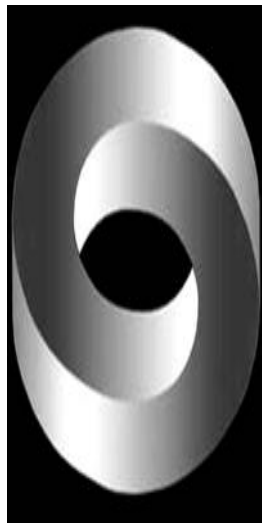


DESIGNING FROM *DASEIN*: EXPLICATING DESIGN
FUTURES FROM HERMENEUTIC CONVERSATIONS WITH
AUTHENTIC PERSONAL EXPERIENCE.



Author: Ian Coxon

Presentation for

'Wonderground 2006'

Design Research Society Conference

November 2006, Lisbon, Portugal

In the spirit of sustainable practices, this paper is printed double sided on 100% recycled paper.

Designing from *Dasein*: explicating design futures from hermeneutic conversations with *Authentic* personal experience.

Author: Ian Coxon

Affiliations:

PhD candidate, under the joint supervision of

University of Western Sydney, School of Communication Arts, Sydney, Australia

In association with

University of Applied Sciences, Koln International School of Design, Cologne, Germany

Contact details:

Unit 9 / 99 Macleay Street, Potts Point, NSW, Australia

Office Tel: 61283541547

Mob: 0416-074569

Skype: Ian Coxon, Sydney, Au

Email: bluearth@optusnet.com.au

Abstract:

This paper presents four explorative approaches to developing design futures from deep (*Dasein*) understandings of individual lived experiences. Using a ‘framework’ or Taxonomy of Experience (*ToE*) developed out of earlier hermeneutic phenomenological research as a basis for exploration; four approaches to explicating design understandings from this experiential base are presented. Language from Martin Heideggers philosophy of existential *Being*, is used throughout this paper to help communicate and support the different explorative approaches and outcomes that unfold through hermeneutic, interpretive analysis.

The analytic explorations presented in this paper are drawn from an empirical study of the lived experiences had by individual customers and designers within a niche but scientifically significant automobile market (Delucchi, Kurani, Nesbitt, & Turrentine, 2002a). Throughout this paper, parallels are drawn between the individual experiences of these customers and designers, and the philosophical guidelines for developing experiential understandings, developed by phenomenologists such as Martin Heidegger and others.

Conclusions are drawn, that indicate that, if a *Dasein* [pronounced da zign; meaning ‘*Being*-there’] understanding of a particular experience is able to be made manifest through the use of a *ToE*, it provides experiential understandings in their wholeness (a unity), which are the existential foundations for understanding *Dasein* experience itself; and that these understandings are essential to moving *forward* as a designer. (Design as essentially future oriented) This is design *from Dasein*. The conclusions suggest Design from *Dasein* might offer a point of departure from *Inauthentic* (A Heideggarian term) design practices such as linear, static or rear vision design. It is further suggested that Design from *Authentic Dasein* can provide, future oriented, forward moving, design foundations from which *Authentic* Design can proceed.

Keywords:

design research methods, experience, design and emotion, hermeneutics, phenomenology,

Prologue

A very senior academic mentor with two Ph.D.s to his credit, remonstrated with me quite early on in my doctoral candidature, “if you only set out to understand the experience of these people (the research participants) and using phenomenology you achieve that, then I’d probably give you a masters for that; because it’s not demanding enough. If on the other hand you go beyond that point, and show how that information can enable me to go forward as a designer?, well then, I’d probably grant you a PhD for that”. This advice (though unwelcome at the time) is the driving inspiration for what follows.

Introduction

This paper describes the second stage of analysis in my doctoral project. It describes the point of departure from that which had become familiar (The first stage, hermeneutic analysis of phenomenological data) into an unfamiliar pragmatic space where I needed to discover, how design could be inspired to move forward.

I am proposing in this paper, that through a hermeneutical phenomenological process, individual experiences can be made understandable using a ‘framework’ or taxonomy of experience (*ToE*); and that this framework can provide a deeper understanding of experiential modes of *Being* (see *Dasein* below), from which design can operate. Design from *Dasein* offers a point of departure from *Inauthentic* (A Heideggarian term) design practices such as linear, static or rear vision design, which leads to experiential ‘after-effects’.

I am further proposing that Design from *Authentic Dasein* can provide, future oriented, forward moving, design foundations from which *Authentic Design* can proceed. In other words, this process will, as my mentor requested, “enable me to go forward as a designer”.

Some of the italicised terms used in the paragraphs above and throughout this paper, are interpretation of terms developed by Martin Heidegger in his phenomenological way of doing philosophy. I have appropriated Heideggarian terms such as, *Dasein* [pronounced da zign; meaning ‘*Being-there*’; and literally ‘there *Being*’] as well as ‘modes of *Being-in-the-world*’ such as *Authentic* and *Inauthentic*. The term *Dasein* I use to describe an intimate understanding of what it is like to experience something to the point of understanding what it is like to literally ‘be-there’. A *Dasein* understanding is a holistic understanding of the many aspects of an experience. An experience is constituted as an entity by *Authentic* and *Inauthentic* modes of *Being*. *Inauthentic* describes the base-level, every-day, barely conscious of, aspect of lived experiences. The *Authentic* modes of being are those in which we recognise something about our ‘selves’, in the experience, we become consciously aware of the experience and we can identify these as ‘superordinary’. The use of these terms is not done with any claim to the efficacy of my Heideggarian interpretation (indeed I offer my apologies in advance to all Heideggarian scholars), but I have liberally interpreted these terms only on the premise that they offer a better understanding of the philosophical entity I am endeavouring to describe and have otherwise find difficult to name. In using the title ‘Designing from *Dasein*’ I am referring to designing things based on a very intimate understanding of what it is like to ‘be there’. This is a reasoned attempt to get close to understanding the experiences of a Heideggarian ‘other’.

"By others we do not mean everyone else but me... they are rather those from whom, for the most part, one does not distinguish oneself - those among whom one is too. This *Being-there-too* ...[is] ... to be understood existentially, not categorically" (Heidegger, 1962, p.155)

I would similarly like to make it clear that this paper explores the efficacy of hermeneutic phenomenology as a methodologically distinct research approach from other research approaches such as ethnography. I agree that other ways of doing research into human experience, share an

interest and belief in the value of human experiences but are directed by quite discrete philosophical perspectives, and fortunately I have not the space to debate the differences here. I would simply like to make it clear for the reader that this study is not meant to be in anyway confused with an ‘ethnographic study’. I have deeply engaged with hermeneutics and phenomenology in my attempts to understand the individual human experience ‘as lived’, and to explore the value of this understanding to directing future-oriented design.

Project background

This paper is drawn from the second stage of data analysis in a doctoral research project, which uses as its research medium, the personal transport experiences had by a sample of people in Western Europe. The sample is drawn from a group who have used, and/or are using, non-standard types of vehicles, referred to as New Mobility Vehicles. *New mobility* is generally identified as a political and social movement towards more sustainable transport options in answer to rising urban density, traffic congestion and automobile pollution (Britton, 2006). Increasing interest in *New Mobility* has inspired a relatively new species of vehicles I refer to as ‘New Mobility Vehicles’ (NMV’s). In this paper I will be referring to NMV’s quite often. They have been variously described by many transport strategists and collectively have characteristics such as low power, low speed, low weight, low tech, low energy use, nimble in traffic, carry 1-2 persons, high density urban use, small road ‘footprint’ (Delucchi et al., 2002a); (Riley, 1994); (AEMM, 2000); (Banister et al., 2000a).

Many major automobile companies have attempted NMV’s in the last two decades, but most of these have failed. Ranging in sophistication, from common types of simple motor scooters to the highly advanced BMW *CI*; NMV’s also include the *Twike*, *Carver 300*, and experimental vehicles such as Mercedes *F300*, Renault *Ublo* and Italjet *Scooop*.

In my current study I am exploring what possibilities might be illuminated for new vehicle designs, through a hermeneutical phenomenological analysis, of the individual lived experiences of people directly involved with NMV’s. A lack of this kind of understanding has featured significantly in the failure of many attempts to innovate in this field. (Ness, 2004; Van den Hoed, 2004)

In an earlier stage of data analysis in my doctoral research (Coxon, 2005), I used hermeneutic interpretive techniques to thematicise the usage experiences of this unique group into what I call collectively, a ‘Taxonomy of Experience’ (*ToE*) (this is described in more detail later). In this current paper I am discussing the second stage of analysis; that is, how I explored ways a *ToE* might be used to develop possibilities for improving design.

Structure of the paper

A secondary goal of my research is to consider what new design possibilities might come out of using hermeneutic phenomenology as a pragmatic design research methodology. To foreground this, I will briefly describe how these philosophies / methodologies were most useful as landmarks when I seemed lost in the data. Adopting these methodological approaches was also instrumental in developing the Taxonomy of NMV experience in the first stage of the project. I will begin my argument by providing a short summary of how the first stage was conducted and concluded, but it is the ‘second stage’ of analysis that is the main focus of this paper.

The second stage of research analysis is presented as a descriptive discussion of the four approaches, used to explore, tease out, reduce and distil a rich mass of field data, in order to develop ‘superordinary’ data from which design directions could be explicated and developed further. In the closing sections, I describe one method of working with these ‘superordinary’ data that was developed as part of preparations for current industry and academic field trials in Europe. The paper closes with conclusions that might be drawn from this method of analysis / synthesis as well as outlining other opportunities for applying the research.

Using hermeneutic phenomenology as a design research methodology

My ongoing research and this paper from which it is drawn, is strongly influenced by approaches to phenomenological inquiry developed by Martin Heidegger, Hans-Georg Gadamer and contemporary Human Science researchers such as Max Van Manen and Peter Willis. (Gadamer, 1975a; Heidegger, 1962; Van Manen, 1997; Willis, nd)

I have been particularly inspired by Heidegger's understandings of the '*Life-world*', and the complexity he described in the multiple ways we have of *Being-in-the-world*; the value of the singular experiential *entity*, and of particular relevance to the explorative nature of my current research, the quest to uncover the *hidden Being* of an *entity*. (Heidegger, 1962)

Heidegger explained and Gadamer re-enforces the importance of the researcher's own ontological forstructures, and how epistemologically they are not only relevant, but indeed essential to the research process. This is why my personal experience of riding, driving, being-in and being-with drivers of NMV's is so intrinsically interwoven throughout this exploration. "Dasein-with [mit dasein] is already essentially manifest in a co-state-of-mind and a co-understanding" (Heidegger, 1962, p.205). This principle of 'co-creation' guided the development of phenomenological narratives at the beginning of my hermeneutic analysis.

Gadamerian hermeneutics on the other hand has strongly guided the ways I approached sampling, data collection, textual analysis and interpretation. To enable a deep and rich understanding of the phenomena to be enlightened (hermeneutically made visible), I chose diversity and disparity in my samples; intuitive and submersive data collection methods; and conversational analysis and interpretation. (Gadamer, 1975b)

Gadamer's inspirational works made developing an understanding of the NMV experience, appear as a tantalising possibility, in the first stage of the project. I was inspired by the universality in his words "if something is called or considered an experience its meaning rounds it into the unity of a significant whole" (Ibid, p.60). This significant whole reflects the Heideggerian concept of *entity*, and sums up the multiple modes of *Being* that experience encapsulates; the *Inauthentic* and *Authentic* aspects of our lives that can only be accessed through deep conversation with the *hidden* texts of individual life-worlds. (Heidegger, 1962)

It is only through a detailed analytic relationship with the minutiae of these life-worlds that understandings of *Dasein* can follow. I used Hermeneutics to find the 'language of the experience' to use in conversations with the field data; teasing out threads of conversation to a point where I became lost in the sheer volume of data. (Zarrilli, 2004). I used hermeneutic interpretive methods to reorient myself thematically, reducing, distilling and refining the essences of these data-conversations; exposing their multiple interpretive meanings, until they made sense, *to me*: A reflection of Paul Ricoeurs (another Gadamerian) 'plurality' of meanings (Geanellos, 2000, p.113)

"Ricoeur removed authorial intent; the idea that the meaning of a text resides only with its author, for example, a research participant. Methodologically, objectification of the text allows researchers to move beyond the notion that only one understanding is meaningful or correct; that of the research participant. As a result, textual plurality (that preunderstandings lead interpreters to interpret the same text faithfully yet differently), and multiplicity (that texts have many meanings) is acknowledged" (Geanellos, 2000).

The discussion above, outlines some of the philosophical, methodological foundations I repeatedly returned to throughout this research, and frequently refer to in this paper. They provided the 'signposts' that guided the first stage of field data analysis, which lead to a Taxonomy of Experience (*ToE*) for NMV's. The following section (the body of the paper), begins by firstly explaining in more detail how the *ToE* of NMV experience was developed.

Data analysis - Stage One: Developing a Taxonomy of the experience of NMV usage.

The field data was captured in semi-structured interviews, close observations, submersive participation and contextual studies, using video, still photos and audio recordings. Each of these mediums was converted into phenomenological narrative form, guided by Heidegger's and van Manens guidelines for phenomenological description. (Heidegger, 1962; Van Manen, 1997) "It is not enough to simply recall an experience had, it must be recalled in such a way the essential aspects, the meaning structures of this experience as lived through, are bought back as it were in such a way that we recognise this description as a possible experience, which means as a possible interpretation of that experience" (Van Manen, 1997, p.41).

I developed richly detailed narratives of each experiential event, incorporating sensorial, affective and cognitive elements of the experience of NMV use from designers, researcher and customers. These were entered into an *NVivo* data base for coding and hermeneutic interpretation. NVivo qualitative data analysis software was used as it is an efficient way of handling large volumes of data and also provides the kind of flexibility and fluidity needed for hermeneutic analysis. The analysis proceeded through an iterative process of thematic coding and interpretive cycles of theme development. These were guided and informed by my (the researchers) own forstructures which had been made explicit and included in the narrative process. (Geanellos, 1998b)

" In ontological Interpretation an entity is to be laid bare in regard to its own state of *Being*; such an Interpretation obliges us first to give a Phenomenal characterisation of the entity we have taken as our theme, and thus to bring it into the scope of our fore-having, with which all the subsequent steps of our analysis are to conform." (Heidegger, 1962, p.275).

Through a hermeneutic reductive process of forming themes and sub-themes of meanings; the situated experiences of designers, users and the researcher (myself) were detached from authorship and reconstituted into a Taxonomy. This provided a structure for understanding the elements that constitute the NMV experience in its wholeness as an *entity*. This is not to say that the taxonomic reduction *is* the experience but it is a structural interpretation of the experiential phenomenon that allows understanding of it to take place.

" the essence of a phenomenon is a universal which can be described through a study of the structure that governs the instances of particular manifestations of the essence of that phenomenon" (Van Manen, 1997, p.10).

The Taxonomy of Experience (*ToE*) and its thematic structure

The *ToE* is an experiential framework comprised of key meta-themes (Usage Experience and Design Experience), themes (The Gut, The Heart, The Head, Out There, 5 P's of Design), and numerous sub-themes. Theme titles such as 'The Gut', were drawn from descriptions used by research participants; a common practice in hermeneutic analysis.

Figure 1 shows the structural constituents of the *ToE* of NMV experience, which are discussed in more detail in the following pages.

Insert Figure: 1 here (see end of document)

Figure 1: Taxonomy of experience (*ToE*)

Usage Experience

The Gut: Somatic experience

These are aspects of the NMV experience which stimulate or directly impact on the physical body and include sensorial stimuli, comfort (ergonomics) and appearance (aesthetics). These are what Donald Norman refers to as the 'visceral' level but which I found to contain more complexity than is often ascribed to it.

"Visceral design is about the initial impact of a product, about its appearance, touch and feel" (Norman, 2004, p.37).

For instance there may be sensorial elements in an experience that are not directly related to their comfort or appearance; this is why I have treated them separately. As when one participant said, 'when you take the helmet off ..all of a sudden you realise how loud it is'.

Somatic elements of the *ToE* were defined in the analysis according to their *meaning* in the context in which they occurred, and this meaning often showed itself in a relationship with affective and cognitive aspects of the experience at that point in time.

"There are key nodal structures that link Affect or its somatic (physical or bodily) representation, to cognition and behaviour" (Adolphs and Damasio, in (Forgas, 2001, p.43).

The Heart: Affective experience

In this project the aspect of Affect I am principally interested in, are the 'emotions' experienced in driving situations. These are mostly short duration, intense emotive responses and do not generally include extended Affective states such as feelings and moods. 'Affective experience' was sub-themed in terms of the positive and negative valance which presented itself in the analysis.

"Emotions are usually defined as intense, short lived, and highly conscious affective states that typically have a salient cause and a great deal of cognitive content" (Forgas, 2001, p.15).

"Psychologists argue that affective experience is bipolar (good or bad) whereas others argue it is orthogonal. Its valence increases as good goes up then down as bad goes up" (Ito and Cacioppo, in Forgas, 2001, p.60)

The Head – Cognitive experience

This section refers to the way in which a driver thinks about both internal (reflexive) and external (reflective) aspects of the experience. I use 'internal' aspects as a way of describing the way in which the driver thinks about himself e.g. 'I am not a biker...I am a little bit afraid'

Externalised aspects of cognitive thinking (Conation) relates to the way in which the driver thinks about things outside himself that may or may not lead to action or behaviour, e.g. 'because in a car everything is closed ...in a box ...and in a C1 ...its open ...you feel the wind.'

"Psychology has traditionally identified and studied three components of mind: cognition, affect, and conation" (Huitt, 1999, p.1).

"Kant ... felt that, Conation relates to practical reasoning, will, action or judgment [while] ...Cognition relates to intellect or pure reason" (Forgas, 2001, p.8)

Out there – The Context of Being

The experiential somatic, affective and cognitive meta-themes described above, are integrally situated within a contextual meta-theme I refer to as 'Out There', their mode of *Being-in* and *Being-*

with, the *life-world*. This component of a *ToE* contains a series of important sub-themes or elements of the context in which the experience takes place.

Contextual Factors found in the NMV experience included:

- Environmental factors
- Regulatory factors
- Social factors
- Existential factors
- Corporate, Economic factors

Summarising the Taxonomy of Experience (ToE)

When the full Taxonomy is considered, at its highest thematic levels (Meta-themes, themes, sub-themes), it shows the structure and contents of a particular experience at a glance (Figure 1). There are many ways a *ToE* might be used to explore situations requiring a deeper understanding of an experience. The development of this *ToE* of NMV's, not only provided a deeper understanding of the NMV experience, but also the experience of the designers of NMV's, and how the context of use impacted on their designing.

However in this study, the understandings of Design experience were recognised as interesting opportunities for future research but were not explored further. There appeared to be 'issues' in these areas, but it was more important to proceed with the next stage of the investigation; the substantive aim of the research – which was to find out what the *ToE* of NMV's could do to 'enable me to go forward as a designer'.

Exploring approaches to making NVivo data useful for design...as a designer

At this point the theories that had guided my exploration, appeared to be no longer helpful. What I needed to do, was to draw out and make visible, the design possibilities contained within the *ToE* data; but it appeared that hermeneutics, while it illuminates possibilities through questioning, does not suggest the nature of the questions that might be fruitful. Phenomenology, while it has previously helped to distil and understand the essence of the *Dasein* experience; does not provide any guide as to how this essence might be made useful to the designer. So in many ways this was strange and unfamiliar territory. I needed more signposts, so I applied the same principles to move forward into the design question as I had at the beginning, which was to try different approaches on a 'trial and error' basis and learn from the results.

I returned to the field data contained in the NVivo database and experimented with different hermeneutic questioning approaches. The data in the *ToE* was contained in thematic 'nodes' Nodes are collections of similar interpreted 'meanings' of instances or aspects of the experience. The *ToE* in its tree form (figure 1), provides understandings of the parts (nodes, instances and their meaning) and the whole experience (*ToE*), in terms of triggers or stimuli (causes) and effects (sensorial, affective and cognitive responses)

" no true starting point for understanding exists, because understanding of the whole presupposes understanding of the parts, in the same way that understanding of the parts presupposes understanding of the whole" (Geanellos, 1998a, p.159)

Approach #1 – Developing hermeneutic design ‘interpretations’

The following passages are examples of the type of conversations (with the data), which were used to interrogate each aspect (node) of the experience, in trying to determine an appropriate ‘design response’ to each experiential trigger (causal stimuli) within the node. The experience trigger is the aspect of the event which triggered (caused) the response described in the node i.e. a sensory, affective or cognitive response. The design response to this trigger, is the manner in which I responded to the trigger, so as to enhance or improve it in a positive way. The following questions and answers are examples of how these conversations-with-the-data, played out in the first instance. These were heuristically adjusted, as they were applied to the balance of the data group.

Questioning Somatic dataData group

Q: What aspect of Somatic experience is being described?

A: comfort

Q: What specific aspect of comfort does this describe?

A: seating

Q: What specific aspect (of seating) prompted this?

A: seating direction..... (Experience trigger)

Q: How might a designer interpret this aspect so as to change or improve it?

A: seat both passenger and driver in same direction(Design interpretation)

Questioning Affective dataData group

Q: What is the emotion described in this aspect of experience?

A: feeling nervous

Q: What aspect of the experience from the life-world prompted this?

A: fragility of the vehicle.....(Experience trigger)

Q: How might a designer interpret this aspect so as to change or improve it?

A: make the frame more solid(Design interpretation)

Similar questioning was applied to Cognitive, Contextual and Design data respectively but for space reasons these are not detailed here and it does not affect the following outcome.

Asking these questions, I reached a point where I had developed hundreds of design ‘interpretations’. That is, interpretations for almost every event which had triggered an effect or Affect. Unfortunately it became fairly obvious that if I was to actually apply all of these design interpretations; what I would be doing is simply enhancing the NMV in a linear fashion until it reached a predictable and quite uninteresting interpretive outcome; a car as we know it now. This is where Heidegger’s concepts of *Authenticity / Inauthenticity* begin to resonate. *Inauthentic* events are the mundane everyday manifestations of *Being* that can be understood in the everyday aspects of an experience. *Authentic* states are those aspects of the experience that come into sharp focus and where a *superordinary* aspect of the experience is understood.

"*Authentic* moments are those in which we are most at home with ourselves, at one with ourselvesHeidegger thinks we live in an *Inauthentic* way most of the time" (Moran, 2000, p.240).

A linear ‘cause and effect’ approach simply takes every experiential moment (cause) and progressively adds to it in order to prescribe a positive effect. This process does not differentiate between *Authentic* and *Inauthentic* modes of *Being*; treating all causal triggers as if they are the same; leading to nothing really new or interesting in design terms.

Approach #2- Design amplification

Changing direction, I returned to the experiential triggers contained in the *ToE* and explored what possibilities could be derived by ‘amplifying’ the identified triggers in different ways. By amplifying I mean, to positively enhance each trigger event whether it was originally positive or negative, and in such a way as to turn it into a more positive event. I did this by not only enhancing the positive aspects of the experience triggers (+ → ++), but also turning negatives into positives (- → +) and venturing beyond this linear process, to adopt a more lateral questioning approach e.g. how could I interpret the event to enable ‘invention’ or superordinary possibilities to show themselves (-/+ → ?) In other words what radically different view could I take of this piece of information that would allow me see it in an entirely new way?

This process still addressed the experiential triggers in a fundamentally linear, ‘cause and effect’ manner, which did not offer anything very interesting in design terms. It did offer some interesting functional ideas and stimulated design concepts that creatively answered some specific design issues, but as a method for stimulating fresh design direction, it was still very, prescriptive, linear and *Inauthentic*.

Approach #3 – Asking the *te estin* question: what is it really all about?

The large volume of information contained in the *ToE* was making it difficult to find a new way forward and needed to be further reduced. I formulated a new set of hermeneutic questions designed to help understand the true nature of the experience of driving an NMV.

I began the next phase of the distillation process by questioning the list of experiential triggers; asking each incidence and event ‘is this, what it (the *Dasein* essence of the experience of driving an NMV) is really all about?’ in other words how important is this piece of information to defining the essence of the experience. Is it incidental or vital?

What are the most important or essential triggers or events that constitute this experience and make it what it is?

"In determining the universal or essential quality of a theme our concern is to discover aspects or qualities that make a phenomenon what it is and without which a phenomenon could not be what it is" (Van Manen, 1997, p.107).

By asking these questions, I reduced thousands of elements to around two hundred ‘essential elements’. However, while the picture did become clearer, it remained quite fragmented and too undefined to be useful from a design standpoint. Even more distillation was required.

Approach #4 - Design superordinary-ness

To further reduce the volume and increase the quality of ‘essential elements’ described in Approach #3 above, I applied another set of hermeneutic questions, which originated out of considering two possible reasons why these vehicles (or other designed items) fail in usage.

I asked the data two ‘turnkey’ questions:

1. What the designers did that didn’t work or was wrong?

It seemed that answers to this type of question would be similar to the linear ‘amplification’ process described in Approach #2 above, so this questioning approach was abandoned.

...or alternatively, I could ask:

2. What the designers did not do, that they should have done, or was needed?

In other words, what didn't the designers know to do; what was intrinsic to the experience that current users know about, but that the designers didn't know they didn't know? At the end of Approach #3 there remained 200 plus 'essential' elements of the experience, which needed further distillation. I needed to isolate the elements of the experience, which were most probably, **not an important part of the original designing process**, but which were **important to users** and might also be subsequently **useful in making better designs**. I rephrased the *turnkey questions* to ask; what were the surprising or *superordinary*, elements of the experience? This questioning reduced the 200 'essential' elements to 70.

Searching for the 'superordinary' or unintended impacts of design, hidden within the individual pieces of text; I also found it useful to fluidly reframe the 'turnkey questions' against a background set of 'filter questions' which taken together helped to recognise the *superordinary* answers when they arose. Filter questions included:

- What do users know about the experience that the designers don't?
- What is it about this experience that keeps users coming back?
- What do I (as designer) not already know?
- What didn't I know before I investigated this experience – what surprised me?
- What didn't the designer know when he designed it?

Final reduction

I prescribed a value against each of the final 70 'superordinary' elements, using a Likert rating of 1-7 (1 is low), and allocating these on the basis of the 'perceived' powerfulness of the experience, or the level of intensity of its '*superordinary-ness*'. This may seem a conspicuously subjective determination, but it is consistent with phenomenological methodology and appropriate in this instance as the ratings 'accuracy' was enabled by the process of 'submersive research' that I had employed throughout the project.

"The whole point of phenomenology is that we cannot split off the subjective domain from the domain of the natural world as scientific naturalism has done. Subjectivity must be understood as inextricably involved in the process of constituting objectivity" (Moran, 2000, p.15)

I use the term 'submersive research' rather than 'immersive research'; because of the deeper level to which I went, to understand the experience. I rode an NMV for two years in preparation for this project; I drove many of the NMV's for extended periods with their owners; I interviewed owners while I drove and while being driven. I fully submerged myself in the experience and the context of the experience, in order to better understand it and its language. By 'submerging' myself to this level of active participation in the research process, I learned the 'language' of this experience; enabling me to interpret with a significant degree of authority, the multiple perspectives of designer, researcher and user.

"It is by observing and subsequently analysing these sentences that one can understand the language on that deeper level needed to speak it. And when one speaks the language, one can translate it." (van Veggel, 2005, p.5).

Applying the Likert scaling to the reduced number of superordinary elements and sorting the entries by their prescribed numerical values, I produced a ranking of *superordinary* aspects of the experience in descending order. These can be seen in the last column in figure 2.

Insert Figure 2 here (see end of document)

Figure 5: Likert ranking of superordinary elements in the experience

Each of these final entries was hermeneutically questioned for their essential meaning, in an effort to distil a purer inter-subjective meaning. After several iterations, a pattern began to appear in the 'one word description' column. (the last column of figure 2 above). By this process, the experience of driving an NMV had devolved to an interpretation of its phenomenological essence. I now had an understanding of the *Authentic Dasein* nature of NMV experiential *Being*; represented by four, meaning-filled words, which have been ranked and sorted by their degree of *superordinary* salience; using the Likert scale mentioned above:

1. Spiritual pleasure*
2. Freedom
3. Danger
4. Celebrity

N.B. even though spiritual pleasure is not literally one word. The one word 'spirituality' does not accurately represent the power expressed in the text it represents; so in the absence of a better single word, spiritual pleasure has been used.

If the distillation process employed to arrive at these *superordinary* words, can be seen as separating the *Authentic* or *superordinary* from *Inauthentic* or ordinary elements of the experience, then these are the *Authentic* aspects of *Dasein* that I have been seeking. These are the elements that will 'enable me to go forward as a designer'.

***Superordinary* summaries in more detail**

Referring back to the *Authentic* moments from which they were drawn, a useful narrative can be constructed of the *superordinary* summaries that help to explicate their mode of Heideggarian *Being*. The *Authentic Dasein* is made visible again through the hermeneutic of text.

Spiritual pleasure – From the Heart or Spirit

Driving an NMV is a deeply spiritual activity and design for this spiritual state must understand how it is experienced. Drivers experience euphoria, spontaneous joy, joy of life, community and deeply meditative states. They are drawn to the vehicle because it puts them in touch with important aspects of their inner self and at the same time, allows them to relate to the world around them in more elemental ways.

Spiritual exemplars

'sudden bursts of unmediated joy in the experience; sense of euphoria; specially beautiful days when riding holds a sublime pleasure; moments of real 'connection' with surroundings; moments of consciousness when it is simply a joy to be there; clear crisp days in the sunshine; balmy, dry days with clear open roads; sublime sights, sounds, smells; heightened visual variety and novelty, noticing more (fields of daisy's, dead cows)'.

'moments of vivid existential consciousness (place, weather, road); being out 'in' it, having a strong positive connection to the ambient environment, often resulting in powerful cognitive reflections and/or emotional responses; moments of great head space, interesting thoughts, deep meandering thoughts'.

Freedom – From the Head or Mind

Freedom is at the core of the NMV cognitive experience. It takes many forms including simple convenience*, coming and going as one pleases, freedom to be the kind of person one chooses and very importantly, freedom to choose the level of risk enjoyed.

*simple in terms of complexity but still very highly valued

Freedom exemplars

'I come and go as I please; independence from others; uncomplicated travel; short quick runs in traffic; I can go longer distances; pull up outside front door; park and walk in; parking close to favourite places; lightness, nimbleness; weave through intense and particularly difficult traffic conditions using small gaps'

'costs very little; simple and easy to fix; no long repairs'

'wearing very little on hot dry days; having to wear less protective clothing'

Danger – From the Body

Drivers are particularly aware of the dangers involved in driving an NMV and it is an intrinsic element of what makes the driving experience desirable. Many types of danger while not enjoyable are never the less endured by drivers as a right of passage. Still other dangers are frightening but add an essential level of piquancy to the experience.

Danger exemplars

'wet slippery roads; driving at night; unthinking and life threatening acts by other drivers; severe wind turbulence from large vehicles; storms; gusty bridges'

'white lining or running between moving cars and parked cars; driving through narrow gaps between moving vehicles; no risk no fun; danger inherent in driving raises alertness and adrenaline; driving without a helmet; driving in shorts; physical feedback (shaking and shuddering) provides a connection that allows the driver to make driving decisions; heightened alertness driving in narrow streets with many obstacles; having the protection that makes them warm and comfortable but not detached from the experience'.

Celebrity – From Being out there – The Cosmos

Celebrity, standing out or *Being* 'special', comes with driving an NMV that is not considered 'normal'. Drivers embrace this aspect and thrive on it. They do not consider themselves 'normal' and are happy to receive admiration, interest and recognition from others. Driving an NMV provides a constant stream of positive public affirmations which are welcomed along with some forms of attention which are not. But in every instance, drivers would rather be noticed than considered 'normal'.

Celebrity exemplars

'standing out in a strange vehicle; pulling up and people staring; people say 'that's cool'; other riders and drivers affirming smiles and gestures; not wanting a *normal* car'

'verbal and gesticular ridicule from other road users; vehicle is seen as a poor alternative to a 'normal' car; vehicle is seen as a novelty or joke; derisive gestures; remarks and verbal abuse from strangers'.

Using *Authentic Dasein* to design

Two key questions still remain: by using this information, **how does a designer, design better?** and by using this method, **how can a designer be a better designer?**

Both answers lie in the nature of the original question (The failure of NMV design) and the nature of the *Authentic Dasein* solution. Through a description of the entity that design is focusing on (in this case NMV's that have failed), we can understand its mode of *Being* or the nature of what it is that we are designing towards (*Authenticity*). Aspects of the nature of an NMV-entity; were referred to earlier as; low powered, low speed, low weight, low tech', low energy use, nimble in traffic, carry 1-2 persons, for high density urban use, using small road footprint.

To improve the entities mode of *Being* by design I need to have a way to *Authentically* 'see' the entity (NMV); a way that enables me as a designer, to view it from an *Authentic* perspective. Approach #4 above, showed how an *Authentic Dasein* perspective of NMV experience was developed out of a *ToE* of NMV's. The *Authentic Dasein* perspective is represented in four, 'superordinary' summaries (Spiritual Pleasure, Freedom, Danger and Celebrity). Combining the nature of an NMV-entity described above, with the *Authentic Dasein* 'superordinary' summaries offers a matrix through which design possibilities can begin to be developed. The matrix (figure 3) allows the fixed perspective of *Authentic Dasein* to systematically focus on the variables describing the nature of the old entity, allowing possibilities for new entities to be seen.

Insert Figure3 here (see end of document)

Figure 3: *Authentic Dasein* matrix

For example; what possibilities can be seen when 'Low Tech' is viewed through the lens of 'Spiritual pleasure'? What is suggested in the combination of 'low power' and 'Freedom'? What ideas does the mating of 'Danger' and 'Urban use' offer?

The *Authentic Dasein* matrix (Figure 3) is a framework for viewing the NMV entity in new and *Authentic* ways; **enabling me to design better**. Applying this matrix method enables me to creatively approach the design task from a lateral *Authentic* direction rather than an *Inauthentic* linear direction, offering me greater possibilities for **being a better designer**.

Possibilities for continuing research

The research represented in this paper has indicated a number of opportunities for further exploration. The Taxonomy of Experience (*ToE*) was only lightly explored in the different ways it might offer deeper understanding of particular aspects of the NMV experience of usage. A further exploration of this understanding could offer interesting possibilities for automotive design. Similarly, the experiences of designers explicated in the *ToE* was not fully explored in this project and could offer interesting insights into professional practice associated with designing NMV's (see 5P's in Taxonomy)

The inextricably inter-subjective relationships between the designer and the user, the designer and the context of use, and the user and context of use, could all be better explored. NVivo offers possibilities in this direction if researchers were to capitalise on its ability to deeply interrogate and cross reference the experiential data against different participant attributes.

Postscript

The practical value of this method of Designing from *Authentic Dasein* is currently being evaluated in a series of trials with students at University of Applied Sciences in Cologne, Germany (Testing its pedagogical value) and also with an industry partner (Testing its value in design practice).

I expect that these trials will generate some interesting material for publication in the near future.

Conclusions

In this paper I have shown that through a hermeneutical phenomenological process; a taxonomy of experience (*ToE*), can be used to make individual experience of an entity understandable in a Heideggerian, *Being-there (Dasein)* sense. This *Dasein* understanding provides understandings of both the *Inauthentic* (ordinary, everyday elements of the experience) and *Authentic* (superordinary elements of the experience). This process became evident in approaches #3 and #4. Approaches #1 and #2 indicated that design decisions based on *Inauthentic* foundations provide linear and re-arrangement, re-design opportunities from which only incremental improvements can be made. Design from *Authentic Dasein* offers a radical point of departure from these otherwise deterministic paths.

Design from *Authentic Dasein*, is designing from 'Being-there' it is future oriented; a design foundation from which designing can begin to move forward and make 'design-leaps'(design futures). Designing from an *Authentic Dasein* base enables better design, but also the opportunity to be a better designer.

Design from *Dasein* does, as my mentor initially requested, "enable me to go forward as a designer"

References:

- AEMM. (2000). *Smart wheels for city streets: Powered two wheelers, a practical alternative*. Brussels, Belgium: Association of European Motorcycle Manufacturers.
- Banister, D., Stead, D., Steen, P., Akerman, J., Dreborg, K., Nijkamp, P., et al. (2000a). *European transport policy and sustainable mobility*. London: Spon.
- Britton, E. (2006). *The new mobility agenda*. Retrieved 13-02-06, 2006, from http://ericbritton.org/htdocs/eb_index.htm
- Coxon, I. (2005). *The universe in a single step: Using phenomenological narrative as data*. Paper presented at the College of Arts, Education and Social Sciences Conference, Sydney, Australia.
- Delucchi, M. A., Kurani, K. S., Nesbitt, K., & Turrentine, T. (2002a). *How we can have safe, convenient, clean,affordable,pleasant transportation without making people drive less or give up suburban living*. Unpublished paper, University of California, Davis.
- Forgas, J. P. e. (2001). *Handbook of Affect and Social Cognition*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Gadamer, H.-G. (1975a). *Truth and method*. New York: Seabury.
- Gadamer, H.-G. (1975b). Hermeneutics and social science. *Cultural Hermeneutics*, 2, 312.
- Geanellos, R. (1998a). Hermeneutic philosophy Part I: Implications of its use as methodology in interpretive nursing research. *Nursing Inquiry*, 5, 154-163.
- Geanellos, R. (1998b). Hermeneutic philosophy Part II:a nursing research example of the hermeneutic imperative to address forestructures / pre-understandings. *Nursing Inquiry*, 5, 238-247.
- Geanellos, R. (2000). Exploring Ricoeur's hermeneutic theory of interpretation as a method of analysing research texts. *Nursing Inquiry*, 7, 112-119.
- Heidegger, M. (1962). *Being and Time (Sein und Zeit)* (J. M. a. E. Robinson, Trans.). New York: Harper and Row.
- Huitt, W. (1999). *Conation as an important factor of mind*. Unpublished Presentation, Valdosta State University, Valdosta. US.
- Moran, D. (2000). *Introduction to phenomenology*. New York: Routledge.

- Ness, E. (2004). Stuck In Reverse: Why can't Detroit mend its gas-guzzling ways? *OnEarth: Natural Resources Defense Council, Winter 2005*.
- Norman, D. (2004). *Emotional Design: Why we love (or Hate) everyday things*. New York: Basic Books.
- Riley, R. Q. (1994). *Alternative cars in the 21st century : a new personal transportation paradigm*. Warrendale, Pa., U.S.A.: Society of Automotive Engineers.
- Van den Hoed, R. (2004). *Driving fuel cell vehicles: How established companies react to radical technologies*. Unpublished PhD thesis, Technical University Delft, Delft.
- Van Manen, M. (1997). *Researching lived experience : human science for an action sensitive pedagogy* (2nd ed. ed.). London, Ont: Althouse Press.
- van Veggel, R. (2005). Where the two sides of Ethnography collide. *Design Issues, 21*(3), 3-16.
- Willis, P. (nd). *Expressive voice in education research: Showing what its like*. Unpublished unpublished paper, University of South Australia.
- Zarrilli, P. (2004). Toward a Phenomenological Model of the Actor's Embodied Modes of Experience. *Theatre journal, 56*(4), 653-666.

Figures list:

Figure 1: Taxonomy of experience (ToE)

Figure 2: Likert ranking of novelty elements in the experience

Figure 3: *Authentic Dasein* matrix of NMV's

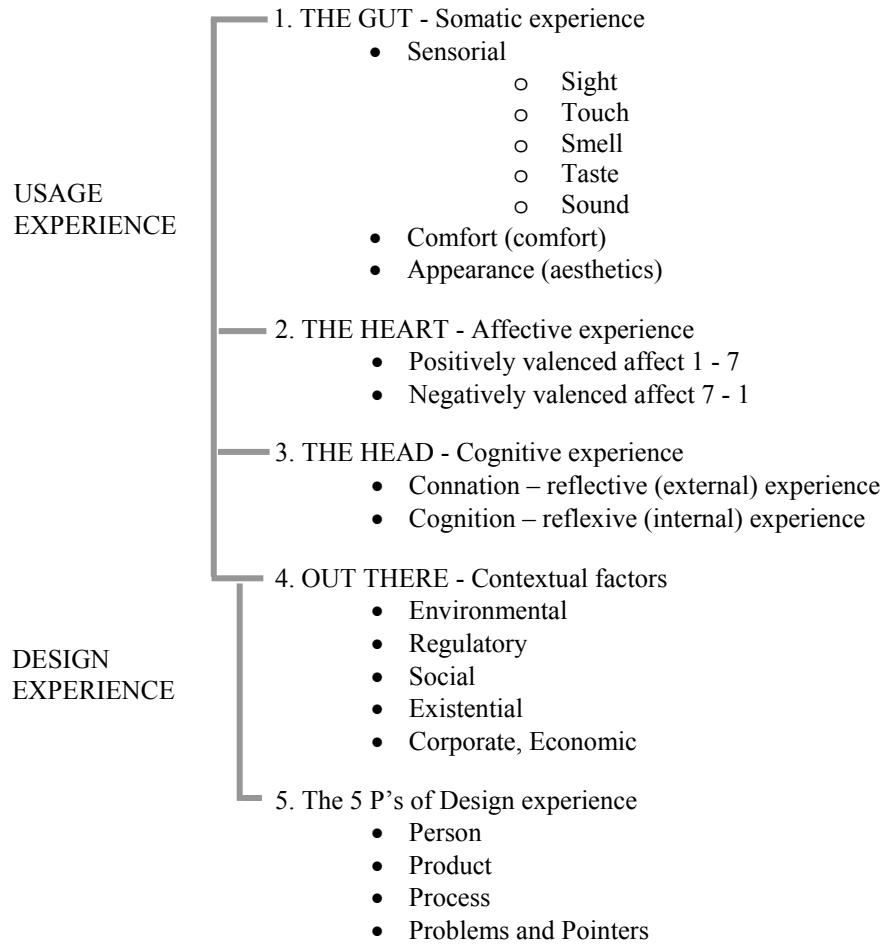


Figure 1: Taxonomy of experience (*ToE*)

Essential elements (all)	Usefulness / novelty	Weight	one word description
having coffee is associated with 'coolness' and these vehicles are associated with having coffee. It is a sound feedback (good and bad) from other road users, space users, ambient sounds, makes drivers feel more	sudden bursts of unmediated joy in the experience	7	spiritual pleasure
Smell is a very important component of the driving experience. The sensory feedback provides strong Drivers enjoy the experience of cool crisp, days, warm sunny days.	specially beautiful days when riding holds a sublime pleasure	7	spiritual pleasure
that its really nice to be out in the wet cold weather but not really IN it.	there can be odd moments of real 'connection' with your surroundings	6	spiritual pleasure
the elemental feeling of being part of the environment but still being protected from it.	there are moments of consciousness when it is simply a joy to be there	6	spiritual pleasure
having the protection that makes them warm and comfortable but not detached from the experience.	Sublime sights, sounds, smells	6	spiritual pleasure
Road conditions are very important and physical feedback (shaking and shuddering) provides a	sense of euphoria	6	spiritual pleasure
Driving in crisp, cold, sometimes wild weather and being well clothed, warm and snug while doing it, is a very	moments of vivid existential consciousness (place, weather, road)	6	spiritual pleasure
Drivers talk of experiencing heightened visual variety and novelty, they notice more. (fields of daisys, dead	moments of great head space, interesting thoughts	6	spiritual pleasure
"There is something unique in the view you get of the world on a bike. You are really in it and can see more of	deep meandering thoughts	6	spiritual pleasure
Heightened levels of attention increase the richness of visual reception and cognitive awareness. Drivers situations which appear dangerous and require risky manoeuvres	clear crisp days in the sunshine	6	spiritual pleasure
it should be a recognisably different, special, unusual, type of vehicle	balmy, dry days with clear open roads	6	spiritual pleasure
it should be eyecatching, modern, aerodynamic looking,	There is something unique in the view you get of the world on a bike. You are really in it and can see more of smells bringing back old memories	5	spiritual pleasure
it should be desirable, unique, wantable, covetable	Sharing a ride with someone special	5	spiritual pleasure
steering mechanism should have a secure, controlled, but fun 'feel'	riding in rain and thunderstorms on a straight road and well protected	5	spiritual pleasure
steering can look different but must have familiar features	personal strength to stand out and be different	5	spiritual pleasure
a sense of being cocooned as well as being open to the environment	Heightened levels of attention increase, richness of visual perception, cognitive awareness. Drivers speak of being out 'in' it.	5	spiritual pleasure
feeling a surge of power while being secure	no risk no fun	6	freedom
	danger inherent in riding raises alertness and adrenaline	5	freedom
	uncomplicated travel	6	freedom

Figure 2: Likert ranking of novelty elements in the experience

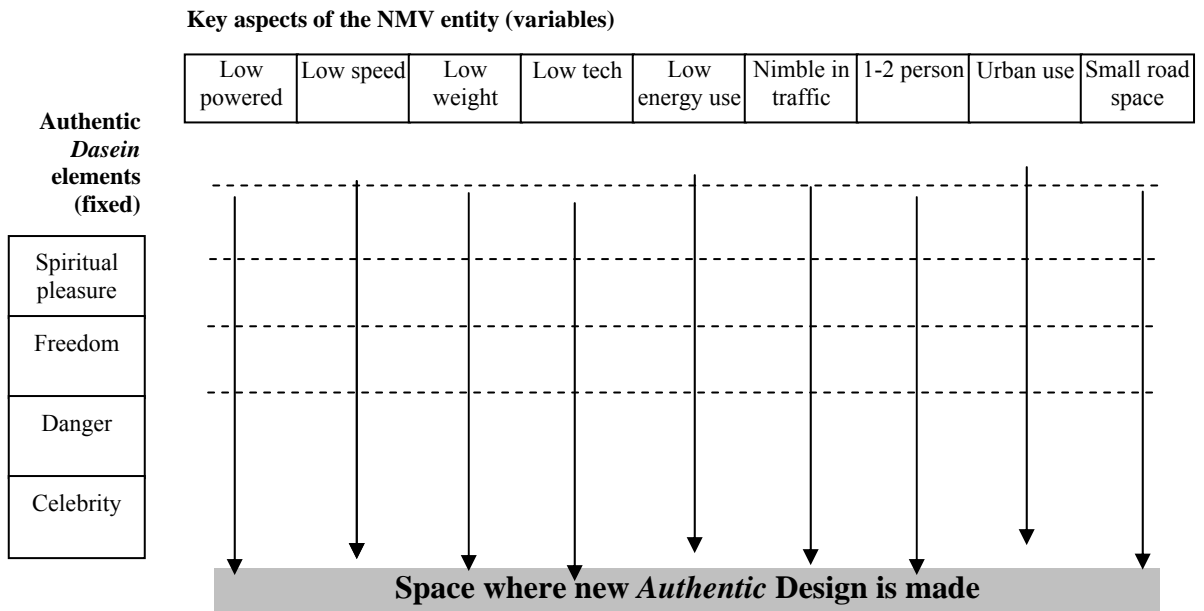


Figure 3: Authentic Dasein matrix of NMV's