

Type Trails: Exploring the potential of typography as a system for storytelling in urban wayfinding design

by Sarah Jane Jones

Thesis submitted in fulfilment of the requirements for the degree of

Doctor of Philosophy

under the supervision of Professor Lawrence Wallen Dr Zoë Sadokierski

University of Technology Sydney
Faculty of Design, Architecture and Building

August 2021

CERTIFICATE OF ORIGINAL AUTHORSHIP

I, Sarah Jane Jones, declare that this thesis is submitted in fulfilment of the requirements for the award of Doctor of Philosophy, in the School of Design, Faculty of Design, Architecture and Building at the University of Technology Sydney.

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

This document has not been submitted for qualifications at any other academic institution.

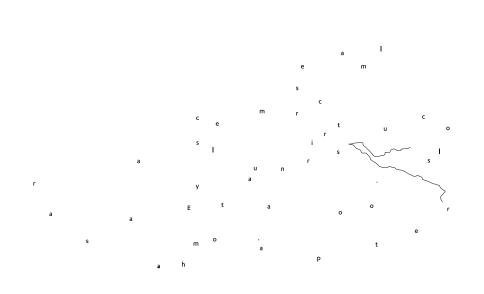
This research is supported by the Australian Government Research Training Program.

Production Note:

Signature: Signature removed prior to publication. Date: August 2021



EXPLORING THE POTENTIAL OF TYPOGRAPHY AS A SYSTEM FOR STORYTELLING IN URBAN WAYFINDING DESIGN



ACKNOWLEDGEMENTS

First and foremost, I would like to thank my supervisors Dr Zoë Sadokierski and Professor Lawrence Wallen. To Zoë, for her ability to ground me when I flew off on multiple tangents, her constant ability to give constructive and insightful feedback and, most importantly, for her wit that has carried me through this candidature. To Lawrence, for encouraging me to enjoy the process of this research, his carefully considered feedback and his guidance in keeping me focused on my field of research. I would also like to thank Dr Gerhard Bachfischer, who was on my supervision panel until 2020, for his encouragement and critical conversations around typography.

I wish to extend my gratitude to my colleagues in Visual Communication Design at the University of Technology Sydney for their encouragement and support: Dr Andrew Burrell, Gabriel Clark, Nicola Hardcastle, Dr Jacquie Lorber-Kasunic, Monica Monin, Aaron Seymour, Erin Turner and Dr Kate Sweetapple. With particular thanks to Nicky Hardcastle for her continuous support and confidence in me. Also, Dr Danièle Hromek, whom I met as a fellow PhD student at UTS, for always inspiring and encouraging me and for supplying me with cups of tea at all the right moments. I was also privileged to have had mentoring conversations with Dr Jacqueline Gothe and Professor Anne Burdick, which helped to frame my practice-based research. I am appreciative of receiving a Design, Architecture and Building (DAB) Faculty scholarship.

Many people have given me assistance through this research. I would like to thank those people who met with me and advised me on where to source further research on the ecology of inner-city Sydney in 1788: Nerida Campbell, Curator – City Portfolio, Sydney Living Museums; Shannon Foster, a D'harawal Saltwater Knowledge Keeper; Iain Innes, Director Heritage & Collections, Sydney Living Museums, and Paul Nicholson, Site Coordinator Volunteer Programs, The Royal Botanic Gardens Sydney. I would also like to thank the people who have helped to complete this final submission: Thomas Ricciardiello for the development of *Type Trails* as a website, my cousin Sean Monro for taking photographs of London street signage and Hazel Baker for her meticulous eye for detail in the editing of the text. Any errors are my own.

My deepest gratitude goes to my family who gave me the space and time and support to achieve this milestone – to my husband, Huw, my children Leo and Alexander, to my mother Althea, and siblings Lucy and David. Finally, I dedicate this to my father, Arne Barr, who encouraged me to undertake this candidature but is no longer here to see me complete it. His words of advice became a voice in my head carrying me through the tough times with a touch of humour – "Of course you can do it! You just have to read a lot!"

THESIS FORMAT

This thesis comprises two components:

1 The written thesis:

This document combines pages of my critical documentation or research diary with my written thesis.

2 The practice-based component:

www.typetrails.com.au

Photography by the author unless otherwise noted.

CONTENTS

| | Acknowledgements | |
|------------------|--|----|
| | Thesis Format | i |
| | Acknowledgement of Country | |
| | Acknowledgement of Songlines | V |
| | Abstract | |
| | Terms | |
| Chapter 1 | Introduction | 1 |
| | Overview: <i>Type Trails</i> – the prototype | 2 |
| | Research aims and questions | ! |
| | How the research is structured | ! |
| | Theoretical framing | 6 |
| | Significance | 1 |
| | Chapter breakdown | 1 |
| Chapter 2 | Methodological Approach | 15 |
| | Critical documentation | 16 |
| | Mapping out the field of research | 17 |
| | Diagrams as summaries | 24 |
| Chapter 3 | Contextual Review | 27 |
| | Section 1: Urban Wayfinding Design | 28 |
| | What is urban wayfinding design? Where is it located? What type of functions does it have in our cities? | 28 |
| | What is wayfinding design? | 30 |
| | A distinction between wayfinding and navigation | 3! |
| | Theoretical and cultural approaches to wayfinding | 37 |
| | Storytelling in wayfinding design-user experience research | 38 |
| | The social aspect of wayfinding | 40 |
| | Examining the way storytelling contributes to the types of wayfinding experiences cities offer | 4 |
| | Conclusion | 4! |
| | Section 2: Digital Wayfinding | 46 |
| | How we perform wayfinding due to our new digital habits | 48 |
| | Mobile mapping and the capacity for narrative | 49 |
| | Words as a way of navigating in mobile mapping | 50 |
| | Mobile storytelling | 5 |
| | Exploring wayfinding storytelling from a visual communication | |
| | design perspective | 5 |
| | Conclusion | 5: |

| | Section 3: Typography in wayfinding | 54 |
|------------------|--|----------------|
| | A critical analysis of typography in urban wayfinding | 54 |
| | Typography contributing to the image of the city | 56 |
| | Typography in wayfinding signage schemes | 56 |
| | How we should think about and approach designing typefaces | _ (|
| | for the different aspects of our cities | 5 ⁸ |
| | Typography and city identity through digital and place-based storytelling Conclusion | 68 |
| Chapter 4 | Contextual Survey: Sydney wayfinding | 69 |
| | Photo-documentation and graphic analysis as a method | 79 |
| | What this does not study | 80 |
| | What is currently in place | 80 |
| | Contextual survey of Sydney street name signage | |
| | and potential typeface project | 8 |
| | Conclusion | 90 |
| Chapter 5 | Preliminary experiments on | |
| | typographic systems for wayfinding | 91 |
| | Experiment 1: Digital street name signage | 9: |
| | Experiment 2: Indicators of air quality as digital signage | 10 |
| | Experiment 3: Story poles | 113 |
| | Conclusion | 112 |
| Chapter 6 | Type Trails | 115 |
| | Situating the practice-based research | 12 |
| | Interpretation | 12 |
| | Digital mapping and mapping practices | 12 |
| | Critical documentation: design methods and insights | 128 |
| | Type Trails as a typographic system in digital mapping | 146 |
| | The point of differentiation in this work and emerging trajectories | 15 |
| Chapter 7 | Conclusion | 153 |
| | A criticism from within wayfinding design practice | 154 |
| | The potential for digital wayfinding to enable new ways | |
| | of experiencing place | 156 |
| | Potential directions | 156 |
| | Epilogue | 158 |
| | Appendix | 159 |
| | References | 161 |
| | Type Trail References | 171 |
| | Map References | 173 |

ACKNOWLEDGEMENT OF COUNTRY

I acknowledge the Aboriginal and Torres Strait Islander peoples of this country and their continuing connection to culture, community, land, sea and sky. I pay my respects to the Elders past, present and future. I would like to acknowledge the Gadigal people as the traditional custodians of the land where I live and work, and of the land where this research is situated, in the inner city of Sydney. I acknowledge that sovereignty has never been ceded. This research acknowledges the living culture of Aboriginal Australians that carries a continued spiritual, cultural, political and physical connection to this land today. This always was and always will be Aboriginal land.

ACKNOWLEDGEMENT OF SONGLINES

The songlines of Aboriginal and Torres Strait Islander people connected clans from one side of the country to another. The cultural, economic, genetic and artistic conduits of the songlines brought goods, art, news, ideas, technology and marriage partners to centres of exchange.

The Brewarrina fish traps were one such centre, the Lake Condah eel fishery another, Sturt's grain fields of the Warburton River region another and Melbourne's Botanical Gardens were the point of dispatch for the great Dreaming corroborees brought from the Australian Alps by such important philosophers as Kuller Kullup. (Pascoe, 2014, pp.129–130)

In many ways it seems redundant to be researching in the field of wayfinding design in a country/continent that has songlines and a history of impeccable individual ability in tracking and wayfinding. Songlines are one of the most intricate, highly structured and successful systems of navigation and wayfinding—an intricate web of storylines as pathways across this country that are sung.

There are numerous epical stories that travel in storylines, some over long distances in the country. One of the longest known continuous songlines extends approximately two thousand kilometres from Port Augusta to the Gulf of Carpentaria. These sacred texts—their stories and songs containing a great depth of knowledge—are honored and preserved through ceremonies and sacred practices which recognize that the ancestral beings are alive in the country, though they may be sleeping or resting. (Wright, 2021, para. 23)

These storylines linked trade and economic, marriage and spiritual ties (Pascoe, 2014), and connected the Law across this vast land (Wright, 2021), lines of knowledge of story that were sung and passed down generation to generation, including stories that were passed on only to those who were allowed to learn (Wright, 2021). The experience of wayfinding in this context is a cultural story that is sung over time and distance, is intergenerational, performative and passes down knowledge.

To reduce songlines to a system of wayfinding and navigation simplifies what songlines are. They are something that I, as a non-Indigenous person, can only just begin to understand when listening, reading and watching guidance from Aboriginal researchers, designers, artists and authors. In this Acknowledgement to songlines I am quoting only Aboriginal authors and designers; they are: author Bruce Pascoe (Bunurong), author Alexis Wright (Waanji) and scholar and spatial designer Danièle Hromek (Budawang/Yuin).

Songlines link sites to people, landscape and ecosystems, to sky, water and languages. They connect Countrys and groups, creating lines of knowing, interchange and movement, often across vast distances. (Hromek, 2019, p.81)

As I am a non-Indigenous researcher, songlines are not my story to tell or my area to research and I prefer to learn and contribute to the area of cultural storytelling in wayfinding post-PhD collaboratively and under the guidance of Indigenous-led research projects. I would therefore like to acknowledge that any form of wayfinding I am experimenting with here will not come close to the intricate, cultural, spiritual and political connection songlines have to this place, Australia, that has never ceded sovereignty and I would also like to acknowledge that songlines show us that wayfinding can be intricately connected to story.

As I am a non-Indigenous person, this research is also acknowledging that we are all always "On Country", and with this research I am on Gadigal Country, here in the concrete and tar-sealed centre of the central business district (CBD), in the heart of the city of Sydney.

ABSTRACT

Type Trails: Exploring the potential of typography as a system for storytelling in urban wayfinding design

This research proposes that a storytelling approach to urban wayfinding design opens up an opportunity to critically examine existing wayfinding design systems based on ecological, cultural and historical information and inform the wayfinding experience in a city. Urban wayfinding design plays an integral role in making cities legible, connected, accessible and functional. Navigational technologies and digital wayfinding have produced new methods to navigate and experience cities that impact new wayfinding systems design.

Digital technologies extend opportunities for immersive and experiential approaches to narrative strategies of wayfinding design. This research poses the questions:

- 1 how might a storytelling approach to urban wayfinding design be a critical probe?
- 2 how might we design local wayfinding systems for cities that provide a deeper and richer orientation to place?

The research initiates a critical enquiry into existing wayfinding design mechanisms within the city centre of Sydney. It classifies the global, local and historical influences on Sydney's wayfinding systems and catalogues areas where a "local" identity could be developed from typographic and other perspectives.

Identifying the disjunct between articulating the ecological history of the area and contemporary digital wayfinding and physical signage led to the development of a prototype titled *Type Trails*, which forms the practice component of this PhD. *Type Trails* is a locative, immersive, digital, wayfinding experience that prompts users to consider the ecological and cultural history of inner-city Sydney and its influence on how we find our way. As a discursive object, it contributes to the possibilities of geospatial explorations using typography as a system for storytelling within digital mapping and it works in a non-linear format with different literary sources that converge, wayfind and drift through multiple layered stories that connect with physical signage in place.

TERMS

Digital Wayfinding

The act of finding your way and orientating oneself with the use of digital wayfinding technologies. Digital wayfinding in the urban environment encompasses a whole range of possibilities including: digital mapping systems (GIS) and GPS navigation in combination with location aware devices; applications or websites that are activated through QR codes; notifications on location-aware devices triggered by beacons or NFC/RFID tags in the environment; digital mobile storytelling experiences; and digital signage that is connected to personalised systems or other online social network connectivity. AR (augmented reality) can be built into most of these experiences.

Legible Sydney

Legible Sydney is a pedestrian wayfinding system in the city of Sydney which has been steadily rolled out across the suburbs that the City of Sydney Council govern. The wayfinding system was designed by Minale Tattersfield in partnership with the City of Sydney Council and is based on a larger global series of Legible wayfinding schemes, namely Legible London.

Mapbox

Mapbox is a mapping platform for location based services.

Navigation

'Some researchers differentiate navigation from wayfinding as the process of traveling along a predetermined route such as established roads, routes, waterways or pathways.' (Golledge and Garling cited in Melzer & Madison, 2020). Ingold also describes the role of navigation as a "cognitive task" in which one follows a set of instructions to reach a set location that has geographical co-ordinates (Ingold, 2000, p. 236).

Typography

Historically, typography was a term specifically used to describe type design and typographic principles that derived from a mechanical process or had an element of a mechanical system at its base. According to Ellen Lupton, who as an academic researcher and educator has written extensively on the field of typography, "Typography is what language looks like" (Lupton, 2010). The role of the typographer emerged in the early 20th century, when independent designers started taking control of publication design and publishing from master printers (Kinross, 2004, p. 68). At its core, typography is infinite variations of an alphabet, a way of visualising language and an investigation into verbal and visual relationships; it is visible language.

Wayfinding

Wayfinding is a performative act of finding your way and orientating oneself in an environment. Lynch defines wayfinding as "the consistent use and organisation of definite sensory cues from the external environment" (Lynch, 1960, p. 3). Taking this further, Ingold describes wayfinding as a performative act over time and place in which wayfinders gain their knowledge of place or pathways "as they go" and that "people's knowledge of the environment undergoes continuous formation in the very course of their moving about in it" (Ingold, 2000, p. 230).

Wayshowing

Passini argues that the area of wayfinding in which visual communication design can play a significant role is "the execution of plans and the transformation of decisions into behavioral actions." (1981, p. 17). Mollerup coined the product of this practice as "wayshowing", "the professional activity of planning and implementing orientation systems in buildings and outdoor areas" that "precedes and enables wayfinding" (2013, p. 6). Wayshowing is made up not only from wayfinding design or urban design but by architectural, urban and natural devices in the environment (Mollerup, 2005).

Wayfinding as storytelling

Ingold positions the role of wayfinding as more akin to storytelling, because "places do not have locations but histories" (2000, p. 219) and comes to this position through his research into many Indigenous forms of wayfinding and through the influence of an ecological approach to the perception of the environment by James Gibson (1979). Danièle Hromek, explains how from an Aboriginal perspective, storytelling, mapping and walking Country are deeply entwined:

Mapping Country through walking creates a map of the lived experience of places, in a way, a true knowledge of place. Mapping lived experience enables a knowing of places through the senses, which interact with our emotions; it is an embodied learning of the relational narratives of that place through space and time. Navigating using Country as a means for movement embeds encountered stories into made objects. The route "drawn" into the landscape links, and at times follows, the narratives of places; this is meaningful movement that not only retells stories but writes them anew. (Hromek, 2019, pp. 196–7)

.