Studio
   Prism Live Studio was the streaming software/app used by the performers when livestreaming from a mobile device. It is the only free-to-use app available on iOS and Android, which allows users to bypass YouTube's viewer requirements to livestream from a mobile device. It also user-friendly and allows performers to add graphics and audio on-the-fly.

4. Jitsi Meet (and Pop-Up Jitsi Meet)
   Jitsi Meet was the videoconferencing app used by the performers to send their video for the group scenes. It was chosen because a Google Chrome extension called Pop-Up Jitsi Meet allows livestream creators to grab clean feed of the video conference (no display names, modules, etc.) to then channel into OBS Studio. This includes a Multiview feed which creates a split-screen effect for the group scenes. Jitsi Meet is also accessible through all web browsers as well as native apps for iOS and Android devices.

5. OBS Studio
   OBS Studio was used only by myself for the group scenes (and, by extension, all streams taking place in the Lounge) as SLOBS often glitches when capturing the feed from Pop-Up Jitsi Meet.

6. Facebook Messenger
   Facebook Messenger was used as the primary communication tool between the artists and backstage personnel (stage manager and myself) during the live performance. It was chosen as it was accessible on web browsers and as native apps on mobile devices, and was the only communication tool available whose push notifications could appear on top of Prism Studio Live.

Livestream Setup and Embedding

I set up dedicated stream keys for each artist (as well as additional stream keys for Entrance, Lounge, and Pre-Recorded Rooms). At the start of each performance day, I scheduled all required instances of livestreams on YouTube's livestream management console.

The livestreams are embedded onto the web app using iframes in HTML, with URLs from YouTube's livestream management console. The videos and live chat were embedded on separate iframes, which allowed mixing and matching between videos and live chat instances (such as where pre-recorded videos were used). Where new instances of livestreams are used for each performance, the iframe codes were revised once the livestreams were scheduled.

As a note, using iframes to embed the livestreams also required the embed permission on the YouTube livestreams to be turned on through the livestream management console. This had to be done once the livestream went live (if it was turned on prior to going live, it would automatically turn itself off as soon as it went live). If the embed permission was turned off, YouTube's video player would refuse to play the video and prompt users to open the video on YouTube instead.

Livestream Workflows

There were several different livestream workflows depending on the needs of each Room/page as indicated in Diagram 1.

- Entrance

  The livestream in the entrance contains a title card welcoming for audience, title cards with instructions on where to go at any point in the performance, and party noise. This livestream is run by myself on one of my laptops using Streamlabs OBS, with title cards updated based on cues from the stage manager. Only one instance of YouTube livestream was set up and used for both performances.

- Lounge

  The livestream in the Lounge contains live feed of the group scenes, pre-scene and post-scene title cards, party noise, music, and a pre-recorded video loop of the lounge. We used a dedicated meeting room on Jitsi Meet to include all the artists, the stage manager, a live feed from Sophie of a disco ball and a pre-recorded loop from myself of another disco ball (these fill up empty squares in the splitscreen), and myself on a different device as the host.

  There were instances where single feeds were shown in the lounge (Haz's intro and Iyrah's song), but these were still captured through Jitsi Meet to maintain one continuous livestream. In addition, while the individual scenes took place, the feed switched to a pre-recorded loop of a disco ball in the lounge along with music from the community Spotify playlist (refer to 'Additional Content' section below).

The livestream was edited together using OBS Studio and sent to YouTube through one of my laptops. A new instance of YouTube livestream was set up for each performance to allow a new live chat session.

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- Live Video Rooms except Lounge (Kitchen, Rhayne's Room, Haz's Room, Bathroom, Driveway, Garage, and Backyard)

  The livestream in these rooms contains live feeds of individual artists, pre-scene and post-scene title cards, and party noise. Each artist featured in these rooms (everyone except for Iyrah) was given a dedicated YouTube stream key and sent their feed directly to YouTube through either SLOBS or Prism Studio Live. They also had to insert title cards and party noise on their end. The driveway was an exception as a pre-recorded loop was used in between scenes.

  A new instance of YouTube livestream was set up for each performance to allow a new live chat session.

- Pre-Recorded Rooms (Nigel's Room, Claire's Room, Leighton's Room, Iyrah's Room)

  Since these rooms did not involve any live performance, it contained pre-recorded video loops of an empty room (Nigel's Room) or a door's locked title card (Claire's Room, Leighton's Room, Iyrah's Room) uploaded to YouTube. A new instance of YouTube livestreams was still set up for each room to allow a new live chat session, although no feed were sent to these livestreams.

Technical Checks and Communications

Each pre-performance preparation began with backstage crew performing a technical check with the artists. This involved the artists sending video and audio feed to YouTube and backstage crew confirming reception of the feed on YouTube's livestream management console. Once feed is received, I started the livestream, allowed embed permission, while the stage manager confirms that the stream is running on the web app.

All cues for setting up, technical checks, streaming, inserting graphic and audio elements, and artists' performances came from the stage manager via Facebook Messenger.

Technical Challenges

Other than human errors, one major technical challenge was unreliable internet connection from the artists. Our solution for this was a safety net system whereby stream health of each livestream instance is checked one scene prior to when audiences were expected to be viewing

that livestream. If stream health was poor and could not be fixed in time, the scene would be skipped. If there were multiple bad connections and we had to skip more than two scenes, the performance would be closed by inserting a prepared title card on all main streams. This did not occur during actual performances.

C. Additional Content

For the purposes of my own research and promoting the show, I also created additional content for audiences to engage with before and after the show. These include:

1. Facebook Event
   The Facebook event, hosted by the Our House on Lorikeet page which I set up and co-hosted by the Q Theatre page, invited audiences to the in-universe house party. The event's Discussion section had video content posted by the artists in-character as well as other activities like a dress up guide and the community Spotify playlist below.

2. Spotify Playlist
   A community playlist was created on Spotify for audiences to add songs they'd like played during the in-universe house party. This playlist was used to provide music in the lounge before the performance, in between scenes, and after the performance. The use of copyrighted music was deemed a non-issue as the performances were free-of-charge.

All illustration works for *Our House*, title cards, the Our House on Lorikeet app logos and icons, and floorplan of the house were done by myself.

This summary was prepared by Adisti Regar (adis.regar@gmail.com), Digital Artist on *Our House*.

APPENDIX K – Full Recording of the *Our House* Performance on 25 September 2021

Link to view the *Our House* recording on Google Drive:

https://drive.google.com/file/d/1qiQXiovxN2UVXkry98Kff8o1hkM9lX8R/view?usp=sharing

APPENDIX L – Our House on Lorikeet PWA (Digital Artefact)

Link to view the Our House on Lorikeet PWA (username: exegesis, password: exegesis1):
www.ourhouseonlorikeet.com/

Link to view the Hallway menu on the Our House on Lorikeet PWA (username: exegesis, password: exegesis1):
www.ourhouseonlorikeet.com/explore-2

Link to view the blog entries on the Our House on Lorikeet PWA (username: exegesis, password: exegesis1):
www.ourhouseonlorikeet.com/stories-1

APPENDIX M – Our House on Lorikeet Facebook Event

Link to view the Our House on Lorikeet Facebook Event page on Facebook (may require Facebook login, external paratexts can be found in the 'Discussion' tab):
https://fb.me/e/1XEM73Rev

APPENDIX N – *Our House* Survey Questions (with Skip Logic Diagram)

Link to view survey questions on Google Drive:
https://drive.google.com/file/d/1eAYeuDB6U6fozJSmaeylrWRJqCikHdUO/view?usp=sharing

Link to view survey questions on the Our House on Lorikeet PWA (username: exegesis, password: exegesis1):
https://www.ourhouseonlorikeet.com/docs/exegesisappendices/Our%20House%20Typeform%20Survey.pdf

APPENDIX O – *Our House* Focus Group and Interview Questions (including Pre-Questionnaire)

FOCUS GROUP DISCUSSION
For transmedia activities/cultural probe participants

Pre-Questionnaire

This questionnaire is intended for focus group discussion participants of a doctoral research conducted by Adisti Anindita Regar from UniSA Creative, Adelaide, South Australia. The research is meant to investigate the experience of engaging in transmedia theatre activities before and after attending a theatre performance.

By completing and submitting the questionnaire, as well as participating in the focus group discussion, you are indicating that you have read and understood the Participant Information Sheet and give your consent to be involved in the research.

1. What is your age?
    - 18-24 years old
    - 25-39 years old
    - 40-54 years old
    - 55 years old and above

2. Are you currently studying or working?
    - Yes, studying part-time/full-time
    - Yes, working part-time/full-time
    - Yes, both studying AND working part-time/full-time
    - None of the above

3. Where do you currently reside?
    - I reside in the City of Penrith
    - I reside in the Greater Sydney area, but outside the City of Penrith
    - I reside outside Greater Sydney area

4. On average, how many theatre performances do you attend per year?
   Note: this includes plays, musicals, and operas, but NOT music concerts, dance, or circus/acrobatic shows
    - 0-1
    - 2-5
    - 6-12
    - More than 12

5. How many digital theatre performances have you attended in the past 18 months (since the start of the COVID-19 pandemic)?
   Note: a digital theatre performance is a theatre performance which takes place exclusively on digital/online platforms such as Zoom or YouTube rather than in-person, but does NOT include viewing recordings of in-person theatre performances such as *Hamilton* on Disney Plus
   - None
   - 1-2
   - 3-5
   - 6-12
   - More than 12

6. How did you find out about the performance of *Our House on Lorikeet*? (select all that apply)
   - Website/e-mail subscription (Q Theatre/The Joan/Penrith Arts)
   - Social media (Facebook/Instagram)
   - Word-of-mouth (friends/family)
   - Have previously attended or participated in the Originate program

Focus Group Questions

1. Which of the transmedia activities (list of activities) for *Our House on Lorikeet* did you participate in?

2. How did you find out about these activities? Was it the same way you found out about the performance?

3. What made you decide to participate/not participate in (activity)?

4. What were your expectations when you (did the activity)? Did you expect to learn something? Interact with people? Just have fun? Were those expectations met? How?

5. Did it make a difference that the performance itself was digital? Are you more/less likely to participate in the transmedia activities if the performance was in-person? Why?

6. How do you feel about the fact that the activities are optional? How about the fact that they take place digitally? Would you consider doing similar activities in-person (give examples)?

7. What kind of performances do you think would suit these kinds of transmedia activities? Musicals? Something more abstract or experimental? Kids' theatre? Why?

8. Have you done something similar before? Describe your experience. Was it positive/negative? Why?

9. Would you consider doing something similar in the future? Why or why not?

INTERVIEW QUESTIONS
For the creative team of *Our House on Lorikeet*

1. What was your role on *Our House on Lorikeet*? How did you become involved with the performance?

2. How did you learn about transmedia theatre engagement? Were you familiar with it or something similar prior to your involvement on *Our House on Lorikeet*?

3. How were you involved in creating the transmedia theatre activities for *Our House on Lorikeet*? What was your collaboration process with the researcher?

4. How do you think transmedia theatre activities can affect audience's experience in attending a theatre performance? Do you think this happened with *Our House on Lorikeet*? Why do you think it did/didn't? How could we have improved them?

5. Did you see audience members participating in the activities? Did you interact with them? How do you think we could have encouraged participation and/or interaction?

6. Do you think it made a difference that the performance itself was digital? Would you be more or less involved if the performance was in-person? Why? What if the activities were in-person?

7. Would you consider creating similar engagements in your future works? Would you consider participating as artists/theatre-makers? Would you consider participating as audience members? Why or why not?

APPENDIX P – *Our House* Typeform Survey Responses

Link to view survey responses on Google Sheets:
https://docs.google.com/spreadsheets/d/1XtRGJX3nU1lfXtVUDHQQEe0zQxHPYN8Y/edit?usp=sharing&ouid=117629772467144347996&rtpof=true&sd=true

APPENDIX Q – *Our House* Focus Group and Interview Recordings

Link to view recording of the 1 October interview with Anjelica Murdaca on Google Drive: https://drive.google.com/file/d/159yLerD-4QFr-IJ1RzFmUrrE4mTdq_MD/view?usp=sharing

Link to view recording of the 5 October interview with Sophie Kelly on Google Drive: https://drive.google.com/file/d/14I7m2_AS6RhADfVzFQjVSbz9NpKMr6ph/view?usp=sharing

Link to view recording of the 5 October focus group discussion with David Bunton, Andrea Fung, and Jai Nathani on Google Drive: https://drive.google.com/file/d/1aZcXJKO5OAEm-HajO-Sn0U3y1inR7WHm/view?usp=sharing

Link to view recording of the 9 October focus group discussion (interview) with Thais Turner on Google Drive: https://drive.google.com/file/d/1_0jkbaybxt-e3VeSlOhcyKPhpVTt07YF/view?usp=sharing

APPENDIX R – Q Theatre's Originate Survey Responses

Link to view survey responses on Google Drive:
https://drive.google.com/file/d/1MnZfr4w0q7VB_WMuoPHIMG9ru2iRN7v9/view?usp=sharing

Link to view survey responses on the Our House on Lorikeet PWA (username: exegesis, password: exegesis1):
https://www.ourhouseonlorikeet.com/docs/exegesisappendices/Originate%20Survey%20Results%20Q%20Theatre.pdf