

PART ONE – DEFINING THE FIELD

Introduction to Part One

This thesis is divided into three parts.

- Part one: Defining the field - introduces and provides the background to the thesis followed by a discussion of the literature related to philosophy, methodology and design theory which was reviewed over the course of the candidature and used to guide and support it throughout its many phases.
- Part two: Empirical research - discusses practical aspects of the field research, followed by the two key stages of data analysis and synthesis leading to the development of the *ToE* and *SEEING* methods.
- Part three: Presentation – Presents a discussion of the outcome of validation trials in Australia and Germany along with conclusions drawn from these and the project as a whole, culminating in suggestions for further research.

Part One presents the following chapters,

- Chapter One – Introduction to the thesis.
- Chapter Two – A brief discussion of the sustainable transport issues impacting on *NMV*'s (the subject vehicles in this study).
- Chapter Three – A discussion of the philosophical and methodological knowledge related to understanding experience that was particularly helpful in this project.
- Chapter Four – A critical review of the body of Design and other theoretical knowledge related to understanding experience in which this project is situated.

CHAPTER ONE – INTRODUCTION TO THE THESIS

Introduction

This thesis is presented in a narrative form, reflecting the unconventional nature of the project. It describes a highly exploratory search for new ways to understand the nature and meaning of everyday experience. The medium in which this exploration of new design research methods took place was the research processes required to be developed in this project to understand the usage experience of New Mobility Vehicles (NMV's¹). A lack of this type of (experiential) knowledge is evident in design theory and in design practice² and is exemplified by the continual failure of these vehicles to succeed in the marketplace.

It is my thesis that *an* experience with all its multiple meanings and subjectivities can be made understandable to a researcher and that if attention is focussed on a specific experience of interest to the researcher, this experience can be made understandable to a researcher/designer in such a manner as to allow designing to take place that is directly aligned with the experience being designed for.

The path to uncovering this type of understanding has not been smooth. Throughout this exploration I have encountered many dead ends, vague and obscure paths, disappointments, elation and some success. This is said to establish for the reader that this thesis should not be perceived as a smoothly arrived at, empirically linear 'explanation' of my attempts to understand experience. It has been a clumsy, 'grappling' with a 'messy' problem; the way forward at no time seeming clear, even so far as what the goal was.

¹ NMVs - Small, 1-2 passenger, 2-3 wheeled, low powered vehicles. (See Key Terms above)

² See Chapter 4 - Design theory and Experience – 4.3.3.4 What's missing? Where are the gaps?

There was no clear guiding 'research question' or hypothesis. This is said now, to openly inform the reader that even the question that the research answers was derived only at the end of this process. But still for this text to make sense and not read like a mystery novel, it must be understood here at the beginning that the research has had an outcome. In stating this in the introduction I am contradicting the deductive process by which it was derived, but still it must be stated so that the reader will know that there is an endpoint to this text.

This sense of contradiction also resonates in the misleading artifice of presenting the following chapters in sequence. In reality they did not evolve this way but to present the information contained in them in the slightly chaotic and piecemeal manner in which they arrived would be to deliver a thesis requiring excessive interpretation. Chapters are therefore presented with a degree of chronological symmetry, which bears no relationship to their sequence of involvement in the project. I have striven to maintain a little of this 'groping in the dark' flavour throughout the thesis without suffocating it with the same sense of the order I was trying to impose on the uncertainty encountered in the project.

This research began with the relatively simple goal of understanding why some quirky little vehicles fail to sell in the marketplace. It soon became much more about everyday human experience. What follows is an explanation of how I went about finding out how to understand what experience is, and in particular how this understanding might be made useful to design.

1.1 What is the research question when there is no question?

1.1.1 *The genesis (research) question*

Throughout most of this PhD candidature a question that has often startled me, and immediately made me feel quite nervous as to how to answer it, especially when asked at parties and social gatherings is, ‘so what is your thesis about’?

Usually my mind begins to whirr frantically, thinking, how do I answer this simply? I don’t have a clean, clear, research question or hypothesis, and what level of understanding can I assume of the person asking the question? - are they genuinely interested or just being polite?

Sometimes I try the short version see what their first reaction is by saying, “I’m investigating methods for doing design research into aspects of human experience”. This mostly gets a puzzled ‘uh huh’ look from my audience, followed by a change of subject or sometimes the genuinely curious or foolhardy ask for more information and often to their regret, get the long version.

The long version begins by explaining that during a previous research project, an ethnographic study of scooter riders in Sydney³, I developed an interest in sustainable transport and one particular paradox which this research highlighted. I discovered that around the world every year, hundreds of quite sustainable⁴ little vehicles are designed which are never heard about. I also discovered in my early reading in sustainable transport (which was what I erroneously thought at first, this project was about) that even though many sustainable transport strategists are calling for smaller modes of transport to be developed {Delucchi, 2002 #159; Sperling, 1995 #137;

³ See Coxon, I. (2002) *Journey to work : buzz or bore?*, Proceedings of the Australasian Transport Research Forum, BTRE Conference, Canberra, Australia.

⁴ Sustainable in the sense that they consume far less materials and energy in production and generate far less pollution and end of life waste in comparison to cars

Urry, 1998 #266; Hoogma, 2002 #29}, that they were already being produced; but most of them fail to succeed in the marketplace and soon disappear. This was the point at which my PhD thesis began. I formulated a genesis question; if so many strategists are saying we need these things, and so many are designed and/or produced, 'why do so many small single passenger, powered, transport⁵ vehicle designs and concepts fail to reach or survive in the marketplace?

1.1.2 Transport question ... down the wrong track!

I spent the first nine months reading everything I could find on Sustainable transport looking for a way into this complex area of mobility until I came to a startling realization brought on by a supervisor who suggested to me that my project was not about transport at all. Understandably this came as a shock and left me wondering, what was it really about?

Thinking I had answered this in my genesis question, I cast about for a finer aspect of the 'vehicle failure' paradox which I might be able to throw more light on. The political, economic, technical and environmental aspects of the problem were enormous and largely beyond the scope of my background and expertise⁶. I shifted my focus to consider the social impacts of these vehicles, and as it seemed from my previous scooter studies that the social behavioural aspects of small vehicle transport were an important part of their current success, I began my new search here.

My previous ethnographic study had highlighted the importance that participants attached to the experience of riding a scooter versus driving a

⁵ These are what I refer to as New Mobility Vehicles (*NMV*s). See Terms section for a fuller explanation

⁶ My undergraduate degrees are in Marketing and Industrial Design with many years experience in graphic and industrial design practice

car or riding a bus. I decided to look further into this concept of 'experience' and what it might mean to the design of these small vehicles.

1.1.3 Experience ... a new direction

A great deal of my early reading related to experience required me to venture out of my comfort zone in design and into the disciplines of psychology, sociology, neuro-physiology, neuro-psychology, linguistics, semiotics, aesthetics, ergonomics, even as far afield as economics, health and social sciences.

Through my preliminary explorations of the meaning of the word-concept 'experience' I reframed my inquiry to consider, 'what is the New Mobility Vehicle experience like, how can we know and understand it?

1.2 Research objectives

After these initial evolutions of the topic I began to investigate ways I might research the *NMV* experience. Around this time a chance meeting with a senior academic advisor raised the stakes when he told me that if I only set out to understand the experience of *NMV* users, then that would probably be a Masters level outcome. He also told me, if I wanted to do something worthwhile and 'new' I would have to do it in such a way as to not only develop an understanding of this experience but also in such a way as to make this way of understanding it generally 'useful' to designers. I chose to approach this by studying *the way* I could understand the 'lived experience' had by users of the niche transport group, called New Mobility Vehicles(*NMV*'s). After some preliminary reading in Phenomenology I decided that the project should be based on a deep exploration from the phenomenological position, that is, what is the (*NMV*) experience like and what can we understand from this? {Van Manen, 1997 #28}

1.3 Significance of the research

Recent research into the social impacts of small electric cars or alternative powered vehicles, has referred to the enormous social-behavioural changes necessary if this form of vehicle is ever to be broadly accepted {Nilsson, 2000 #125; Kurani, 1994 #190; Redshaw, 2001 #237; Urry, 1998 #266}. Little has yet been done to understand the impact these 'behavioural changes' might have on the lived experiences of these users. Many European cities have had considerable success with *NMVs* and many thousands are on their roads. In Australia, as in the United States, (we follow the US closely in transport terms) there are few if any of this type of vehicle {Newman, 1999 #40}.

In Italy, Germany, the Netherlands and France, production of NMVs has met with significant market acceptance. Early adopters⁷ have continued to react positively to the vehicles but little is known about why. There has been no research into the lived experiences of this unique transport group. This is not entirely surprising when the ‘experiential’ component of personal transportation in *any* form has been largely un-researched. I approached this research with the view, that if personal mobility is to move forward in design terms, there is an opportunity to learn much from this group and they are worth studying. They offer a unique opportunity to understand a group who have redefined their personal mobility needs, radically changed their travel behaviour and rejected automobile marketing hegemony. This is the path that many transport and environmental strategists (described above) have told us we need to go down, urgently and ... *en masse*.

This research contributes two new methods that help to achieve these goals. The first provides a theoretical model of experience in design in the form of a Taxonomy of Experience (*ToE*). This model will be useful to researchers exploring the nature of different experiences as a tool for structuring and controlling their data collection and management.

The second method, the *SEEing* process of data analysis, exposes the data collected within a *ToE* so that deeper layers of thematic abstraction can be achieved.

1.4 The nature of this thesis

1.4.1 Overview of the methodology used

This research has been guided throughout by my growing understanding of phenomenology and particularly hermeneutical phenomenology. From the

⁷ the first consumers to ‘adopt’ these new concepts

development of a guiding research direction, throughout the data gathering and analysis through to its synthesis and validation, I have been guided by 'listening' to what the research uncovered and wanted to 'say'. This has not been a straightforward process of simply gathering information, observing or relating what was observed. In attempting to understand an abstract and complex human concept such as 'experience' I have become aware that it is not very useful if experience is simply measured, categorised, or defined by a formula, but still it can be 'understood' in a different way. Hermeneutical phenomenology firstly requires of the researcher an ontological orientation towards human values, a way of *Being* that is people oriented, inquisitive and open to the possibilities in everyday life events. Secondly, it offers an epistemological path to understanding these things. By following this path I have been able to (admittedly clumsily at times) explore the possibilities for meaning that I have found in the real life situations studied in this project.

I refer regularly throughout this text to how I have drawn on Heideggers work particularly in relation to ontological understandings of the life-world, for reassurance along the way and to reorient myself when uncertain how to proceed. Likewise, I have held a continuing dialogue⁸ with Gadamer's hermeneutic phenomenology, which has been very useful in guiding my data collection and subsequent 'conversations' with the data in analysis and synthesis (Gadamer, 1975 #9; Heidegger, 1962 #97). These referrals in no way should be read as a sound understanding of the philosophies of these two philosophers. I have read such a small amount of their voluminous writings that I can only admit to having a naïve but growing understanding and

⁸ I acknowledge that in all probability I not have correctly interpreted the writings of these eminent men in the way they meant them to be interpreted. This highlights the nature of hermeneutics in that even Heideggers and Gadamer's writings about hermeneutics must also be open to interpretation. In this situation I am using the term dialogue in the sense of a hermeneutic conversation, meaning that I take Gadamer's words and interpret them in terms of this project then return to his words for confirmation of the direction I have followed from the earlier interpretation

respect for their work. I have however, read and been affected deeply by my reading of their work, finding great comfort and much guidance in the limited writings I have studied. I have in some instances quite broadly interpreted their written concepts and I apologise in advance to those scholars who hold these esteemed gentlemen's work in high regard, as I do, for any clumsiness exhibited in my references to and use of their work in advancing this project.

1.4.2 The thesis style

The style of writing used throughout this thesis is my endeavour to align my writing 'voice' with my ontological view that care-filled communications between people should take primacy over technological agendas even academic ones. This ontological view has guided the epistemological design of this project from the beginning and it seems appropriate to me that my writing voice should reflect these views. The thesis is written as a narrative of my research experiences but in a way that allows the reader to have something of their own experience during the reading (see note on interactivity below). It is a phenomenological narrative so it should be understandable in a phenomenological way. This is the reasoning behind the structure of the printed thesis and also for my endeavour to retain some flavour of the messy⁹ and chaotic nature of the entire project.

"Although there is no compelling reason for structuring a phenomenological study in any one particular way, it may be helpful to organise ones writing in a manner related to the fundamental structure of the phenomenon itself" (Van Manen 1997, p. 168)

⁹ I am using 'messy' intentionally to describe a convoluted, undefined and illogical problem, realising it is similar to the term 'wicked' used by {Rittel, 1973 #370; Margolin, 1995 #65}

1.4.3 Interactivity

In Chapters Six, Seven and Eight a number of photographs are accompanied with hyperlinks to video sequences which help to support the explanations or activities being described in the text. The thesis text is designed to be read on its own (without using the hyperlinks) however the linked audiovisual files add another dimension to what is being described. If it is convenient, the reader is invited to place the attached CD in their computer disk drive and read from the enclosed digital copy of the thesis which will enable the links to be activated and an interactive experience to be had.

This CD also contains all Appendix files and Figures mentioned in the text should a closer scrutiny of any of these be required.

1.4.4 Structure of the thesis

The following dissertation presents a narrative of my four year exploration of the meaning of everyday human experiences. It has been conducted using an evolving 'trial and error' exploration process which the following structural outline belies. The structure presented below attempts to 'logically' present what has been an otherwise 'messy' project. The project did not flow 'neatly' nor in exactly the same order of things as they are presented here, but I have presented the flow in this manner hoping that the reader will gain a better understanding of the project outcomes, rather than become mired in a convoluted (though interesting) retelling of the processes by which they were achieved.

Part One – setting the field

- Chapter One sets out the general background and concept of the thesis.
- Chapter Two provides a brief but deeper understanding of the transport question which initially guided the project but which ultimately became secondary to the exploration of experience itself. It sets up the context in which the ‘research vehicle’ (*NMV* experience) was explored. It is the research ‘location’ in which discussions of current road transport sustainability thinking, current research strategies and future directions are the defining discourses.
- Chapter Three outlines the theoretical framework, philosophies and research methodologies guiding this exploration of experience. It details my ‘interpretations’ of hermeneutical phenomenology that have been used to guide this project. It must be restated however that these interpretations were developed progressively over the entire timeline of the project and did not simply arrive before commencing. This chapter is presented not as a critical review of the literature but as a discussion of the most important aspects of the philosophy and methodology literature which were used to guide the research project. It is placed here in Chapter Three in a ‘block’ format rather than interspersed throughout the text so that the interpretations used, can be understood clearly as a unified set of concepts as well as referred to in later chapters to support the way in which these philosophies were used to guide and support the more pragmatic aspects of the research.
- Chapter Four presents firstly, a critical review of literature related to design theory, focussing on what these texts are currently (2007) saying about how designers understand experience, design for experience and conduct experiential research.

The second half of this chapter delivers a detailed review of information from many disciplines outside design that I have drawn on extensively to develop my own understanding of how experience might be constituted. The detailed discussion of experience presented in this chapter has helped me to situate the goals of this research by highlighting the perceived gaps or ‘opportunities’ in current knowledge bases within the many disciplines canvassed.

Part Two – Empirical Research

- Chapter Five considers the guiding research goal (understanding experience) and the knowledge ‘gaps’ identified in Chapter Four. Chapter Five describes how the field research for this project was initially designed and prepared for, providing a backdrop to how quickly and significantly these plans changed to meet realities encountered in the field. This evolution of data gathering techniques ‘in the field’ are presented along with many of the lessons learned from this experience.
- Chapter Six describes the first stage of data analysis, that is the approaches used in preparing and analysing the field data described in Chapter Five. It details the writing of phenomenological narratives, the evolving hermeneutic analysis and synthesis which lead to the development of a Taxonomy of the *NMV Experience (ToE)*.
- Chapter Seven covers the second phase of the data analysis, where the data which was analysed and interpreted into a Taxonomy of the Experience (*ToE*) in stage one was further interpreted to understand its ‘*Superordinary*’ essence from a design perspective. This chapter describes the ways in which information contained in the *ToE* were explored, distilled and made visible for design practice. The heuristics of failures as well as successes in this process are discussed in terms of what might be learned from them as well as how they ultimately lead to a set of methods

(called *SEEing* methods) for understanding the deepest meanings in the experience.

Part three - Presentation

- Chapter Eight describes the lessons learned from initial trials of the *ToE* and *SEEING* methods with students from an Australian and German University Design School. Both pedagogical and student perspectives on using the methods are presented along with recommendations for improvements.
- Chapter Nine presents conclusions about the research project, a summary of its contributions to knowledge and suggestions for further research.
- Chapter Ten contains a detailed list of references used throughout the text and a list of appended material.

N.B. There are no physical appendices as all material has been supplied in digital form on the attached DVD (inside back cover).