ARCHITECTURAL EXPERIENCE IN THE EVERYDAY CONTEXT

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Abstract

Initial attempts to more deeply understand what architecture means to people as they go about their everyday activities revealed that relevant bodies of knowledge such as environmental psychology (including environmental perception and cognition) did not adequately satisfy, either singularly or collectively, the need expressed in environmental psychology and design theory for a more contextualized and holistic conceptual framework. The research described in this thesis addresses this shortfall by responding to the question: What is architectural experience in the everyday context? In other words, the research aimed to identify the various ways in which people make sense of buildings that are part of their everyday context in order to develop a conceptual framework that captures the holistic and contextual role of architecture in people's everyday lives.

As an overarching methodology Grounded Theory (GT) was used to guide research in a systematic inductive way augmented by Interpretive Phenomenological Analysis (IPA) to reveal the idiographic, contextual nature of architectural experience through building engagement. To facilitate exploring their experiences in semi-structured interviews, participants were asked to photograph buildings that they encountered and experienced on a regular basis in the Brisbane CBD as a pedestrian while walking along the street and as a visitor. A third stage of the project involved interviewing participants in the building in which they work, that is, as occupants.

In the first two instances, participants were asked to bring their photographs to the interview with the photo-elicitation method found to be successful in taking participants back to their actual experience and in encouraging revelation of emotive and existential sense-making as well as conceptual and perceptual sense-making. Analysis of the data from the three stages produced four super-ordinate themes: (1) building in urban (text), (2) building in (text), (3) building in human (text), (4) and building in time (text) which, with their sub-themes, constitute an original conceptual framework representative of the multifaceted way in which people make sense of building in the everyday. The framework was also found to be useful in

accommodating specific environmental psychology theories about selective aspects of person-environment engagement.

Through this framework, the research makes a substantial original contribution to environmental psychology, particularly from a transactional perspective, as well as to architecture and design, educationally and professionally. Specifically, it identifies the general community's contextual sense-making in relation to the everyday experience of buildings, producing a comprehensive theoretical framework that acknowledges a person's relationship with a building as dynamic and unfolding, as opposed to static and constant; as emotive and existential as well as conceptual and perceptual. As well as contributing methodologically through the integrated use of GT and IPA, at a practical level, this thesis extends our knowledge of the relationship between people and architecture (in this case buildings) to help inform and enhance the design of more responsive buildings, interior environments and the urban context.

Table of Contents

List of Figures

CHAPTER 3:

CHAPTER 4:

List of Abbreviations

1. Grounded Theory: GT
2. Interpretative Phenomenological Analysis: IPA
3. Central Business District: CBD
4. General Post Office: GPO
5. Participant-Produced-Photograph: PPP
6. Commonwealth Scientific and Industrial Research Organisation: CSIRO
7. Department of Environment and Resource Management: DERM
8. Department of Employment, Economic Development and Innovation: DEEDI
9. International Federation of Interior Architects/Designers: IFI

Statement of Original Authorship

The work contained in this thesis has not been previously submitted to meet requirements for an award at this or any other higher education institution. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made.

Signature: QUT Verified Signature

Date: 21 October, 2015

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1 Introduction

Over the last fifteen years architecture has been an all-consuming part of my life through my roles both as an architect as well as an academic. During this time and in each of these roles I have been motivated to learn more about what architecture means to people as they go about their everyday business. While initial attempts to understand this through literature revealed relevant bodies of knowledge in environmental psychology and architecture, they did not adequately satisfy, neither singularly nor collectively, my need as an architect and architectural educator for a contextual and holistic conceptual framework.

As highlighted by Chokor (2004), although there are studies in relation to people's interaction with the environment, both natural and built environments, these studies atomistically focus on specific influent factors only. The review of literature in this study further reveals a tendency for such studies to be highly controlled methodologically favouring environmental simulation and/or statistical measurement. While there are methodologies such as existential and interpretative phenomenology that challenge these highly selective detached approaches, it is only recently as noted by Gifford (2007, 2014) that they are being considered more seriously in environmental psychology. In his words: "perspectives that show the wholeness and distinctiveness of environmental psychology are now appearing, but more are needed" (p.17).

From within architecture and interior design, there are studies such as that by Smith (2001) that have sought an experientially rich and holistic understanding of architectural experience. To date, however such studies have failed to extend this understanding to an abstract more accessible 'meta' level as a theoretical framework or model for guiding architectural practice, research and education. The research described in this thesis represents an attempt to address this shortfall through the use of two complementary methodologies: Interpretative Phenomenological Analysis (IPA) to capture at a micro level how people understand their experience of buildings as they interact with them in various ways as they go about their everyday business;

and Grounded Theory (GT) that helps generate meta theory from this experiential data.

This chapter positions the research by providing: contextual information informing the research topic (section 1.1) and its aims and objectives (section 1.2). The importance of the research in addressing substantive and methodological gaps in literature is then addressed (section 1.3) together with an outline of the research approach and scope. The chapter concludes with a description of the remaining chapters comprising the main body of the thesis (section 1.4).

1.1 CONTEXT

Architecture contributes to our built environment and physical settings (Jones, 2010). It is a significant aspect of people's everyday experiences where 'everyday' is understood as the routine recurrence of activities undertaken by people throughout the day (Harris & Berke, 1997). These everyday activities are integrally linked to the built environment, of which buildings play a major role (Upton, 2002). Everyday most people walk past, visit or dwell for periods of time in buildings. And while the majority of people might not regularly think or reflect on their experience in the built environment, architecture is intrinsically bound to people's everyday life (Raith, 2000) and meaning-making.

For existential phenomenologists everyday experience is difficult to capture and understand because it is so real and ordinary; because it is so embedded as being-in-the-world. The only way to obtain a glimpse of this (in this case, the experience of buildings) is through descriptions by individuals of their own lived experience of buildings; experience that is multifaceted. For example, a building can be meaningful to people for how it functionally supports their activities and physical needs. Spaces and environments can also be significant socially and psychologically; as well as in a more enduring way existentially. People's responses to buildings can be experienced as thoughts or feelings produced through sensing, feeling and evaluating. In this sense, they can also be categorised as aesthetic experiences (Amedeo, Golledge & Stimson, 2009).

The main area concerned with exploring the relationship between people and environment of relevance to this study is environmental psychology, and of special relevance to this study transactional theory that recognises the situated and dialectic relationship between person and environment. However, as the literature review will reveal, even this more integrative paradigm is of limited value holistically due in part to how the research from a transactional perspective is undertaken. Examination of relevant research reveals reliance on data gathered from participants away from their everyday context, in many situations using photographs of buildings preselected by the researchers themselves. In this respect then, the opportunity exists to explore what is possible from a phenomenological perspective using a methodology that focuses on how people make sense of their own interaction with buildings they experience, and then by employing a grounded theory methodology to further develop this sense-making into a contextual, holistic theoretical model of building experience.

1.2 AIMS AND OBJECTIVES

As highlighted in the previous section and substantiated more fully in Chapter 2, there is no comprehensive, contextualized understanding of how people make sense of buildings in their everyday context. This thesis seeks to address this situation by responding to the question:

What is architectural experience in the everyday context?

In doing this, the thesis asks the following two sub-questions:

- How do people make sense of buildings as they pass by, visit and occupy them as part of their everyday activities?

- How does this sense-making ground the development of a robust and accessible conceptual framework for informing and guiding further research as well as architectural/design practice and education?

Substantively, the thesis aims to identify the various ways in which people make sense of buildings that are part of their everyday context in order to develop a holistic and contextual conceptual framework. In this respect, the objective of the thesis is to provide architectural and spatial design educators and practitioners with a conceptual framework that captures the main elements of architectural experience and how they are interconnected informing a deeper more comprehensive understanding of the potential role of architecture and design in people's everyday lives; and from this, the design of more meaningful and sustainable environments. It is also intended that the framework form a conceptually robust basis for future research and on-going refinement of the framework.

To address the objective philosophically compatible methodologies were selected to respond to each sub question. For the question: how do people make sense of buildings as they pass by, visit and occupy them as part of their everyday activities?, the study employed Interpretive Phenomenological Analysis (IPA). Here, participants were asked to photograph buildings that they encountered and experienced on a regular basis as a passer-by and/or visitor and to bring these photographs to the interview. Known as photo-elicitation, the process helps participants to imagine the situation where and when they took the photograph and instances of everyday engagement with the building. Participants could include buildings that evoked negative as well as positive experiences. In implementing the process particular care has to be taken to ensure that the reflection extends beyond visual perceptual understanding. The process is to encourage revelation of emotive and existential sense-making as well as conceptual and perceptual sense-making.

For the sub question: how does this sense-making ground the development of a robust and accessible conceptual framework for informing and guiding further research as well as architectural/design practice and education?, the research utilised Grounded Theory (GT). The scope and significance of this research adopting an integrated IPA/GT approach are outlined in the following section.

1.3 THE SCOPE AND SIGNIFICANCE OF THE THESIS

In the early stages of the research, considerable time was spent refining the research question and how it should be addressed methodologically. As will be explained in detail in Chapter 3, the process was an iterative one with the questions inviting exploration of several methodologies, and the methodologies in turn demanding refinement of the research questions. For example, the lack of research emphasising people's lived experience of buildings suggested very strongly a phenomenological approach. But what phenomenological approach? Early consideration was given to an existential phenomenological approach responding to the question: How do people experience buildings? Further exploration though suggested that such an approach may be too focussed on identifying a common structure of building experience at a highly abstract level and fail to reveal the various attributes of the experience in a more personal contextually situated way. What this suggested was the need to consider a hermeneutic approach; one that recognises meaning as contextualized but that also acknowledges that when described and examined away from the lived moment there is interpretation by the participants as well as the researcher. For this reason IPA was selected.

IPA facilitates attempts to understand people and their interaction with the world by focussing on how they make meaning of it (Smith, Flowers & Larkin, 2009) as conveyed through their reflections of specific situations (Smith & Osborn, 2008). These reflections in terms of what people think and feel of such an experience, constitute first-hand data that are then analysed and interpreted hermeneutically. For this study, the analysis was very attentive to the built environment and elements of the built environment that were regarded by the participants as central to their meaning making. Reflecting this approach, the overarching research question: What is architectural experience in the everyday experience?, was considered as two sub questions:

- How do people make sense of buildings as they pass by, visit and occupy them as part of their everyday activities? and

- How does this sense-making ground the development of a robust and accessible conceptual framework for informing and guiding further research as well as architectural/design practice and education?

The first sub-question reflects the desire to adopt a hermeneutic phenomenological orientation as well as recognition of how one's experience of a building is influenced by whether one is a visitor, an occupant, or is just passing by (Hillier & Hanson, 1984). As highlighted in the literature review (Chapter 2) a gap remains regarding research to do with buildings as part of one's 'lifeworld'; how they are integral to everyday experiences. To understand this further, the literature review focuses on three concepts regarded in this research as central to this notion of building experience as part of one's lifeworld. These are: the everyday and everydayness; place and sense of place; and aesthetics, including architectural aesthetics.

As the thesis will reveal, these concepts were central to informing the IPA study providing the ground from which an overarching conceptual framework could be developed; a framework that addresses the need in environmental psychology for a more integrative and 'multilevel' (Steg, Van den berg, & Groot, 2013) model. Influenced by Loewenstein (1996), Steg et al (2013) emphasise that "a major task for research on environmental behaviour is to develop models that incorporate emotions without losing the rigour and structure that are the main strengths of existing models" (p. 311). Herein for this thesis, IPA and GT play significant complementary roles.

Given its primarily inductive approach, it is common for GT projects to go through various stages or iterations involving constant comparative analysis, and evolve over a period of time, as was the case in this study. Originally, it was intended that the study involve a pilot study and a major study undertaken using GT exclusively and restricted to building experience as perceived from the outside. Although emergent categories from the initial major study revealed new insights it was felt that they did not capture experience at a significantly deep level prompting the inclusion of IPA as well as additional participants and extension of building experience to also include inside as well as outside. As will be described further on in the Methodology Chapter (Chapter 3), the research eventually comprised a pilot

stage and three main stages: stage one involving participants' experiences of self-selected buildings as experienced from the outside such as when walking down the street; stage two where participants visited specific self-selected buildings describing their experience of the building from inside as well as outside; and stage three involving experiences of a building where the participants worked.

In accordance with GT and IPA methodologies a small pool of participants is considered appropriate, indeed desirable for IPA, given the detailed level of analysis required and its potential to produce a meaningful outcome (Smith, Flowers & Larkin, 2009). As such the research employed purposive sampling attempting to include participants with diverse as well as homogeneous demographics and experiences. Overall, there were three participants in the pilot study, six in the first stage; four in the second stage; and six in the third stage.

While the buildings in the pilot study and the first two stages were selected by the participants, the building in stage three was selected by the researcher because it accommodated a diverse range of occupants. As previously noted, data were collected from semi-structured interviews incorporating photo elicitation. In relation to the scope of the project geographically, this was restricted to the Brisbane CBD technically extending three kilometres from the GPO (Stimson & Taylor, 2010). While Brisbane is a relatively young city (established about 155 years ago), it does have buildings ranging in style from Victorian to contemporary buildings (Marsden, 1966; De Gruchy, 1988). Data from each stage were analysed using a standard IPA approach that produced superordinate and subordinate themes. GT was also employed with its theoretical sampling and constant comparative method to further develop the themes as a theoretical framework for how people make sense of buildings in context.

This sense making is encapsulated in four super-ordinate themes: (1) building in urban (text), (2) building in (text), (3) building in human (text), (4) and building in time (text) which, with their sub-themes, constitute an original conceptual framework representative of the multifaceted way in which people make sense of buildings in the everyday. Through this framework that extends transactional theory, the research makes a substantial original contribution to environmental psychology as well as to

architecture and design, educationally and professionally. Specifically, it identifies the general community's contextual sense-making in relation to the everyday experience of buildings, producing a comprehensive theoretical framework that acknowledges a person's relationship with a building as dynamic and unfolding as opposed to static and constant; as emotive and existential as well as conceptual and perceptual. As well as contributing methodologically through the integrated use of GT and IPA, at a practical level the thesis extends our knowledge of the relationship between people and architecture (in this case buildings) to help inform and enhance the design of more responsive buildings, interior environments and the urban context.

1.4 THESIS OUTLINE

To set the scene for a detailed description of the research and its outcomes, this chapter **(Chapter One)** outlines the background and context of the research together with its purpose, significance and scope. While literature was accessed and incorporated at various stages in the project, the respective reviews brought together in **Chapter Two** position and substantiate the need for the research in a broader theoretical context. How the research achieves its intended outcomes methodologically is described in detail in **Chapter 3**. In this chapter specific attention is given to the research design including its philosophical position, how data were collected and analysed, as well as to issues of research quality and ethical behaviour. The results of the research are presented in **Chapter 4**, in the form of a detailed description of the emerging categories representing the various dimensions of sense-making in relation to participants and buildings that are part of their everyday context. The descriptions of the categories, which constitute the holistic, contextual framework are supported and illustrated by the inclusion of participant's reflections and their photographs. The significance of these results and their contribution are then discussed in **Chapter 5** in terms of their relationship to existing theory and the aims and objectives of the research as outlined in the first chapter. **Chapter 6** concludes the thesis by drawing out in the context of its limitations the implications of the research and its potential to be further extended through future research and practical application.

2 Literature Review

2.1 INTRODUCTION

At the outset, the literature review process identified environmental psychology as the knowledge domain most relevant contextually to this thesis project. Environmental psychology is described in section 2.2 in terms of its broad theoretical approaches as well as specific theories related to environmental perception and cognition. Because the study is positioned from the experience of the participants and how they understand and perceive buildings in their everyday lives, the section emphasises integral theories, in particular the transactional position. The review critically examines research in this area as it relates to the built environment highlighting methodological and theoretical gaps and the need for further research such as undertaken by this PhD project.

The argument for such research is reinforced in section 2.3 through its focus on concepts central in architecture to a holistic appreciation of architecture experience; concepts such as: the everyday and everydayness, place and sense of place, and aesthetics. The chapter concludes with a summary and a discussion (section 2.4). As previously highlighted, the findings presented in Chapter 4 are the outcome of analysis of first-hand data emerging directly from the participants and their understanding of their relationship with buildings comprising their everyday experience. Chapter 5, the Discussion chapter, then connects back to the literature reviewed in this chapter exploring the relationship of the findings of this PhD project to existing research, in the process drawing out the project's significance and contribution to environmental psychology, particularly design psychology, and through its application, to the spatial design disciplines such as architecture, interior design and urban design.

2.2 THEORETICAL CONTEXT – ENVIRONMENTAL PSYCHOLOGY

In reframing the main research question: what is architectural experience in the everyday context? as, how do people make sense of buildings as they pass by, visit and occupy them as part of their everyday activities?, three elements stand out –

people, buildings and the relationship between people and buildings. A domain of knowledge that deals specifically with person-environment interaction is environmental psychology.

2.2.1 Environmental psychology

What is environmental psychology?

There are numerous definitions and descriptions of environmental psychology. Early definitions portray it as an area that focuses on the interplay involving the physical environment, human behaviour, and experience (Craik, 1973; Holahan, 1986). Very simply, environmental psychology is concerned with the reciprocal relationship between person and environment both natural and constructed (Gunther, 2009). For some environmental psychologists, 'person' has two primary dimensions: 1) physical/biological (body or health), and 2) psychological (self-esteem), as well as sociocultural (emphasising the person's role in society). 'Person' can also refer to an individual or social group of varying size (Bonnes & Bonaiuto, 2002). Correspondingly, environment is understood as variously comprising physical, interpersonal, and sociocultural aspects (Wapner & Demick, 2002) where the physical environment can range from simple daily objects, to buildings, to urban space or national parks (Bonnes & Bonaiuto, 2002). According to Levy-Leboyer (1982), fundamental aspects of environmental psychology are that: 1) the relationship between person and environment is dynamic; 2) environmental psychology considers either the natural environment or built environment; 3) environmental psychology must be studied at the molar level rather than at molecular level; 4) behaviour cannot be explained by only the physical character of the environment, but the set of values and meanings attached to each aspect of the environment.

Alternatively, Gifford (2007) describes environmental psychology in terms of three dimensions: persons, psychology processes, and places. All human activity such as learning, socializing, playing, working and exploring, and associated psychological processes of perception and cognition, he proposes, occur across time in built settings such as the home, work, urban environments such as parks and streets, in stores as well as in natural environments such as national parks by people who vary according to age, personality, culture, experience, gender, and motivations.

Emphasizing the dialectic/reciprocal/symbiotic nature of person-environment interaction, Gifford (2007) describes environmental psychology as:

> "…the study of transactions between individuals and their physical settings. In these transactions, individuals change the environment, and their behaviour and experiences are changed by the environment. Environmental psychology includes theory, research, and practice aimed at making buildings more humane and improving our relationship with the natural environment…"
> (Gifford, 2007, p.1).

Acknowledged as contributing to its emergence are several theorists such as Egon Brunswick through his work on perception, Kurt Lewin and his research involving field theory and action research, Lewin's students Roger Barker (founder of behavioural ecology and behaviour setting through) and Herbert Wright and their studies of behaviour settings. Further spearheading its relevance for architecture and pioneering work in architectural psychology (as it was labelled then in order to distinguish it from mainstream psychology) is research in the 1950s by Robert Sommer, Humphrey Osmond, William Ittelson and Harold Proshansky (Gifford, 2007) followed by others such as David Canter, Irwin Altman, Daniel Stokols, whose research will receive further critical review in the following section through its focus on the main theoretical approaches of environmental psychology.

2.2.2 Theoretical approaches

As indicated previously, environmental psychology is an area of psychology concerned with understanding the transactions and interrelationships of human experiences and actions relevant to socio-physical surroundings (Canter & Craik, 1981). The origins of the discipline are linked to attempts by sociologists and psychologists in Germany in 1940s-1950s to study conceptions and evaluations of the physical environment (Canter & Craik, 1981). In the late 1950s and early 1960s, these attempts were formalised as environmental psychology (Gunther, 2009). In the early period of the field, in the 1960s-1980s, environmental psychology moved from a theoretical focus to also include practical research. The aim of environmental psychological study is mainly to gain a better understanding of the relationship

between human behaviour and the physical environment (Bonnes & Bonaiuto, 2002), and in so doing improve outcomes for both people and environments (Gifford, 2007).

Despite this common aim, research in this area reflects particular theoretical orientations ranging from what Moore (2006) describes as "…rather simple empiricist or nativist theories on the one extreme, to more complex – and compelling – interactional or transactional theories on the other extreme" (p. 6). Further to this, Moore (2006) differentiates between the framework by Altman & Rogoff (1987) that encompasses four 'world views': trait; interactional, organismic; and transactional, and his own that incorporates: person-based theories; social group-based theories; empiricist theories; meditational theories; cultural theories; phenomenological theories; structuralistic theories; organismic theories; and transactional theories (p. 6). This grouping, which quite explicitly includes social emphases, is reflected in Moore's preference to use the label 'person, environment and society' (EBS) when referring to studies concerned with the environment and human behaviour.

This move to more explicitly incorporate a social dimension in environmental psychology is evident when comparing an early categorisation by Gifford (2007) to a more recent categorisation (Gifford, Steg & Reser, 2011). For example, in Gifford (2007) theories are categorised as: stimulation; behaviour-setting; control; decision-making; integral; operant; and environment-centred (pp. 6-15). Later on in Gifford et al (2011), there is the inclusion of social-psychology-based theories; decision-making theories are omitted and ecological psychology is used instead of behaviour setting theory. For Kopec (2012), research conducted to explore the human-environment relationship encompasses four major theories: stimulation; control; behaviour-setting; and integral. What these different categorisations reveal is environmental psychology's resistance to attempts to understand it as a coherent field. As explained by Stokols (1995), "…it is more accurately characterized as a part of a multidisciplinary field of environment and behaviour that integrates the conceptual and methodological perspectives of a range of disciplines…" including psychology, sociology, architecture, urban planning and others (p. 822).

While the research of this thesis is theoretically 'integral' through its holistic focus, it is of value to look briefly at the three other major orientations as identified

by Kopec (2012). As the overview will reveal, these theories are not definitively discrete but rather show an evolution and cumulative development over time influenced by varying discipline interests and social demands. Consequently, as demonstrated through this thesis, more recent integral models by nature and to varying degrees build on and encapsulate aspects of preceding theories.

Stimulation theories

In stimulation theories, the physical environment is considered as a significant source of sensory information where sight, sound, touch, taste and smell play central roles (Wohlwill, 1966). In the psychological discipline, various definitions of the word 'stimulus' have been documented. A stimulus can be anything in the terrestrial world (Pavlov, 1927). The term stimulus is the physical or world situation (Spence, 1956). It is simply a part or modification of a part of the environment (Skinner, 1938, 1948, 1953, 1963, 1974). It is also defined as the specific physical force, energy, or agency that brings out the stimulation of the particular receptor system. Stimulus is considered as a source of energy activating a sense organ. In terms of physical environment settings, it can be aspects such as light, colour, sound, noise, heat, and cold, or more complex aspects such as buildings, streets, city, and other people. Psychologists and physiologists normally use the word 'stimulus' for the arousing of a sense organ instead of a whole individual (Gibson, 1960).

Having said this, people integrate and interpret stimulus information in particular ways, for varying reasons, and with different outcomes. For Gifford (2007), there are several theories that attempt to explain the ways people interact with stimuli by emphasizing particular aspects, namely: 1) *adaptation level theory* and how for health and well-being reasons we adapt to certain levels of stimulation in certain contexts; 2) *overload theory* that seeks to understand the cause and effect of too much stimulation; 3) *restricted environmental stimulation theory* that focuses on situations where there is too little stimulation; 4) *stress theories* concerned with the individual and the behavioural and health impact caused when environmental stimulation exceeds adaptive ability; and 5) *phenomenology* which is primarily interested in the personal meaning-making that occurs during our transaction with the environment.

Control theories

As the name suggests, these theories focus on control; specifically, on personal attributes that also depending on the person-environment setting influence the degree and nature of control a person has over environmental stimulation. While recognizing external stimuli, control theories emphasize an individual's control over stimulation (Gifford, Steg & Reser, 2011). For instance, Glasser's control theory asserts that behaviours are caused not by the external forces or stimulus, but by what an individual wants most at any given time (Glasser, 1999). He recognises four components of what he calls 'the total behaviour'; doing (or active behaviour); thinking; feeling; and physiology. Glasser claims that the more people are able to recognise different components of the behaviour the more people can be in control of their life. Glasser's control theory then is concerned with personal choice, personal responsibility and personal transformation. Of relevance to this study, taking control may mean changing the environmental event (behavioural control), changing the way one thinks about the environment (cognitive control), or choosing a specific response (decision control) (Averil, 2012).

Making a decision is the process by which people adapt their experiences to decide on a course of action or find alternatives in the real-world context (Orasanu, 2001). Decision-making is a continuous process involving mind and environment (Kte'pi, 2013). The ways people create alternatives to make choices or decisions are the main focus (Sullivan, 2009). A preference for a specific alternative implies that its expected utility is greater than that of the other alternatives. Subjective expected utility of a specific alternative is the sum of numbers associated with each possible consequence considered by the probability that each consequence can occur (Van der Pligt, 2001). In environmental psychology research decision-making theories have particular relevance in terms of the impact of decisions (for example, on the environment when we decide to drive rather than take public transport) and understanding why and when we make decisions (Gifford, 2007).

Behaviour setting theory (and ecological psychology)

Giving greater emphasis to the environment (social and physical) and its role in person-environment interaction is behaviour setting theory, the initial development of which is attributed to Kurt Lewin and then later to Roger Barker in informing the

emergence of ecological psychology and the study of behaviour "in situ" (Barker, 1963). Central to this theory is the notion that there are prescribed patterns of behaviour or programs found in particular places. These patterns have their own milieu, existing independently from an individual's perception of the settings. The milieu is circumjacent to the particular behaviour. The synomorphic, the behaviour-milieu parts of the settings, has a particular degree of interdependence between behaviour and milieu. Such studies support the argument by Barker (1964) that human behaviour cannot be predicted unless we know the nature of situations or environments in which people in the question are living. Trying to understand the behaviour of individuals or groups is firstly to examine both opportunities and constraints of their surrounding environment (Wicker, 1987).

According to Wicker (1984, 1987), behaviour settings include social constructions resulting from sense-making and interactive behaviour of participants. In Wicker's conceptualisation, two major dimensions were emphasised:

- First, setting facets, including: resources (people, behaviour objects, space, information, reserves); internal dynamics (personal cognitions and motives, functional activities, social processes, growth and differentiation, stability and flexibility, and decline); context (general contextual factors: cultural, economy, legal system, etc.); setting history; and setting network or the higher-level entity in which the setting niche is embedded;
- Second, the temporal stages involving: pre-convergence; convergence; continued existence; and divergence.

Within this approach, environmental features, such as the city square, a building, a classroom, a football field are evaluated in terms of how well they fit and serve individual's (or groups') behaviours taking place in those places/spaces.

Lewin's behaviour setting theory was considered not only to explain person-environment interaction but also human behaviour at the social scale (Popov & Chompalov, 2010). To reiterate, behaviour settings not only include physical aspects of environment, but also extend to such non-visible aspects as behaviour rules prescribing what to do and not to do in the particular environment. The knowledge of

behaviour setting theory is useful for predicting and informing through environmental design specific behaviour in a particular environment.

Behaviour setting theory is central to Barker's ecological psychology. Broadly, ecological psychology is a multidisciplinary approach studying the organism, its environment, and the reciprocity between organisms and environments. From a perceptual point of view, ecological psychology is interested in biologically adaptive activities (Reed & Jones, 1979, 1982) and how the structured environment guides perceiving and acting. In ecological psychology, there is an attempt to emphasise the richness of information arising from the physical interaction between an organism and the environment, and meanings that are directly obtained from environments through the organism's activities (Reed & Jones, 1979, 1982). Ecological psychology then opposes the idea of separating perceiving from acting. In all, ecological psychology recognises a dynamic and reciprocal relationship between organism and environment (Morris, 2009). Further, ecological psychology comprises three levels; firstly biological—biological interacting with physical world, secondly psychological—psychological interacting with the environment, and thirdly social—the social interacting with its social world.

Ecological psychology superficially appears to stress the objective aspects of the environment rather than those that are subjective. While it is believed that the structures of ambient environments such as light, texture colour, and sound can directly convey information about the environment without any sensational meaning data (Lang, 2011), various other processes are also understood to be involved. In ecological psychology, two issues distinct from naturalistic theories of perception are: the adaptive function of the perceptual system implying its performance in the environment; and, the contrast between distal and proximal stimuli. Distal stimuli are considered as relevant variables in the perception of the world at an ecological level. Distal stimuli provide information about the properties of an object, as it actually exists in the real world, which then becomes proximal stimuli. The proximal stimulus refers to physical stimulation that is available to be measured by an observer's sensory system. It can also refer to the neural activities that result from sensory transduction of the physical stimulation. Explicitly, perception is a mental recreation of distal stimulus in the mind of the perceiver. An example would be a person

looking at a dish on the table. The dish itself is the distal stimulus. The light reflected from the dish and projected onto sensory receptors in the person's retina is the proximal stimulus. The image of the dish reconstructed by the brain of the person is the perception. To sum up, the ecological approach emphasises the spatial properties of human behaviour (Sanoff, 1971).

Integral theories

The primary purpose of integral theory is to bring together disparate aspects including biological constitution, cultural worldviews, felt-sense of selfhood, and social systems (Marquis, 2007). Integral theory is not intended to minimise the significant differences found across cultures or systems or between individuals from the same culture or family. Integral theory proposes a perspective that allows researchers to adopt diverse knowledge approaches in synergistic complement.

For the purposes of this review, integral theories include world-views identified by Altman and Rogoff (1987) as: interactional; transactional; and organismic. According to Stokols (1995), interactional theories in comparison to situationist theories, such as those previously described, recognise the joint influence of environmental and personal factors on behaviour. In contrast, situationist theories attribute behavioural change to specific stimuli and events within and individual's social or physical environment. Regardless of this difference both are understood by Stokols (1995) to be linear or unidirectional "…in that they predict behavioral changes from environmental conditions, alone, or from situational and intrapersonal factors" (p. 825). In contrast, transactional theories "…emphasize the reciprocal or bidirectional nature of people-environment relations – individuals not only respond to environmental conditions but also take steps to influence and restructure their surroundings" (Stokols 1995, p. 825). Stokols and Clitheroe (2010) reinforce this more recently in their comment that the transactional world-view proposes factors that affect personal behaviour as part of a constant, dynamic, reciprocal milieu. Recognising this at a wider more dynamic societal level is organismic theory (Wapner & Demick, 2002).

As previously argued, the question posed by this thesis, "What is architectural experience in the everyday experience?" reflects a (phenomenological) transactional

world-view of behaviour. To this end, the following section provides a review of research undertaken chiefly from a traditional transactional perspective in environmental psychology; research that generally makes only passing reference to phenomenological research despite recognising its growing relevance (Gifford, 2007) and, as addressed through this thesis, potential to expand transactional theory in environmental psychology.

Transactional theory

What is transactional theory?

Transactional theory, as historically understood within environmental psychology, acknowledges "…changing relations among psychological and environmental aspects of holistic units" (Altman & Rogoff, 1987, p. 24). From this perspective "people and psychological processes are embedded in and inseparable from their physical and social contexts" (Altman, 1992, p. 268); in other words, they are "mutually defining and contiguous with one another (p. 270). Additional qualities highlighted by Altman & Rogoff (1987) include:

- Time and change as central aspects
- The changing relational nature of a situation as the focus of analysis; in other words, transactional approaches begin with the phenomenon
- Actions of people are understood in relation to spatial, situational, temporal and social circumstances including the actions of other people
- Phenomena are understood from the position of different types of observers and participants
- A focus on the patterns and forms of the relationships involving people and environment including the principles underlying these patterns
- Relationships are not understood to be between elements where one element is understood to discretely cause a change in another element but rather that aspects of the person and context coexist and jointly contribute to the meaning and nature of a holistic event
- Informed by Dewey & Bentley (1949) psychological phenomena are described using action verbs like acting, doing, talking

- The study of phenomena are approached from a pragmatic, eclectic and relativistic position

According to Altman & Rogoff (1987), the transactional approach is the synthesis of the contextually oriented work of Pepper (1942, 1967) and the early transactional work of Dewey & Bentley (1949). For Pepper (1942), contextualism is an event involving people, settings and activities over time. More recently, the notion of contextualism has been extended to explicitly recognise the dynamic nature of interaction involving people, settings and activities; of how at certain times various aspects come into play: "A fundamental feature of transactional research is its emphasis on the dynamic interplay between people and their everyday environmental settings, or 'contexts'" (Stokols, 1982, p. 42). For Stokols (1982), "The environmental contexts of people's day-to-day activities can be described in terms of their scale or complexity" (Stokols, 1982, p. 45).

Contextualism is further interpreted by Wapner & Demick (2002) who contend that for relations between person and environmental elements there may be different contexts. For them, there are six general contexts: physical/biological (eg health), psychological/interpersonal (eg self-esteem) and socio cultural (eg worker) aspects of person; and physical (natural or built environment), interpersonal (friend/spouse) and sociocultural aspects of environment (rules of home, community etc).

Environmental perception and spatial/environmental cognition emphasising a transactional perspective

In terms of better understanding the nature of the interrelationship between people and environment, understanding the role of perception has been of primary interest (Bell, Fisher, Baum & Greene, 1984) with environmental perception emerging as a sub-discipline of environmental psychology (Lowenthal, 1987). Psychologically, perception is the process of immediate stimulus-dependent interpretation of the environment; the current interpretation of which is linked to past experiences through cognition. Perception, then, is defined cognitively in relation to the detection and interpretation of sensory information (Lemberg, 2010).

Research that has to do with environmental perception can be positioned on a continuum ranging from the objective to the subjective. Objective or bottom-up approaches focus on environmental information and its influence on perception, and subjective, top down approaches focus on how people's previous experiences influence perception (Cassidy, 1997). Situated along the continuum are various theories ranging from Brunswick and his theory of probabilistic functionalism, to Gibson's affordance theory, Berlyne's theory to do with collative properties, and phenomenology at the qualitative end of the continuum.

For Brunswick and probabilistic functionalism, the environment offers cues to the perceiver who must make sense of the most important ones if they are to function effectively in a setting. Brunswick proposes that environmental cues contain information, which is somehow more or less representative of the particular environment in a perceptual way (Cassidy, 1997). Each of the stimuli (distal cues) emerging from the environment might be adopted depending on its usefulness (ecological validity) (Bell et al., 1984).

Unlike Brunswick who believed that perceivers must weight cues, Gibson (1960) believed that certain arrangements and qualities of cues give the perceiver direct, immediate perceptions of the environment. The arrangements of substances and surfaces provide affordances that provide clear meaning in terms of function. As highlighted by Gifford (2007), this contradicts architectural and design education wherein perception is understood to be based on basic elements of line, shape, colour and so on. Rather *affordance theory* suggests that people first perceive what a place can do for them not that it is a particular form or shape. In this way, Gibson's view aligns in many respects with that of a transactional position.

Gibson's idea of perception differs from the classic psychological concept of perception in the way that classical psychology assumes that perception is produced at some organism's receptor surfaces and relies on the organism's knowledge of the world with assistance of memory, habit, cognitive strategies, and innate plans. In contrast, Gibson (1960) believed that there is no reception without activity (Cassidy, 1997). Gibson proposed that environmental stimuli contain certain information

available for the individual in how to utilize the information. He strongly advocated that people are predisposed to search for meanings through how the environment presents itself to the individual; it's affordance (Cassidy, 1997; Ittelson, 1974). For example, to feel the object the individual moves his/her hand over and around the object, thus it is active and perceptive at the same time. From this viewpoint, Gibson proposed the concept of active detection or pick-up of information. For Gibson, perceptions come primarily, and sensations emerge as subjective reports of what people feel while perceiving. Gibson (1960) believed that sensations are egocentric and passive activities, but perceptions are considered as active activities. An example of affordance is how a solid object placed horizontally on the ground suggests or affords sitting. With reference to Gibson's affordance theory, Greeno (1994) argues that while the 'thing' may afford a particular activity, it does not guarantee it. In this respect and displaying greater alignment with the transactional position, Greeno proposes additional conditions associated with the individual and their situation, such as motivation.

Connecting these processes more integrally is *Berlyne's collative property theory*. As described by Gifford (2007), Berlyne (1951) proposes that the environment has characteristics that attract the perceiver inviting further explorations. These characteristics, which he called 'collative properties', include novelty, incongruity, and surprisingness. For Berlyne, two psychological processes facilitate engagement, the amount of beauty or pleasure experienced (hedonic tone), and uncertainty arousal (Gifford, 2007). Berlyne (1963) further explained that the arousal potential of a particular stimulus is defined by 1) collative properties or comparison of two present features of such stimulus as novelty, complexity, or incongruity, 2) psychological properties are determined by such properties as intensity, pitch, hue, brightness, and so forth, 3) ecological properties are defined by semantic features such as innate value, meaningfulness, and associations of stimulus. In order to explain the organizational processes, Berlyne & Ogilive (1974) proposed that the organizational processes involve comparisons among stimulus elements, which affect arousal level and exploratory preference.

From a transactional position the demarcation of perception and cognition is not clear. This is further apparent when reviewing literature on spatial cognition,

which, of course, also has specific relevance in relation to the design of the built environment. For Swobodzinski (2010), spatial cognition is concerned with obtaining, managing, applying internal knowledge about events and phenomena in the physical world where individuals exist. Not all cognition is spatial and in this way he differentiates between spatial cognition and environmental cognition; the latter including mental constructs of environmental phenomena such as droughts, or biases that come into play when we consider environmental issues.

According to Swobodzinski (2010), the main difference between cognition and spatial cognition is the concern in spatial cognition of the spatial properties of objects, events, and situations in the particular space. Spatial cognition is the study of mental representations that reflect individuals engaging the physical dimension of space and the whole environment. In the real world setting, individuals engage interactively with parts of the environment, not passively as simulation research portrays it (Evans, 1980). Environmental information in the real world setting is not isolated, nonsensical information, but meaningfully involved with the context of the real world setting. Individuals' intrinsic factors, age, gender, education, and so on, are held to affect spatial cognition (James, 1989; Matthews, 1987; Webley & Whalley, 1987). Spatial cognition significantly differs among individuals even though they share the same culture and language (Lloyd, 2007). Studies of spatial cognition identify three stages: 1) the processing of spatial information; 2) identifying, representing and communicating spatial information; (3) the differential analysis of virtual spaces cognition (Tommasi & Laeng, 2012). Spatial cognition has been adopted by several academic disciplines, such as psychology, geography, architecture and planning, anthropology, information science.

From an environmental design point of view, two processes are central to spatial cognition: cognitive mapping and way-finding. In terms of the latter, the legibility of the environment is understood to play a significant role. As early as 1960 Lynch (1960) identified five urban elements contributing to legibility. These are paths, edges, districts, nodes, landmarks which together with other information is stored pictorially and verbally as a form of 'cognitive map' to be retrieved when needed such as when we are trying to find our way around a particular environment. The cognitive map, then, contains information about the physical environment that

individuals have experienced (Swobodzinski, 2010). It is a dynamic collection comprising all spatial and non-spatial information embedded in individuals mind about the space and place (Lloyd, 2007). Cognitive maps represent spatial relationships among places (Evans, 1980). Spatial cognition research is not only relevant at the macro urban level but also involves the micro level of the interior and aspects including sign systems, visibility of the destination and views to the outside, differentiation of parts of the building, and building layout (Gifford, 2007).

Environmental experience and the transactional perspective

An understanding that people and environment are in a transactional relationship appeared early in the work of Merleau-Ponty (1945), a French existentialist philosopher renowned for his work on perception and embodiment (two concepts that for him are integrally connected), puts forward a theory of perception described as the 'primacy of perception', which proposes that in order to act individuals need a spatial awareness of their bodies and parts of their bodies and what they can do. In Merleau-Ponty (1963) the theory is extended to differentiate between the 'subjective body' or habitual body, that is the body as lived and experienced pre-reflectively, and the 'objective body', the body as observed and examined (Finlay, 2011, p.55). As expressed by Finlay (2011), "phenomenologists agree that the body discloses the world just as the world discloses itself through the body" (p. 40).

Referring to Seamon & Sower (2008), Finlay (2011) describes how "phenomenologists seek to capture lived experience – to connect directly and immediately with the world as we experience it…The aim is to clarify taken-for-granted human situations and events that are known in everyday life but typically unnoticed and unquestioned" (Finlay, 2011, p. 15). It's transactional orientation is reflected in "it's attempt to existentially integrate the setting and the perceiver; the involvement of people as participants in the research as well as in some cases the researcher; and attempts to understand meaning as it emerges from a particular situation rather than by applying extant theory" (Gifford, 2007, p. 32). For environmental psychology, phenomenology as both a philosophical orientation and methodology has been chiefly restricted to research on dwelling and the meaning of place, which is explored more extensively in section 2.3 of this chapter. As a

methodology and in describing and substantiating its role in this thesis, this is dealt with further in the methodology chapter of this thesis (Chapter 3).

2.2.3 Environmental Psychology Research and the Built Environment

The role of the physical environment

According to Altman (1992), research in environmental psychology positions the physical environment in various ways including: (a) as an independent variable in which aspects of the environment affect or cause variations in interpersonal processes; (b) as an aspect of behaviour, for example, use of environment to regulate privacy; and (c) as a context or setting within which psychological processes, relationships, and behaviour are embedded" (p. 275). In line with the various philosophical orientations described previously, research also reflects specific concern for the person, the environment or both. In terms of the person, various attributes such as age, gender, cultural difference, education and professional training are of interest in how they influence perception and cognition.

In terms of environment, research tends to focus on either the natural environment or the built environment, in both cases emphasising particular qualities such as: macro/micro qualities; culturally relevant features; spatial configurational qualities; temporariness/permanence; phenomenological aspects; affective and cognitive features; and so on (Altman, 1992, p. 276). While reference is made to phenomenological aspects, its use as a methodology in environmental psychology is scant compared to other knowledge domains such as cultural geography and architecture. This is despite considerable research undertaken from a transactional perspective; a perspective that:

- Takes settings and contexts into account – "Contexts and settings include the qualities of the physical and social environment that may be psychologically relevant, the nature of tasks and instructions, the flow of events, how the setting relates to other aspects of a person's life, the 'meaning' and interpretation of the situation by the participants, and the familiarity of the participants with the setting" (p. 33).
- Seeks to understand the perspective of the participants in an event
- Understands the observer as an aspect of events

- Emphasizes the study of process and change
- Accepts the relativity of indicators and measures of psychological functioning
- Emphasizes methodological eclecticism

Environmental appraisal and assessment

The review that follows, while emphasising transactional studies, also positions them in relation to others studies of buildings and the built environment; studies that emphasise either the person or the environment. This latter distinction is evident in two judgement processes described as 'environmental appraisal' (an individual's personal impressions of a setting or an element in a setting with emphasis on the person) and 'environmental assessment' (emphasising the environment and quality) (Gifford, 2007).

In terms of environments including buildings, various sets of descriptors and semantic scales have been produced to help describe and analyse descriptions (appraisals) of environmental experience. Invariably these include items that relate to whether something is good or bad, liked or not liked, ordered or chaotic, and so on. As further illustration, Nasar (1994) proposed that aesthetic qualities comprise 1) formal, 2) symbolic, and 3) schematic qualities. Firstly, formal qualities are abstract concepts, for example, complexity, order, openness, and enclosure. Secondly, symbolic properties are illustrated through design style or languages such as classic, modern, and post-modern. Lastly, schematic qualities are defined with 'the typicality' of its 'functional categories', such as hotel, school, museum, and office building. Likewise, different appraisals emerged from the combination of these qualities (Nasar, 1994). Environmental appraisal also involves understanding what is beautiful, how something makes you feel, whether it's significant or safe (Gifford, 2007). In the main, environmental research in this area has focussed on scenic beauty with studies showing individuals varying in terms of their appraisal of the same scene.

In contrast to environmental appraisal, environmental assessment is a study of the probable changes of socioeconomic and biophysical characteristics of the environment, which could be result from individuals' proposed or impeding action (Jain, 2002). Environmental assessment deals with collective impressions of places

giving emphasis to the environment and its quality. In environmental assessment, visual quality is of primary concern. Visual assessment can be conducted through direct and indirect approaches. The direct methods compare the scenic preferences of individuals in a group in order to reach a consensus (Jain, 2002), or with aggregated outcomes giving a total value of the scene (Arriaza, Canas-Ortega, Canas-Madueno & Ruiz-Aviles, 2003). In environmental scenic assessment, expert visual approaches are also adopted and depend on the proficiency of experts to evaluate the scene.

Personal influential factors/attributes

As noted by Vernon (1970), *age* is one of factors in terms of time and the accumulation of experience and memories which affect the way people obtain and process perceptual information from the environment. In earlier studies, age was shown to influence colour perception in terms of variation and complexity (Hershenson, 1967; Spears, 1964) and perceptual function (Braun, 1959; Birren, 1961; Welford, 1958). Recently, further support for age difference and its influence on perception was found by Neiss, Leigland, Carlson and Janowsky (2009) with their investigation of the effects of age and gender on emotional perception. Two age groups, (65-85 years) and (24-40 years), showed significant differences in perception in relation to picture-memory task.

With a focus on children, Castonguay and Jutras (2008) studied preference of places where children, age 7-12 years old, played in their neighbourhood. Children were assigned to take photographs of their favourite places by themselves with supplied disposable cameras, and then were interviewed with the photographs regarding what they liked and disliked. Interview transcripts were coded by two coders. It was found that the liked places varied according in relation to the age of children and degree of vegetation. Places that more effectively supported their activities were rated more positively.

In terms of *gender*, Santos, Page, Cooper, Ribeiro and Mota (2007) studied the association between perception of the built environment and physical activity among groups of Portuguese boys and girls. In their research, self-report questionnaires were used in data gathering, the analysis of which indicated that perception of

neighbourhood environmental aspects significantly related to gender and physical activities.

With respect to *culture*, there are studies such as those by Nasar (1984) which focussed on cultural difference between Japanese and Americans. Nasar's study affirmed that culture difference played significant role on rating environmental preference. In a study using 130 preselected photographs in categories of 1) image of the sea, 2) image of the mountain, 3) image of the river, as well as the inventories 4) sea affairs score, 5) environmental attitudes scale, 6) environmental knowledge scale, and 7) environmental behaviour scale, gender difference was established. For example, there were significance differences in ratings regarding the sea, the mountain, and the river, where the Japanese group scored these as less pleasant than other groups but in terms of environmental knowledge had the highest scores compared to the American, German and Swedish groups (Nasar, 1984).

Other studies such as Shiraev and Levy (2004) and Rapoport (1976) show that cultural difference when associated with religion has significant influence particularly in terms of meaning of place. Kearins (1986) studied visual perception and memory in Australian aboriginal children age between 6-17 years old in relation to natural environment scenes of desert regions. Sets of photographs of the natural environment were rated. The study showed that Australian aboriginal children were more concerned with natural features in the rural environment than non-aboriginal Australian children living in the city. In another study, Kaplan and Herbert (1987) undertook a cross-cultural comparison of Western Australian and American students' preference of the Western Australian landscape. Participants were asked to rate on a 5-point scale 60 slides of five landscape types. The study, they claim, provided additional evidence of the influence of culture on perception.

Ethnicity and cultural variation were also shown to be contributing factors in several other studies including Bruce and Revell (1989) who compared scenic beauty evaluations of rural landscape by Western tourists and the Balinese. The research revealed difference as well as a strong role played by familiarity. In a multifaceted study, Yu (1994) invited 28 Chinese groups to rate 50 scenes from a Chinese national park. It affirmed that landscape preference is significantly influenced by the cultural

backgrounds of the individual, their sub-cultures, and different professional backgrounds.

Influences of *education and professional training* on environmental perception and preference have also been of interest (Devlin & Nasar, 1989; Wilson & Canter, 1990). For example, Devlin and Nasar (1989) involved architects and non-architects in a study of architectural style preference. Colour slides of popular and more high-end styles of residential architecture were preselected and then given to both groups of participants for rating. Architects preferred complexity and high-end attributes, while non-architects opted for simplicity and popular attributes. In another study, Brown and Gifford (2001) were interested in establishing why architects as a group cannot predict a layperson's aesthetic evaluation. Architects and laypeople were asked to rate colour slides, with a global impression rating on a scale of 1 to 10, properties of 42 buildings retrieved from architectural journals and books. The result was significant differences in perception of buildings based on different educational perspectives. Akalin, Yildirim, Wilson and Kilicoglu (2009) also studied influences of educational difference on environmental perception. They examined the relation of complex features of the façade of houses and perception by architecture and engineering students. Photographs of eight private houses were selected and presented in black-white in order to negate the influence of colour. Overall, architecture students were more critically aware than engineering students.

In an earlier study, Espe (1981) investigated characteristic features of historical buildings in relation to preference between two groups of professions. Results showed a relationship between preference and style. With respect to urban settings, Green (1999) found greater preference when the built environment was supported by natural landscape features in terms of their naturalness, beauty, pleasantness, distinctiveness, and interest. With the built environment positive responses were associated with distinctiveness, pleasantness, charm, familiarity, and interest. In popular social settings familiarity, friendliness, openness, liveliness, and safety were found to positively influence preference. Herzog, Maguire and Nebel (2003) studied the influence of predictor variables such as openness, visual access, movement ease, and setting care. Participants, 512 undergraduate students, were asked to rate sets of

70 colour slides from two categories: urban and field/forest natural environments, using the predictor variables.

Similar studies have also been conducted in relation to the natural landscape. Natori and Chenoweth (2008) investigated how the perception of the rural landscape in the Arai-Keinan region, Niigata, Japan differs among farmers and naturalists. Different attributes of natural landscape were preselected and presented in two colour photographic prints. These photographs were rated using a seven-point semantic differential scale. Again difference was noted based on professional background.

Additional examples in relation to training and landscape include Van Den Berg, Vlek and Coeterier (1998) who studied the influence of group difference in aesthetic evaluation of natural landscapes. Groups of farmers, residents, and visiting cyclists were asked to rate agrarian landscape scenes. The results showed appreciable differences among the groups. Vouligny, Domon, and Ruiz (2008) showed that for lay-people the value attributed to landscapes depended more on emotional criteria and everyday experiences in terms of place intimacy. Acar and Sakici (2008) conducted a survey using questionnaires and 20 pre-selected photographs. Participants, comprising 204 inhabitants and 10 landscape architects, were asked to assess visual preferences and landscape attributes of natural elements in scenes in those photographs. The result showed that personal demographics and expertise status were correlated with environmental preferences.

With respect to the built environment, Gjerde (2011) studied influences of group difference regarding professional background between the general public and experts on visual evaluation of urban streetscapes. Six different urban streetscape pre-selected scenes were presented to participants, and they were asked to rate their overall preference of certain design attributes, such as colour and building height, the whole scene and to identify any buildings that did not fit to the scenes. In terms of the expert group comprising various designers and planners, Gjerde's study showed that while architects and planners hold similar opinions about urban visual preference there were differences in terms of scale preference with the architect group preferring to engage with smaller scale environments while planners preferred large scale

environments. In addition, the group of architects tended to be demonstrative in their views while the planners appeared to be more reticent in expressing their opinions.

Environmental factors and attributes

In contrast to the 'subjective' oriented studies just highlighted, 'objective' related studies are interested in identifying the aspects of environment that contribute to aesthetic and visual quality. As the examples will highlight, the research tends to rely on the use of preselected photographs. Zube, Anderson and Pitt (1974) studied landscape characteristics as predictors of scenic quality. Thirteen dimensions were developed from these characteristics, and participants were asked to evaluate these dimensions. Generally, it was found that visual quality increases in accordance with degrees of wilderness, the presence of well-organised built elements, and the percentage of natural elements within scenes, such as water, plants, and mountains. Various studies have been conducted in a variety of contexts and for various reasons. For example, Lee, Ellis, Kweon and Hong (2008) attempted to understand the relationship between landscape structure and neighbourhood satisfaction. Variety in terms of size and shape of tree patches showed a significant positive relationship for neighbourhood satisfaction. Sayadi, González-Roa and Calatrava-Requena (2009) assessed three agricultural-landscape components, 1) type of vegetation layer, 2) density of rural buildings, and 3) level of slope for several types of landscape. They confirmed that agricultural-landscape components play an important role in landscape preference for the general public.

Person-environment factors

More recently, studies reflect greater interest in the relationship between people and environment. For instance, Kahana, Lovegreen, Kahana and Kahana (2003) argue that the relationship between the character of person, environment and person-environment fit are important for built-environment satisfaction. This study also suggested that understanding each of those three parts can result in better prediction of environmental satisfaction. While their approach considered both personal and environmental aspects, their ultimate aim was to specify salient environmental dimensions in terms of congruence with personal preference of the environment.

Bernasconi, Strager, Maskey and Hasenmyer (2009) investigated environmental aesthetic attributes of an automated transportation system. Pictures captured by the researcher from two selected-streets were shown to members of the public who were asked to assign a score to the pictures based on a scale (+3, +2, +1,−1,−2,−3). The chosen scale is consistent with the minimum suggested by various studies. The study indicated that design attributes, such as pillar shape or size and type of fascia, did not emerge as a significant influence on public perception, but the relationship between the automated structure and vehicular infrastructure, and the position of the observer are particularly important.

In another study, Chon and Shafer (2009) examined the relative influences of aesthetic response dimensions, which are maintenance, distinctiveness, naturalness, pleasantness, and arousal, on the likeability of greenway trail scenes in urban environment. Taylor (2009) studied the concept of legibility and aesthetics and concluded that perception of urban legibility while essentially cognitive was also crucially emotive. As such, Taylor argued that legibility, by itself, is not a significant criterion for evaluating perceptible and aesthetic quality of townscapes.

At the smaller scale of the interior environment, several studies focused on the effect of environmental conditions, such as interior noise, interior lighting, and the color of interior lighting on individuals' cognitive performance via mood (Knez, 1995; Hygge & Knez, 2001; Knez, 2001; Veitch, 1997; Knez & Kers, 2000; Knez & Enmarker, 1998). Regarding the methods in these studies, subjects were generally asked to conduct specific activities involving cognitive performance, within varying environmental-settings. For example, in studies focusing on the effect of lighting's color temperature on cognitive performance (Knez, 1995), ninety-six subjects, aged from 18-55 were paid to participate in a specific experiment. In the experiment, the subjects were divided into eight groups with 12 subjects in each. The experiment was conducted in a chamber-room of 3.9 meters width, 3.8 meters length, and 2.5 meters height. The room had six ceiling-mounted fluorescent luminaires with four lamps each. The luminance levels were measured on subjects' tables and other horizontal surfaces. The subjects were asked to do cognitive tasks including: 1) long-term recall and recognition tasks; 2) problem-solving tasks; 3) free recall tasks; 4) performance appraisal tasks; 5) mood measures—in the beginning of the experiment and after 85

minutes of being under sets of lighting, and were asked to complete an affective state questionnaire. The results showed that the mood valences and cognitive performances varied significantly depending on gender and indoor lighting.

While the research just reviewed constitutes person-environment research its restrictive focus on discrete aspects of person and environment precludes it as transactional research which given its holistic emphasis relies on 'descriptive' methods, naturalistic observations and other non-experimental methods. This is evident in the following section that reviews approaches to and methods for studying person-environment interaction.

Approaches to and methods for studying person-environment interaction

Various approaches have been adopted to address the different aims of person-environment research. Lowenthal (1972) categorises these as:

1) Environmental simulation where studies in environmental perception and behaviour are mostly based on simulated environments or environmental surrogates. Environmental simulations and surrogates were adopted by researchers with advantages of economy, speed, and control
2) Semantic analysis employing questionnaires, interviews, and images of the environment through interpretative language or sematic response
3) Congruence of environmental descriptors—environmental descriptors are constructed from terminology employed in relevant disciplines, such as design and environmental management profession or from reduction of vocabularies selected by participants in the research
4) Statistical methodology involving the manipulation of variables and measurement parametrically and nonparametrically.

Regarding the methods for studying the interrelationship between people and the landscape environment, several models and frameworks have been developed. For example, Kaplan (1985) tried to examine how preference measurement can be utilised to explore landscape perception. In Kaplan's study, it was found that landscape characters were determined by four landscape elements, form, line, colour, and texture. Kaplan also argued that using adjectives in the environmental preference

rating approach are limited in how they could adequately describe and differentiate between preferred/non-preferred landscapes. Tveit (2009) tried to predict landscape preference of two photo-based indicators of visual scale; 1) percentage of open land in the view and 2) size of landscape room within a set of pre-selected photographs. Participants were asked to rate photographs selected by the researcher of landscape with various degrees of openness. It was found that these two indicators can be used to reveal the expression of landscape preference. Botequilha & Ahern (2002) developed a conceptual framework for sustainable landscape planning using landscape ecological concepts and the multiple potential roles of landscape metrics as ecological planning tools.

Various guidelines have been developed such as the IEMA guideline to evaluate quality of the landscape. This guideline separates landscape impacts and visual impacts (Landscape Institute, & Institute of Environmental Management and Assessment, 2002). In terms of method, Meitner (2004) compared the method of using slides as presentation stimuli with presenting 360° panoramas. In Meitner's study, the failure of using photographs and slides as surrogate for the in situ environment was raised leading to the recommendation that photographs and slides are only useful in visual evaluation. Otero, Casermeiro, Ezquerra and Esparcia (2007) compared two landscape evaluation methods, the cartographic assessment method and in situ assessment method. Their study showed that the cartographic method was successful only when used by a panel of experts when there is the sufficiently accurate information provided on the available map.

Regarding the issue of testing or verifying, various methods and instruments have been developed. For example, Giuliani and Scopelliti (2009) reviewed articles in the *Journal of Environmental Psychology* producing a classification framework comprising: mode of human-environment transaction, research topic, and type of setting and function of places, socio-demographic characteristics and environmental role of people, mode of presentation of the setting, sampling procedure, and source of data. Nasar (2008), for instance, advocated the following steps for assessing perception of environment including: 1) the selection of respondents 2) measurement of environmental variables, 3) sampling and mode of presentation of the environmental stimuli, and 4) response measures. Feimer (1984) on the other hand

employed three factors for exploring environmental perception: 1) medium of presentation, 2) evaluative context, and 3) observer sample. Results indicated that each of these three factors has a small but discernible effect on retrieving data from participants.

In terms of collecting data, environmental psychologists use various methods including: self-reporting; time sampling; behaviour inference; and psychophysical approaches. *Self-report* is used to learn about the behaviours and activities of an individual. It is based on an individual's own account of their behaviour. It often involves the participant completing a questionnaire. However, there are limitations with self-report methods. Another technique, *time-sampling* is one of a wide range of direct approaches involving biometric work for the observation of behaviour. Time-sampling is defined as "the systematic recording of a definitely delimited unit of behaviour within the action over time interval yielding quantitative individual scores" (Olson & Cunningham, 1934, p. 40). *Behaviour inference* is a method of gathering data from participants through indirect interpretation. Inference procedures integrate past experience with current sense data to allow perception of the content of the sense data to emerge (Roger & Jain, 1978). In short, it provides understanding of the content and nature of the experience at representational, relational, and hierarchical levels (Roger & Jain, 1978). Extracting information from current events or activities and past experiences is the main process of this method. The *psychophysical approach* aims to describe, with mathematic measurable scales or indices, the relationship between individual's psychological response and the physical features within a visual scene as observed by the individual. In evaluating scenic beauty, for example, an important consideration in psychophysical measurement methods is the relation between obvious indicator responses and psychological processes. Relevant in this regard are examples by Frederiksen (1975) who studied psychophysical scale invariance with changes in stimulus ranges.

In terms of more holistic, contextual methods such as descriptive' methods, naturalistic observation and other non-experimental methods involving semi structured interviews as an example, these are favoured in the interpretive paradigms such as phenomenology utilised by researchers who do not necessarily regard themselves as environmental psychologists. There are several *phenomenological*

approaches as outlined by Finlay (2011) (an occupational therapist) ranging from Husserl's descriptive, empirical approach, to Heidegger and Gadamer's hermeneutic, interpretive approach, to Heidegger, Merleau-Ponty's and Husserl's lifeworld approach used to explore how everyday experience shows itself as embodied and lived through time/space and in relationships with others. More recently there is interpretative phenomenological analysis (IPA) – the primary methodology of this study - that incorporates ideas from Husserl and Heidegger with Schleiermacher and Gadamer's hermeneutics to understand individual's sense-making of their experiences. In addition, there are approaches that emphasise a first-person point of view or a reflexive-relational position.

As has been and will be highlighted in following sections, existential phenomenology with its focus on the taken-for-granted context or natural attitude of everyday life and routine is a major phenomenological concern that aligns philosophically with the transactional position in environmental psychology. Phenomenological research in relation to human experience considers the essential nature of human experiences and existence; how people make sense of and behave within their everyday world. A key concept of phenomenological investigation is that the individual has both an active and passive relationship with the world; active refers to a mode of cognitive intentionality, while passive involves habitual behaviour or routine intentionality.

As to the question of how lived experience is researched, Finlay (2011) proposes the following as underpinning any phenomenological project:

- A focus on lived experience and meanings
- The use of rigorous, rich, resonant description
- A concern with existential issues
- The assumption that the body and world are intertwined
- The application of the 'phenomenological attitude' (setting aside our habitual ways of perceiving the world to be open to what may appear)
- A potentially transformative relational approach (pp.15, 16).

2.2.4 Summary

The studies described in the preceding section reveal foci and approaches that are selective in understanding how people respond to the environment, natural and built, and while they provide some indication of the nature of the relationship between people and environment they *fail to capture how relationships with the environment contribute to experience in a holistic sense*. As the review also reveals most of the studies were conducted in laboratory settings or other settings *removed from the actual environments being studied*. In the following sections the review considers key concepts that exemplify the holistic and contextually situated nature of person-environment transaction. These concepts are: the everyday and everydayness; place and sense of place; and aesthetics.

2.3 KEY CONCEPTS

2.3.1 The everyday and everydayness

One cannot talk about 'the everyday' and 'everydayness' without acknowledging the foundational work of Henri Lefebvre and Michel de Certeau. According to Lefebvre and Levich (1987), the everyday is defined as "…a set of functions which connect and join together systems that might appear to be distinct" (McLeod, 1997, in Harris & Berke, 1997, p. 34), for example, judicial, fiscal and such like, and sub systems including the housing system, the fashion system, the food system. For Michel de Certeau (1988), an illustration of a set of functions in the urban context is the trajectory associated with spatial practices that being ordinary and tactical structure without fanfare the determining conditions of social life.

> "In the technocratically constructed, written, and functionalized space in which consumers move about, their trajectories form unforeseeable sentences, partly unreadable paths across a space. Although they are composed with the vocabularies of established languages (those of television, newspapers, supermarkets, or museum sequences) and although they remain subordinated to the prescribed syntactical forms (temporal modes of schedules, paradigmatic orders of spaces, etc.), the trajectories trace out the ruses of other interests and desires that are neither determined nor captured by the systems in which they develop" (De Certeau, 1988, p. xviii).

As expressed earlier by Lefebvre and Levich (1987), the everyday is "…the most universal and the most unique condition, the most social and the most individuated, the most obvious and the best hidden" (p. 34). "The concept of everydayness does not therefore designate a system, but rather a denominator common to existing systems" (p. 35); a uniform aspect of the major sectors of life: work, family, private life, leisure (p. 36).

Being "real" and ordinary such practices of the everyday are out of sight; they have a strangeness that does not surface (Michel de Certeau, 1988, p. 99). In Michel de Certeau's words:

> "The ordinary practitioners of the city live "down below", below the thresholds at which visibility begins – walkers whose bodies follow the thick and thin of an urban "text" they write without being able to read it…The networks of these moving, intersecting writings compose a manifold story that has neither author nor spectator, shaped out of fragments of trajectories and alternations of spaces: in relation to representations, it remains daily and indefinitely other" (de Certeau, 1988, p. 93).

As Michel de Certeau's and others' works show, Lefebvre had considerable influence in relation to discourse to do with urbanism and architecture. This is apart from the fact that Lefebvre, a devout Marxist, fixated on exploring the meaning of modernity. In brief, he brought together urbanism, architecture and the everyday, with his work playing a critical role in philosophical, cultural and architectural debates, from the 1920s to his death in 1991, and then extending elsewhere as a reaction to what McLeod (1997) describes as avant-garde escapism, pretension, and heroicism (p. 9.). With its emphasis on the concrete and the real, the humble and the ordinary, the concept of the everyday is regarded by McLeod to offer still the most potential for transformative agency and action.

In terms of this study and its focus on buildings and further understanding the "disquieting familiarity of the city", de Certeau's work is of particular interest. As he poses: "Is the immense texturology spread out before one's eyes anything more than a representation, an optical artefact?" (de Certeau, 1988, p. 92). And as his writings

suggest, it is indeed something more. Very eloquently he describes how pedestrian movements spatialize, their paths giving shape to and weaving together spaces, the spatial order of which organises an ensemble of possibilities. Herein the walker through his or her rhetoric of walking and composition of paths plays a central role in actualising some of these possibilities (de Certeau, 1988).

Everyone, then, as they go about their everyday activities has a story wherein urban elements such as buildings inform itineraries and the geographical structure of the narrative. As Upton (2002) pointedly remarks: "Architecture is inescapably concrete and it forms the fabric and the setting of everyday life" (Upton, 2002, p. 707). And yet, as she proposes, despite the infiltration of contemporary theories of everyday life in Architecture motivated by a desire to resist the "pervasive commodification and homogenization of life and landscape" such theories are often lacking in detail and specifics about everyday relationships of people to life and landscape, and in many respects, have been hijacked by the preoccupations of Architecture (with a capital 'a') (Upton, 2002, pp. 707, 708). As qualification, she points to Architecture's "habit of dichotomous and hierarchical thinking about the landscape" wherein there is a tendency to fit thinking about the everyday into an Architectural discourse model that relegates it to the vernacular over a perceived higher-order and more self-conscious and sophisticated form of art.

For Upton (2002), such acknowledgment of the central role of the body and its movements and dispositions invariably leads to another French theorist Pierre Bourdieu and his notion of everyday life as 'habitus'; that is, as a system of structuring dispositions, constituted in practice (repeatedly and routinely) and oriented toward practical functions. This, she claims, provides a more concrete sense of the everyday as: "The nexus of spaces and times that repeatedly trigger habits and cultural memories – the habitus" (Bourdieu, 1990, p. 69 in Upton, 2002, p. 720). It is a sense Upton concludes that gives the everyday a specificity lacking in the work of Lefebvre and Michel de Certeau and their architectural disciples and that supports as critical the need for a small-architecture.

In earlier work, Harris and Berke (1997) describes what everyday architecture might be. It may be: generic and anonymous; banal or common – permits you to

provide your own meaning; quite ordinary – unselfconscious – potential for inventiveness in the ordinary; crude – raw and unrefined; sensual; vulgar and visceral. An architecture of the everyday may: acknowledge domestic life – endorsing the repetition of familiar things – allowing for personal rites but avoiding prescribing rituals; take on collective and symbolic meaning but it is not necessarily monumental; respond to program and is functional; change as quickly as fashion, but it is not always fashionable – "everyday life is unpredictable" (Harris & Berke, 1997, pp. 222-224).

While the work of architectural theorists such as Berke and Upton highlighted here makes reference to understanding people as embodied actors, it refrains from any direct engagement with phenomenology. And while Lefebvre and de Certeau acknowledge phenomenological relevance in relation to the everyday; the everyday being intrinsically existential (Richardson, 1991; Milton, 1998), they too avoid extended commentary despite as with Michel de Certeau an attempt to qualify the notion of spatial stories by differentiating between space and place. According to Michel de Certeau, "a *space* exists when one takes into consideration vectors of direction, velocities, and time variables. Thus space is composed of intersections of mobile elements. It is in a sense actuated by the ensemble of movements deployed within it" (p.117). Place, on the other hand, is an "instantaneous configuration of positions" implying stability and a situational existential relationship to a milieu (p.117).

People in their everyday life inevitably bond (not always positively) with the place in which they live, work, and play. In this respect, architecture – particularly buildings - is significant (Raith, 2000). The embodiment of the everyday is multi-sensory and integrally existential as conveyed in the following section where phenomenological studies involving place, sense of place, and sense making are highlighted.

2.3.2 Place and sense of place

Fundamental to studies of place and foundational work by Yi-Fu Tuan and Edward Relph is the focus on existence and 'being' by the German philosopher Martin Heidegger. In his most early influential work *Being and Time* written in 1927,

Heidegger (1927) proposes the notion of human being as 'Dasein' ('there-being' or as commonly expressed 'being-in-the-world'). Expressed this way, there is an overt attempt to convey our 'self' as integrally immersed in and tied to the world in a single entity that is always 'becoming', that is, in a process of responding to our anticipations (Finlay, 2011, p. 51).

Conceptualising the human condition of existence, there are philosophers such as Heidegger, Sartre, and Merleau-Ponty who argue that:

> "…we all have an *embodied sense of self* which is always in *relation to others*, while our consciousness is shared with others through *language, discourse, culture and history*. We experience *time* in our recollection of past joys and trauma. We also anticipate what is to come in the future. We are placed into a matrix of *spatial relations* in the world surrounded by things which have *meaning* while we engage with ideas and activities which become our *projects*. We are thrown into the world in order to live: we act, make choices, strive, become. And ultimately we die" (Finlay, 2011, p. 19).

According to Anderson (2011), in *Being and Time*, Heidegger identified a practical and social "Being-in-the-world" as the basic existential state of Dasein or human being, in the process describing "average everydayness" as Dasein's preeminent mode of existing. "Everydayness according to Heidegger is ontologically reducible to a predominantly utilitarian, thoroughly task-driven and relatively global concern for the world and its entities…" (p.72). In this respect, "…the everyday world at its most fundamental level is a domain of praxis, a realm of predominantly practical truths shaped by and disclosed to practical tasks and relations" (Anderson, 2011, p. 69). Of architectural relevance, Anderson (2011) describes how "To dwell means to remain in place, to make it one's own. And to do that, one needs to build – in all the rich and subtle senses of that word and in a relationship to the elemental that transcends all practical, theoretical or merely aesthetic relationships" (Anderson, 2011, p. 77). "Perhaps more significantly, and unlike representational arts, works of architecture attune us to the truth and beauty of the elemental itself, completely undiluted by an image that would divert our attention away from the matter out of which it is composed – and out of which we are ourselves composed" (p.78).

Architectural materiality then fortifies being and the existential experience (Rogerson & Rice, 2009). Our everyday places are not experienced discretely. They are multi-dimensional and integrally tied to location, landscape, and personal involvement (Relph, 1976a; Smith, 2001). They are, as mentioned previously, experienced in various ways. Tuan (1990), for example, understood place as involving an affective form of attachment; a concept he termed 'topophilia'. More recently, Kudryavtsev, Stedman and Krasny (2011) propose two components of sense of place: 1) place attachment, a bond between people and places; people consider the particular place as 'the place for what they can do or like to do some things; and 2) place meaning, symbolic meanings ascribed to places. Likewise Pretty, Chipuer and Bramston (2003) scrutinise sense of place in terms of discriminating variables, including place attachment (emotional bonding and behavioural commitment), sense of community (affiliation and belonging), and place dependence (available activities, quality and quality comparison with alternative communities). They also mention that the specifications of concepts subsumed under sense of place have not been clearly articulated, for example particularly place identity, place attachment and sense of community. "There is considerable overlap between factors such as emotional bonds, affiliation, behavioural commitment, satisfaction and belonging which are loosely associated in theoretical descriptions" (Pretty, Chipuer, and Bramston, 2003, p. 274).

Alternatively, and more aligned with Heidegger, Relph emphasises practical knowledge – "the very everyday and mundane fact of our knowing where to enact our lives. We live in one place, work in another, play football in another" (Cresswell, 2004, p. 21). As Cresswell (2004) notes, both Tuan and Relph differentiate between space and place. For Tuan, people develop a sense of space "…as an open arena of action and movement while place is about stopping and resting and becoming involved" (Cresswell, 2004, p. 20). For Relph, space provides the context for place (Relph, 1976a, p. 8); it is dwelling in spiritual and philosophical ways that unite the natural and human worlds (Cresswell, 2004, p. 22). "The essence of place lies in the largely unselfconscious intentionality that defines places as profound centres of human existence" (Relph, 1976b, p. 43 in Cresswell, 2004, p. 23).

While both Tuan and Relph, connect place with pauses in time, David Seamon (see Seamon, 1982; Seamon & Sowers, 2008) focuses on the mobilities of bodies in space through "place-ballets" wherein the practices of people living their everyday life, driving to work, walking along the street create place. Place in this sense is lived space. Lived-space is the internal structure of space unveiled to individuals in their concrete experiences of the world in which they are living. Some places are peaceful and safe, and some places are depressing and frightening. People like some places more than others because they involve themselves and give specific meanings to places differently (Newman, 2005).

Elaborating on the work of Relph, Seamon reinforces the notion of modes of place experience, for example, as 'insideness' (where one feels at ease, at home, a profound sense of belonging) or 'outsideness' (where people feel disconnected and alienated). Further to the modes of outsideness are modes that are more objective (thinking about the place as an object), incidental (where place is simply a background to certain activities); and insideness – behavioural (such as in the process of familiarisation), empathetic (being open to encountering a place in a new way), and vicarious (experience a place through accounts of others) (Finlay, 2011, pp. 133, 134).

Other researchers have also attempted to characterise place such as in the early work Lukermann (1964) who proposes six major components, 1) location explained in terms of internal character (site) and external connectivity to other (situation), 2) unique entity; each place has its own nature and culture, 3) circulation; the interconnected system of spatial interaction and transfers, 4) localisation; while places are parts of the larger area at the same time they have characteristics that are local , 5) historical components; places became 'the place' through engagement of historical and cultural changes, and 6) meaning; places are characterised by given concepts and beliefs of individuals. More recently, Canter (1996) proposes a facet theory of place that includes activities, physical characteristics, the individual, social and cultural experience, and the scale of the place. Gustafson (2001) regards place as having three main themes, 'self'; including individual's life path, emotions, self-identity, and activity, 'environment'; considering physical features of the place and its institutions and events, and 'other' people; comprising other's characteristics and

behaviour. Kyle, Mowen and Tarrant (2005) suggest that the variety of motivations, psychological, social and physiological outcomes, dictate interaction between individuals and the place. Turner and Turner (2006) propose that place comprises four main features, 1) the physical characteristics of the environment, 2) the affect and meanings including memories and associations, 3) the activities afforded by place, and 4) the social interactions associated with the place.

An exploration of significant concepts for this study such as the everyday, dwelling and architecture cannot be concluded without reference to the highly complex and much debated and critiqued area of aesthetics. What follows is a very selective and humble attempt to draw out aspects that provide a different although related perspective on buildings, the everyday and their interrelationship.

2.3.3 Aesthetics

Aesthetics as a term is generally attributed to Alexander Baumgarten who understood it as the Greeks did, that is, as perception by means of the senses (Budd, 1996). Traditionally, aesthetics has been understood in terms of the philosophy of art evolving to a point where it now also embraces non-art objects such as artefacts produced by human beings as well as those produced by nature (Budd, 1996). In terms of art, aesthetics has been conceptualised in various ways. At a very simplistic level it is often presented as something that resides in the art work itself though its visual qualities, or alternatively in the person and how they make sense of the work (Mcwhinnie, 1968). In terms of this latter understanding, this has been explored further as to whether aesthetic preference or judgement is dependent on or independent of art training. Using a more general term of aesthetic experience, Carroll (2002) categorises such experience as: affect-oriented; axiologically-oriented, or content-oriented. Affect-oriented experiences emphasise experiential qualities; axiological-oriented experience is linked to the intrinsic value of the thing itself; content-oriented experiences highlight what is experienced.

According to Noel (2001), there are four constructs or ‘accounts’ of aesthetic experience. First, the traditional account considers that the aesthetic experience is self-rewarding in terms of pleasure; pleasure is taken from contemplating the artwork for its own sake. In this way, the aesthetic object holds intrinsic value rather than

instrumental value. Second, the pragmatic account characterises aesthetic experience in terms of its internal structure or rhythm. Third, the allegorical account considers aesthetic experience and how it enables contrast between the everyday social order creativity and imaginativeness available through aesthetic experiences. Fourth, the deflationary account emphasises the concept-free play of the imagination without overgeneralizing. With this account, the aesthetic experience is identified in terms of "the content of certain experiences whose objects it enumerates as the design of aesthetic objects and their expressive qualities (Noel, 2001).

In this study, such conceptualisation poses the following questions: Where does architecture fit? Are buildings art objects or non-art objects? And what about environments, such as interior spaces and settings? As Budd (1996) points out one could adopt essentially two positions in attempting to respond to these questions. The first is to approach the appreciation of everything as if it were art (viewed as problematic in that natural elements can evoke delight without recourse to imagining it as a piece of art); the second is that there is a unitary notion of the aesthetic that applies to both art and non-art (also problematic in that it diminishes unique aspects of an aesthetics of art).

To provide a way forward, it is of value for this project to visit the work of John Dewey and his seminal work on art as experience. For Dewey (1934), "experience occurs continuously, because the interaction of live creature and environing conditions is involved in the very process of living" (p. 36). And in terms of aesthetics or as he terms it 'esthetics', "…esthetics is no intruder in experience from without, whether by way of idle luxury or transcendent ideality, but that it is the clarified and intensified development of traits that belong to every normally complete experience" (p. 48). In this way, Dewey challenges understandings of aesthetics that assign it solely to the emotional dimensions of experience denying it any significant role in cognition and knowledge (Bhatt, 2013, p. 37). According to Bhatt (2013), Dewey understood aesthetics in a broad sense "…as involving form and structure, qualities that define a situation, our felt sense of the meaning of things, our rhythmic engagement with our surroundings, and our emotional transactions with other people and our world" (p. 38). As highlighted earlier in the review of transactional theory to

do with person-environment interaction, Dewey saw no definitive distinction between person and environment, subject and object, mind and body.

In terms of aesthetic meaning, Dewey highlights the central role of expression through 'art'. "Art throws off the covers that hide the expressiveness of experienced things; it quickens us from the slackness of routine and enables us to forget ourselves by finding ourselves in the delight of experiencing the world about us in its varied qualities and forms" (Dewey, 1934, p. 108). When comparing the arts in general with the industrialised arts, Dewey (1934) highlights how in one way objects have definitive form in terms of their intended use and how in an added way can be aesthetic through form that is not merely useful. He points to how 'design' has a double meaning, signifying purpose as well as arrangement.

As with buildings, Dewey (1943) talks about works of art expressing space as opportunity for movement. "Space is room, *Raum*, and room is roominess, a chance to be, live and move" (p. 217). In this way through such concepts as transition, time for Dewey (1934) plays an integral role and is the substance for qualitative unity and the affordance of possibilities for meaningful experience. Naturally, the person in this context is also central. The product of art, such as a building, is not he argues the work of art but rather "the work takes place when a human being cooperates with the product so that the outcome is an experience that is enjoyed because of its liberating and ordered properties" (p. 222). With respect to the processes at play, for Dewey (1934), there are "no intrinsic psychological divisions between the intellectual and the sensory aspects; the emotional and ideational; the imaginative and the practical phases of human nature" (p. 258).

While this section has focussed on aesthetics and the various ways in which it is interpreted, it has also emphasised the seminal work of John Dewey through its transactional orientation; an orientation that has particular significance within environmental psychology. Also significant in environmental psychology is an area of aesthetics labelled environmental aesthetics.

2.3.4 Environmental aesthetics

Environmental aesthetics is used in this thesis as an overarching domain encompassing the built environment as well as the natural environment. Historically, however, as noted by Carlson (2010), environmental aesthetics, an integral aspect of environmental psychology, has its origin in eighteenth century landscape aesthetics and questions as to what constitutes aesthetic experience – is it exclusively non cognitive involving various kinds of affective states or is it cognitive relying on knowledge of and responses to various characteristics of the environment itself? As highlighted in a previous section on environmental appraisal and assessment, these positions are described as subjectivist or objectivist.

From a subjectivist position, individuals play a dominant role in constructing meaning and that this will be aesthetic if they open themselves to being immersed (Carlson, 2000, p. xix). In contrast, the objectivist view holds that aesthetic experience is determined by the nature of the object of appreciation. In landscape, especially in nature policy and landscape planning. Arler (1999) identifies four central sets of landscape or nature qualities; 1) qualities related to species, 2) qualities related to the atmospheres and character of places, 3) pictorial qualities, and 4) qualities related to narrativity. The first set considers that aesthetic qualities are related to biodiversity. Two dimensions of the complex concept of biodiversity are relevant in landscape planning; species diversity and diversity of ecotypes or nature types. These two dimensions are related in the way that species diversity is dependent on the presence of a variety of ecotypes. The second set considers atmosphere and characters of landscape as the whole. Places with different characters express different atmospheres, and different landscapes affect individuals in different ways. Individuals also respond diversely with those differences. The third set; pictorial qualities, considers that individuals perceive scenes of a landscape or place as a whole. And, the pictorial quality of landscapes cannot be separated fully from atmospheric qualities. The last set, historical and narrative values, focuses on historical dimensions of a particular landscape.

More recently, as Carlson (2010) notes, and building on previous research (see Carlson, 1979, 2000 and Hettinger, 2008), such positions are not seen as mutually exclusive. He cites work dealing with the aesthetics of human environments and

everyday life as demonstrating that although different in emphasis, they are not in direct conflict. When conjoined, they advocate bringing together feeling and knowing, which is the core of serious aesthetic experience and which, when achieved in aesthetic appreciation of different environments of the world at large, demonstrates just how rewarding such appreciation can be.

According to Carlson (2000), unlike an artwork such as a painting, the 'aesthetic object' in environmental aesthetics is something that surrounds us; that is, we are immersed within the object of our appreciation. "As we occupy it or move through it, we see, hear, feel, smell, and perhaps even taste it. In short, the experience of the environmental object of appreciation from which aesthetic appreciation must be fashioned is initially intimate, total, and engulfing" (p. xvii). This is the case for built environments such as cities as it is for natural landscapes naturally formed or those formed through human agency, although natural environments tend to be more dynamic and changing of their own accord.

Given the focus of this thesis, the review now turns to an explicit focus on buildings within the context of the aesthetics of architecture. As we will see, a building "more than most works, alters our environment physically; but moreover, as a work of art (aesthetic experience) it may, through various avenues of meaning, inform and reorganize our entire experience…" contributing to "…our continual remaking of a world" (Goodman, 1985, p. 652).

Aesthetics of architecture

"One might say that, in proposing an aesthetics of architecture, the least one must be proposing is an aesthetics of everyday life. One has moved away from the realm of high art towards that of common practical wisdom. And here one might begin to see just how inappropriate is our post-romantic conception of art to the description of normal aesthetic judgments of the normal man [sic], and how obscure are all the concepts, such as the concept of expression, which have been used to elucidate it" (Kruft, 1994, in Goldblatt & Paden, 2011, p. 1).

As Goldblatt and Paden (2011) go on to say it is however the view of architecture as art that has informed reluctance by philosophers to deal with the mundane (p. 1). In understanding the evolution of thought in this regard, Guyer (2011) highlights several philosophers starting with the famous architectural scholar Vitruvius who asserted that for building to be architecture it must conform to the principles of firmness (structural integrity), commodity (utility) and delight (beauty); principles that were interrelated, for example, structure and ornament and its potential to evoke emotion were regarded as necessary to its utility. Such a view was later endorsed by Kant, who while emphasising the essential need for architecture to have utility, or as he called it, objective purpose, also acknowledged an important relationship between the presentation of aesthetic ideas and beauty. After Kant, Guyer (2011) draws attention to Schelling and a shift in emphasis from utility and architecture's materiality to its ideal, intellectual content wherein utility becomes a condition of its beauty (the building should express its function) not a goal in its own right. Extending this further as noted by Guyer (2011) is Schopenhauer who held that works of architecture should express not their own function but rather the nature of their own construction and associated physical forces influencing construction. In this sense, beauty is understood in relation to expression rather than anything formal. Further to this is Hegel's position advocating for an expression of metaphysical ideas about divinity and spirit (Guyer, 2011).

When exploring how buildings mean, Goodman (1985) asserts that not all buildings are works of art (are not therefore architecture). "A building is a work of art only insofar as it signifies, means, refers, symbolizes in some way" (p. 643). Having said this, he further asserts, "not all symbolic functioning is aesthetic" (p. 643). To qualify this, he identifies four different ways in which buildings mean: denotation; exemplification; expression; and mediated reference. In terms of denotation, Goodman argues that buildings as a whole do not usually describe or depict since they are not texts or pictures. They do however mean through exemplification such as its structure by emphasising various structural elements such as columns, walls, and so on as well as through metaphoric exemplification or what he refers to as 'expression'. Buildings can also make reference to what he describes as "abstruse or complicated ideas" mediated by various linking devices.

An alternative approach to differentiating between building and architecture based on aesthetic experience is provided by Mitias (1999) through the following propositions:

- The 'building' and 'aesthetic dimension' of the architectural work are not given to our sensibility as ready-made realities but as potentialities to be realized in the aesthetic experience;
- The architectural work as a building is composed of two main elements: (i) the physical structure of the building, and (ii) the building's spatial form. It is these two elements that act as structure for aesthetic experience and help realise the building's aesthetic qualities (pp. 61-62) "such as serenity, elegance, submit, beauty, grace, grandeur, or magnificence – qualities that are the ultimate basis of aesthetic enjoyment and evaluation" (p. 64).

According to Mitias (1999), perceiving a building as a physical structure involves sensing (significantly through vision) and an appreciation of colour, texture, lighting and so on. To be understood as a whole (what he argues is required for an aesthetic experience to be realised) it also involves an appreciation of the building's spatial or three-dimensional attributes brought to the fore when moving around/through the building.

In their work Goodman (1985) and Mitias (1999) make only passing reference to the building in context in relation to other built or natural elements that surround it or are a part of it. They also avoid exploration of their role socially as well as personally and are discussed from everyday life. Today, architectural theory recognises a multifaceted role for buildings. In addition to functional roles, buildings are understood to be significant socially, emotionally and existentially. They affect our sense of wellbeing, our sense of place and cultural identity, and the quality of human interactions (Shiner, 2011) symbolically as well as in direct physical ways. For the most part, however, this happens unselfconsciously through habitual use rather than explicit visual analysis. "The buildings that are involved with our daily lives are part of our system of habits, and we live our lives with them in the background, unproblematically, as unconscious of their role as we are of the air that we breathe or the time that is passing" (Ballantyne, 2011, p. 43). In this everyday,

"ordinary' respect, buildings are judged by whether life-habits are accommodated" (Ballantyne, 2011, p. 43).

This belief that buildings cannot be discussed separately from life constitutes what Ballantyne refers to as 'pragmatist' aesthetics. As he is quick to point out, however, such aesthetics does not undermine 'contemplative' appreciation of buildings such as that of the tourist's gaze (p. 43) but rather from an everyday perspective: "The role of aesthetics can be to articulate an appreciation of the fitness of the match between the place and the ethos, to see the building through the habits of daily life" (p.48). Expressed another way: "The designed environment unfolds before us requiring our occupational presence to make it whole. It is in this sense that a work of architecture displays itself as a canvas upon which to project the systematic undertakings that are constitutive of a life, but unlike the blank canvas, this canvas has marked out across its surface patterns that present themselves as suitable accommodation for our endeavours" (Winters, 2011, p.67).

The pragmatist aesthetics just described that recognises the significant role of contextual conditions of a building in terms of user perception and use can be aligned with Heidegger's view that "…the everyday world at its most fundamental level is a domain of praxis, a realm of predominantly practical truths shaped by and disclosed to practical tasks and relations" (Anderson, 2011, p. 69). "Under certain conditions, for Heidegger, a being's essence may be that of a mere thing, at other times, an object of utility, and on yet other occasions, a work of art or architecture. In short, the discreet category of into which an object will fall depends not only on its own physical, natural, or crafted properties, but on the contextual conditions of its perception and use" (Anderson, 2011, p.69).

According to Anderson (2011), in *Being and Time*, Heidegger identifies a practical and social "Being-in-the-world" as the basic existential state of Dasein or human being, and he describes "average everydayness" as Dasein's preeminent mode of existing. "Everydayness according to Heidegger is ontologically reducible to a predominantly utilitarian, thoroughly task-driven and relatively global concern for the world and its entities…" (Anderson, 2011, p. 72). As Anderson elaborates: "To dwell means to remain in place, to make it one's own. And to do that, one needs to

build – in all the rich and subtle senses of that word and in a relationship to the elemental that transcends all practical, theoretical or merely aesthetic relationships", and, "Perhaps more significantly, and unlike representational arts, works of architecture attune us to the truth and beauty of the elemental itself, completely undiluted by an image that would divert our attention away from the matter out of which it is composed – and out of which we are ourselves composed" (Anderson, 2011, pp. 77, 78).

The discussion thus far has focussed on architecture in terms of building as an artefact/object. Architecture as a discipline is also by nature of buildings involved in urban design where space, as in the space between buildings and other elements, plays a significant role. To appreciate a building as a whole demands moving around and within it. "…a buildings has to be put together from a heterogeneous assortment of visual and kinaesthetic experiences: from views at different distances and angles, from walks through the interior, from climbing stairs and straining necks…" (Goodman, 1985, p. 650). This is also the case when one is considering the interior spaces of buildings. Such omission is noted by Mattens (2011) writing that: "…the very idea that spatiality can be a source of aesthetic enjoyment risks remaining unrecognized by many, because voids are intangible, and space is, in a certain sense, invisible" (p. 106). The fact that interior spaces can be appreciated aesthetically only seeks to reinforce the experiential nature of aesthetics and the significant role played by everyday rituals and routines. "We do not see rooms, we see dining rooms" (Mattens, 2011, p. 112). Likewise, the identity of a city can be understood as being informed by its physical characteristics as well as the human activities and experiences it accommodates.

2.4 SUMMARY

The focus of this research on understanding how buildings are experienced in the everyday integrally connects environmental psychology with design disciplines such as architecture, urban design and interior design. From an architectural and interior design viewpoint, "the impetus to understand more about person-environment behaviour came post-war with the need to improve human performance and wellbeing through better designed houses, offices and hospitals" (Steg et al, 2013, p. 3), and with this greater recognition of its constituent elements, for example,

physical sensory qualities or stimuli such as noise, light, temperature; its physical structure and materiality; and its symbolic expression (Kopec, 2012, p. 14). Understanding of the environment also extended to its significance psychosocially and existentially as well as functionally. As noted by Kopec (2012):

> "Currently, environmental psychology is the only recognized discipline that bridges design and psychology. The environment plays an intricate role in the overall physiological health and the responses of the human psyche – concern for our surroundings is a component not only of self-actualization but also of safety and of physiological needs" (Kopec, 2012, p. 14).

For this reason, the chapter commenced with an overview of environmental psychology and theories of relevance to this study including stimulation, control, behaviour setting, and integral theories. Of these, integral theory favouring a transactional ontology, as articulated by Altman and Rogoff (1987), was argued to be particularly relevant. This was described in terms of environmental perception, spatial/environmental cognition and environmental experience. The chapter then shifted its focus to environmental psychology research and the physical environment and how environmental appraisal and assessment research has tended to prioritise personal factors/attributes or environmental factors/attributes.

The review concluded that of the little research undertaken that sought to bring together person and environment, this was highly selective. In part, this is attributed to a pervading positivist paradigm and approaches and methods used to study person-environment interaction that were more experimentally rather than existentially based. In the main these comprised approaches ranging from environmental simulation, to semantic analysis, to environmental descriptors, to statistical methodology. Specific data collection methods most generally involved self-reporting, time sampling, behaviour-inference methods, and psychophysical models.

The review noted that, while phenomenological approaches were identified as relevant particularly for transactional-oriented research, and despite extensive research to do with key concepts such as the everyday and everydayness, place and

sense of place, aesthetics including environmental aesthetics, there had been little uptake by environmental psychologists

Drawing on the foundational work of Lefebvre and Michel de Certeau, the everyday was described as a set of ritualised, 'ordinary' activities that connect systems and major sectors of life. In terms of the settings in which these activities are played out buildings play central roles. Despite this, however, theories of the everyday have had little deep and enduring impact in design and architecture inviting calls for more extensive and genuine attention to the embodied physicality of everyday life and the materiality of architecture. While Lefebvre and Michel de Certeau acknowledge the relevance of phenomenology in relation to everydayness, this has been ignored for the most part by more contemporary researchers and commentators including environmental psychologists. This is despite their calls for a greater understanding of the physicality of everyday life as noted above and despite significant research by existential phenomenologists in respect to dwelling and place as outlined in this chapter. As highlighted in the section on aesthetics, the conception of architecture as art, particularly high art, and a preoccupation with differentiating between the building and architecture have in many ways compromised its consideration at a 'mundane' level where buildings are judged pragmatically through life-habits and how they are accommodated socially, emotionally and existentially as well as functionally. The neglect of urban 'space' in comparison to the building as object is also perplexing given the relatively long history of environmental aesthetics and its concern for similar issues in relation to the natural environment and what are deemed to be the major contributing factors of aesthetic experience. In this respect, there is growing support in emerging research for a conjoining of what tends to be understood as disparate emphases in relation to person and environment.

As professionals, designers have a responsibility to design environments that are not only safe and functional but that also enhance quality of experience in the most enduring, ethical and sustainable ways. Despite considerable research in the area of person-environment interaction, as illustrated in this review chapter, in general architects and interior designers avoid explicit use of theoretical frameworks and the application of relevant environmental theory in their practice. In part, this can be attributed to its de-emphasis even neglect in design courses where theory tends to

be restricted to design history (and Architecture with a capital 'A'), and to "theory as it applies to design process, practice and the aesthetics of form and composition" (Kopec 2012, p. 15). As speculated in this thesis, it could also be due to the lack of a holistic, integrated framework in environmental (design) psychology; a framework generated from the everyday lived experience of people in the urban environment, in particular in relation to architectural artefacts and environments – buildings - that play a central role as we pass them on the street, as we visit and occupy them for varying periods of time and for various purposes.

Professionals in a range of related disciplines of architecture, interior and urban design are variously aware of environmental psychology research, and the need of evidence-based research aimed at improving the quality of areas of built environment. In the International Federation of Interior Design/Interior Architecture Declaration (International Federation of Interior Architects/Interior Designers, 2011), seven key issues are highlighted as professionally crucial. These are: 1) value—the need to produce measurable outcomes and improvement in the lives of the people who use buildings and spaces by delivering value economically, functionally, and aesthetically. This is understood to be related to greater understanding of physical, emotional, and behavioural patterns of use; 2) relevance—in terms of people's experiences at all levels; 3) responsibility—to the person, society and the environment; 4) culture—and the role of design in cultural production; 5) business—with professional obligations as a major driver; 6) knowledge—theoretical and applied knowledge with environmental psychology having critical significance; 7) identity—which relates to the reciprocity between people and place and the improvement of quality of life. The IFI Declaration calls attention to the spatial quality of environments and how people experience these environments. It reminds us that people not only occupy spaces but also attribute meaning to these spaces. In specific spaces, we not only experience sense of place, we also sense who we are. As architecture and design professionals, what we design will inevitably affect people in various ways, and while we create spaces, we also contribute to the shaping of people's experiences (International Federation of Interior Architects/Interior Designers, 2011).

While these are very worthy goals, for Franz (2014) the Interiors Declaration does not go far enough in articulating the personal and social value of interior architecture/design, arguing that further work is needed in exploring the profession's defining qualities through closer examination of what it says it wants (its aesthetics) as well as what it believes it should do (its ethics). As highlighted by Kopec (2012) in relation to architecture, a way forward is more explicit attention to and integration of environmental psychology for designers in design courses. When examined closely as in this review, it is apparent that environmental psychology can and should play a central given its capacity to respond to social as well as personal goals. Socially, environmental psychology can be instrumental in creating physical settings that match (or allow to be matched) the needs and activities of occupants thereby enhancing user satisfaction, health, wellbeing and performance, the latter an indication of its role in facilitating more desirable behavioural change such as productivity. Integral to this are systems and environments that enhance personal control, social support and imageability/legibility (Gifford, 2007, p. 529).

In addition to knowledge, environmental psychology may also help to address another issue, this time in relation to design practice and the gap that exists between building/city user/occupant and the designer. There is no doubt that this is exacerbated by increasing complexity demanding the inclusion of more and more consultants and a growing dependency on technology that further distances the user physically and intellectually. As observed even outside the discipline by environmental psychologists such as Gifford, there is also a resistance by designers to engage with person-environment theory as well as more closely with the users which is explained in terms of an arrogance whereby designers see themselves capable of understanding situations as others do and of being able to make decisions for them. This is particularly the case where decisions are limited to ones about how the building will look and function at a basic operational level.

However, having argued the need for greater consideration of environmental psychology in informing design, the question remains as to the suitability of environmental psychology as it is currently in meeting social design needs and in helping designers and others in its engagement. To reiterate, many of the studies informing theories in environmental psychology are conducted through highly

controlled laboratory studies that fail to capture the complexity of the everyday environments people experience (Canter & Craik, 1981; Bell et al., 1984; Gifford, 2007). Such complexity triggers different modes of environmental response: cognitive, affective, interpretive, and evaluative, which can operate at the same time across several sensory modalities (Bell et al., 1984). Consequently, different people can obtain different information from the same environment, and different environments can provide different or similar information to the same person (Ittelson, 1974).

From the 1970s onward there has been increasing support for the transactional view that people in their everyday situations perceive their environment holistically (Altman & Rogoff, 1987; Bell et al., 1984). In this sense, 'holistic' is used in recognition that a person brings awareness of individual goals, values, and socio-culture influences into their perceptual system and that these have functional significance (Bell et al., 1984). Correspondingly then, the holistic character of environmental perception recognises processes that enable comprehension and seeking out information that serves individual goals and values (Bell et al.,1984) and action appropriate in a particular environment, or for changing a part of the environment to suit specific goals or needs.

More recently researchers such as Gifford (2014) and Steg et al (2013) identify an additional challenge: the development of a theoretical framework that is accessible to non-designers as well as designers; that is, that is inviting in its everydayness; is easy to understand and use together. In elaborating, Steg et al (2013) confirm that in research on environmental behaviour the combined person-environment relationship has not been studied via what they term 'multilevel modelling' that incorporates emotions without losing rigour and structure (p. 311). As is described in the following chapter, these challenges have been the motivation and impetus for the thesis topic and the methodology of GT that recognises the value of knowledge developed from data grounded in context from the everyday experiences of non-designers and designers. As early as 1987, researchers such as Wicker (1987) were supporting grounded theory approaches. As stated: "Grounded theories of behavior settings should serve all of the functions that we generally expect of theory. They should provide explanation of events, allow us to make

predictions, provide an explicit perspective on phenomena and a sense of understanding of them, furnish a framework for assimilating already existing knowledge, stimulate and guide future research, and be useful in practical applications" (Wicker, 1987, p. 646).

In order to do further justice in this respect as well as to the experiential quality and the interpretive nature of qualitative research, the thesis study also adopts an Interpretive Phenomenological Analysis. Instead of using photographs preselected by the researcher, the research employs a process of photo-elicitation where the participants themselves take photographs. Where possible this is augmented by interviews with participants in the environment experienced by the participant. The following chapter provides detailed description and explanation of the process adopted to respond to the question: How do people make sense of buildings in the context of their everyday experience?

3 Research methodology

This chapter commences by describing the philosophical position and methodological perspectives underpinning the research undertaken in response to the question: What is architectural experience in the everyday context? In order to gain a qualitative in-depth understanding of individuals' experiences from their perspective, positioning the research in an interpretivist paradigm is argued as more appropriate than the positivist and critical theory paradigms. The interpretivist paradigm is also philosophically congruent with the research methodologies Grounded Theory (GT) and Interpretive Phenomenological Analysis (IPA), which are outlined in the second part of the chapter. This is followed by a description of the research approach and design comprising three stages of building engagement: as a pedestrian; as a visitor; and as an occupant. The chapter concludes by giving explicit attention to ethical issues and issues of research quality.

3.1 PHILOSOPHICAL POSITION

Before describing the key methodologies for this research, it is important to identify the epistemological and ontological position that orients the research (Drisko, 2005). While ontology relates to understanding *what*, epistemology is concerned with *what it means* (Gray, 2004). As indicated in the introduction to this chapter, people including researchers hold different philosophical views in terms of how they see themselves in relation to the world and how knowledge about our world is developed (Klarner, 2010). Such positions are more commonly referred to as paradigms. A broad categorisation that is applicable across disciplines consists of three paradigms: positivism (more recently referred to as postpostivism), critical theory, and interpretivism (Gephart, 1999).

Positivism is based on the assumption that we can discover the truth about human behaviour through scientifically and objectively controlled studies (Willis, 2007). As highlighted previously, research in environmental psychology has historically favoured a positivist position; a position that emphasises observation as the foundation for knowledge and uses various quantitative methods to determine the

truth or falsity of a study's findings (Derek, 2009). In positivism, any knowledge statement will be meaningless if it cannot be verified in experiments providing empirical evidence (Paley, 2008). As such positivism does not accord with a view of the world as socially constructed and having multiple realities (Paley, 2008). It is also more concerned with understanding the world as it is rather than in terms of what it could or should be from a social perspective.

Such a stance is catered more through critical philosophy with its focus on the influence of power relationships and associated issues to do with gender, race, and ethnicity. Research of this nature tends to be more dominant in the humanities and social sciences (Taylor, 2010). Critical theory is naturally reciprocal in that it explicitly recognises a link between philosophical theory and empirical implementation (Deranty, 2010). It focuses mainly on human action, interaction, and power relationships between individual and groups of individuals (Willis, 2007). Critical theory is directed towards engaging problems and possibilities for liberation, and as mentioned before it is not so much concerned with what things are, but rather how things should be (Bronner, 2011). With a belief in the power of relationship, critical research aims to discover hidden negative relationships, producing awareness of those relationships, and exploring ways in which they can be addressed (Willis, 2007). Although this paradigm accepts that there are relationships and interactions among people and external factors, such as social and cultural factors, it mainly focuses on the errors of those relationships and how such errors can be rectified.

As is evident neither positivism nor critical theory is philosophically compatible with the intent of this thesis study. It is, as will be explained, more aligned with an interpretivist position. The distinction of this paradigm comes with the belief that people are meaning-makers (Hustler & Glodbart, 2005). This paradigm presumes that what we comprehend is what we have constructed in our mind (White, 2011). Interpretivism assumes that meaning and truth are created in our internal interaction with the external world, and we form our own meaning different from others, even relating to same events or phenomenon (Gray, 2004; Crotty, 1998; Broido & Manning, 2002). This paradigm focuses on the importance of understanding the meaning between people and society, especially in how people make sense of their world (Sheppard, 2006; Willis, 2007; Bakker, 2010). It mainly

emphasises the importance of humans in their meaning making of their world privileging everyday accounts of life (Bakker, 2010; Blaikie, 2004). In other words, it aims for a deep insight into the world of lived experience from people's point of view (Antonio, 2009). The goal of Interpretivism as reflected in transactional research in environmental psychology is to understand such situations in context rather than formulating a universal rule of the situation (Willis, 2007). Further it aims for explanatory as opposed to just a descriptive understanding (Willis, 2007; Williams, 2003). The key approach for interpretivist research is field research relying largely on in-depth or focused interviews. Researchers are considered as co-producers of the research findings. In this respect, there is strong alignment with phenomenology particularly existential and hermeneutic phenomenology, the latter recognising the influence of language and context on the nature of meaning. There is also, as argued in this thesis, opportunity for these latter phenomenological approaches to exploit transactional research in environmental psychology in deeper and more profound ways.

As suggested previously, different research questions reflect different philosophical orientations. What is most crucial in research is alignment of the philosophical nature of the research question with how the question will be addressed methodologically in the research. In this research, the main concern is with understanding the qualities of the lived experience of buildings and how this might inform the development of a holistic theoretical framework for architectural practice and education. Such concern is essentially qualitative. In contrast to more 'objective' approaches, qualitative research is a distinctive approach focusing on the richness of reflective information derived first hand from people. Qualitative research, in the other words, aims to discover how people experience their world relying for the most part on verbatim data obtained from the research participants (Hammersley, 2012). Qualitative approaches are concerned with eliciting the meaning of phenomena through a process of categorisation (Frank, 1986). Qualitative methods tend to focus on individuals rather than the population (Britten & Fisher, 1993). The nature of the qualitative research conducted for this study is described in detail in the following methodology section on Grounded Theory (GT) and Interpretive Phenomenological Analysis (IPA).

3.2 METHODOLOGY

As the literature review revealed, various research approaches have been adopted in environmental psychology to understand interaction between people and the environment. Despite this very broad area of interest, studies tend to focus exclusively on specific elements of person-environment interaction in controlled experimental situations. The use of Grounded Theory to underpin this research represents an attempt to understand person-environment interaction more contextually and to inform the development of a broader more holistic conceptual framework. The additional inclusion of Interpretative Phenomenological Analysis enables a finer-grain existential and hermeneutic exploration of sense-making in relation to buildings.

3.2.1 Grounded theory

It has been nearly 50 years since Grounded Theory (GT) was launched by Glaser and Strauss in 1967. Since then, GT has proven to be a popular approach particularly in the social sciences (Woods, 2003). GT is an inductive process aiming to discover the nature of meaning, as people construct it in specific situations (Olson, 2008). It comprises two main parts, 1) systematic methodological strategies which consist of a set of methods in conducting research and in analysing inductive data, and 2) the completed theoretical analysis of data (Bryant & Charmaz, 2007). It emphasises new discoveries and the generation of theory where there is little current knowledge (Goulding, 1999). While there are arguments as to whether the researcher in GT needs to conduct a literature review or not, increasingly the literature review is considered significant for enhancing theoretical sensitivity during data analysis and theoretical coding (Birks & Mills, 2011). In terms of theory generation, this happens through iterative processes of data gathering, coding, synthesizing, categorizing, and integrating concepts (Bryant & Charmaz, 2007). Reflexivity is central to this process. Reflexivity is an active process of systematically developing insight for the researcher in order to guide further action (Birks & Mills, 2011). One of its distinguishing features is constant comparison involving data collection, coding, and analysis informed by memoing and theoretical sampling (Zarif, 2013).

In brief, to conduct a GT study, the research starts with a topic of interest, followed by questioning which allows participants to freely express their

understanding of the experienced phenomenon (Olson, 2008). In GT research, data might be required to be re-examined or for other methodological protocols to be developed for generating, coding, and analysing additional data (O'Leary, 2004). The theory evolves through progressive iterations of data collection and analysis (Goulding, 1999). Central to this is the practice of memoing (Birks & Mills, 2011). Memoing in GT helps the researcher to record thoughts, feelings, insights and ideas in relation to the research topic while the analysis is in progress facilitating transparency and rigour.

According to GT, an individual's world is understood through the individual's particular perspective, making participants' interviews essential sources of the data (Gasson, 2012; Birks & Mills, 2011). Apart from the importance of data retrieved from participants, theoretical sampling also plays an important role in providing clues and new insights. Theoretical sampling allows the emerging concept to be considered from different points of view (Strauss, 1987). In any stage of the analysis, theoretical sampling enables researchers to confirm, clarify, and verify categories (Charmaz, 2006).

Once some data have been collected analysis can commence employing a coding process. Initial coding as open coding attempts to achieve general understanding of the nature of the data and is concerned with identifying, naming, categorizing, and describing emerging phenomena within textual data. Normally, open coding is undertaken by analysing the transcription line-by-line (Birks & Mills, 2011). At the completion of open coding an axial coding process is implemented. This involves a more abstract refined process of categorisation across data sets (Dunican, 2006). The next step in the coding process is selective coding. It is where a main or core category is selected from all other relevant categories. At this point where the core category is determined, theoretical sampling can further help to saturate and enrich the category (Birks & Mills, 2011). Here, the researcher reaches the advanced analysis stage, and theory is finally generated.

In this research, the general methodology involves: 1) letting data speak for themselves facilitated by the use of participant-produced-photographs, 2) systematic analysis and interpretation involving coding as previously described, and 3) the

inclusion of a finer grain phenomenological methodological lens in the form of Interpretive Phenomenological Analysis (IPA). Before describing IPA in detail, the following discussion provides background information in relation to phenomenology, existential phenomenology and hermeneutics.

3.2.2 Phenomenology

As indicated previously, the thesis employs Interpretive Phenomenological Analysis (IPA) as an additional lens to further expose the experiential quality of the relationship between the participants and the buildings that are part of their everyday experience. Before describing IPA in detail, this section provides some initial contextual information about phenomenology. Overall, phenomenology is a philosophical attitude and research approach (Flood, 2010). It is wildly known as the study of lived experience (Knaack, 1984; Pollio, Henley & Thompson, 1997; Shah, 2009). Meanings of such phenomena are created by the world surrounding us, at the same time as we are creating our world with our backgrounds and experiences (Laverty, 2003). From a phenomenological perspective, people are not viewed as separate from the world, but as being-in-the-world (Keen, 1975; Knaack, 1984; Finlay, 2011). Phenomenology research sets out to describe rather than prove or disprove hypotheses (Husserl, 1970; Kumar, 2012). It intends to identify and understand the subjective meaning of human lived-experience, and provides opportunities for both researchers and research subjects to discover meaning grounded in the world they in which they live (Keen, 1975; Simpson, 2007; Finlay, 2011).

Basically, the aim of phenomenology is to capture description of lived experience of a phenomenon from individuals' perspectives in order to reveal the essential quality of such a phenomenon (Priest, 2002; Finlay, 2011). In the main, phenomenology does not aim to classify behaviour or generate theory, but to unveil the nature of human being (Finlay, 2011). In the other words, phenomenology focuses on processes of understanding phenomena rather than seeking to control or predict phenomenon. It transforms instances of the lived world through in-depth analysis into textual description (Finlay, 2011).

There are, however, different types of phenomenological research. A very basic categorisation views it as either descriptive (eidetic) or hermeneutic (Lopez & Willis, 2004). Edmund Husserl, founder of a descriptive type known as transcendental phenomenology, believed in the concept of 'intentionality', where people enter the material world through their consciousness and gain knowledge from experience through their consciousness (Priest, 2002). It is the process where human thought is brought to connect to an object or an event within a particular experience (Holloway & Wheeler, 1996). Intentionality is considered as a key leading to the experience of things appearing to our attention as things in our consciousness. This intentionality focuses on a correlation between "what is experienced (noema, or noematic correlated) and the way it is experienced (noesis, or noetic correlate)" (Langdridge, 2007, p.13-15). It is believed that a new understanding of phenomena will be unveiled if people review their immediate experience while also 'bracketing' preconceptions and biases, in order to let the phenomena review themselves (Gray, 2004). Bracketing is placing natural attitudes in 'brackets', temporarily placing those attitudes away from attention (Priest, 2002).

In the early version of Husserl's phenomenology, transcendental phenomenology insists that in order to understand the phenomenon, the subject should be considered no longer a part of the correlation of the noema and noematic. It is believed that people, as experiencers, can step outside the correlation between noema and noesis in order to understand flawlessly the essence of experience, and this essence becomes universal to all who share the same experience. This describes the concept of the 'God view', a stepping outside the existence of the phenomenon.

Transcendental phenomenology then concerns how objects are constituted in pure consciousness without any relationship to the world in which people live (Wojnar & Swanson, 2007). Husserlian researchers believe that the impact of researcher biases and preconceptions need to be neutralized (Lopez & Willis, 2004; Hermberg, 2006). It takes a firm stand believing that the essence of the phenomenon, considered as its true nature, is objective and independent from a context (Knaack, 1984). It requires that the researcher assume as described before a phenomenological attitude, stepping aside from their natural attitude, regarding everything from the consciousness of the subjects in the study (Giorgi, 2009). There are three processes

to accomplish bracketing: 1) exemplary intuition; 2) imaginative variation; and 3) synthesis (Laverty, 2003). In contrast to this more traditional very restrictive understanding of bracketing, there is a more contemporary version that acknowledges the existence of bias by encouraging researchers to engage with the phenomenon using an open mind (Finlay, 2011).

3.2.3 Existential phenomenology

There were arguments among thinkers regarding Husserl's transcendental phenomenology and the aim to create a purely descriptive science by linking phenomenology with the transcendental idealism. For one thing, it had limited potential in exploring phenomena as lived. The influence of idealism forced transcendental phenomenology to focus on cognition and to step away from social and historical existence (Compton, 1997). In contrast, existential phenomenology focuses on the contingency of existence and the creation of meaning through being in the lived world. Existential phenomenology developed through attempts to describe bodily, interpersonal, and historical contingencies of people's lived world. Some of existential approaches focus on inter-subjectivity; being one's own body in the presence of other existents and influences of the pre-reflective world of people's everyday consciousness (Compton, 1997). In the other words, existential phenomenology attempts to distinguish the nature of individual's experiences of being in the world and being oneself (Nuttall, 2006). Existential phenomenology tries to explain human experiences in terms of finitude and freedom stances. Existential phenomenology believes in 'the constitution of relatedness between self and world' which forms all experience' (Warsop, 2009). This type of feeling allows people to make sense of reality fostering sense of belonging in the world.

3.2.4 Existential phenomenology and hermeneutics

In everyday life, when people experience things or events, it is inevitable that people's experiences are influenced by preconceived ideas or biases. Individuals, including researchers, cannot be separated from context, the world they inhabit. Many phenomenologists argue that actually researchers unavoidably involve themselves with the research with pre-knowledge (Finlay, 2011). They also argue that bracketing, the concept of awareness of preconception, does not mean that the researcher does not have to read any prior relevant research or literature, but it is

recommended that the researcher should be aware of the potential for theoretical entrapment. Heidegger used the term 'being-in-the-world' to emphasize that an individual cannot disconnect him/herself from the world (Lopez & Willis, 2004; Ginev, 2006). Martin Heidegger's version of phenomenology, existential phenomenology insists that phenomenological investigation must not be limited to only pure consciousness, but it is necessary to involve the existence of people within the whole context (Edie, 1964). Heidegger argued that the correlation between noema and noesis is impossible to be separated from people being in the world, because a person's experience is "grounded in their being relating to the everyday environment in which they live" (Langdridge, 2007, p. 16). Individuals also experience reality through language, and it is impossible to shed such past experiences when we experience the world (Byrne, 2001). The way people make meaning of such experience is based on past experiences, situated in an historical and sociocultural context (Connelly, 2010; Langdridge, 2007).

Existential phenomenology advocates that the only possible way to obtain an authentic understanding of a phenomenon lies in the reflexive analysis of that phenomenon through people's activities (Edie, 1964). In the existential view, existence cannot be understood objectively and separately from people's concrete circumstances. Existence can be revealed through individuals' reflections of lived-experience (Hein & Austin, 2001). In the other words, the existential phenomenological approach interprets existence through people's experiences of being-in-the world. And the only way that experiences can be understood after they have occurred is through 'interpretation', not simply through description as is the belief in transcendental phenomenology (Laverty, 2003; Langdridge, 2007). As such, existential phenomenology relies on interpretative reflection to derive meanings embedded in people's experience of their lived world. Four key concepts of existential phenomenology concern "1) the human experience, 2) meaning and the way meaning arises in human experience, 3) description and relationship of experimental features, and 4) the role of researcher in the co-construction of the investigated topic" (Langdridge, 2007, p. 9).

In phenomenology, recognition of context and the role of interpretation is characteristic of what is termed hermeneutic phenomenology. In hermeneutic

phenomenology, the researcher explicitly attends to the process of interpretation including how people make sense of their own experiences (Wojnar & Swanson, 2007; Laverty, 2003). This approach tries to connect meanings as reveal by the participants to those as revealed by the researcher (Sharkey, 2001). While traditional phenomenological research argues that preconception and prejudice be kept away, in hermeneutic research preconceived notions are held not to impede the researcher's interpretation if the process is transparent and systematic. In contrast, they are held to help in analysing textual data producing a more comprehensive understanding (Byrne, 2001; Sharkey, 2001). In effect a 'double hermeneutic' operates. That is, while participants are making sense of a particular 'X' the researcher is making sense of participants' sense-making of 'X' (Finlay, 2011).

The purpose of data gathering in existential phenomenological research is to gain 'rich description of a phenomenon' (Finlay, 2011). This does not necessarily involve large numbers of participants but rather what is necessary to achieve saturation, judged to be reached when no new meanings emerge (Crist & Tanner, 2003; Higginbottom, 2004). Two to ten participants are sufficient to reach theoretical saturation (Higginbottom, 2004). Potential participants who have lived experience that connects to the research question and who are able to describe their experiences are recruited (Donalek, 2004; Morse, 2004). At this point, normally in-depth interviews are undertaken to collect data in the form of participants' expressions and explanations of their experiences of the phenomenon (Starks & Brown, 2007; Lester, 1999). Verbal or/and photographic data from research participants experiencing a particular phenomenon is rich with complex meaning. Well-organized, simplified, and systematic analysis is required (Sirowy, 2010). The analysis typically starts with reading through entire interview transcriptions to obtain a holistic sense of the phenomenon. The researcher then identifies significant responses from individuals to be analysed in terms of their meaning. The outcomes of this process are then brought together to produce a meticulous description of the phenomenon (Knaack, 1984).

3.2.5 Interpretative Phenomenological Analysis (IPA)

Methodologically, IPA is based on hermeneutic phenomenology and theories of interpretation (Smith & Osborn, 2008). IPA is used to discover how people (participants of the research) make sense of their world (such as a situation or

experience) (Smith & Osborn, 2008; Pringle, Drummond, McLafferty & Hendry, 2011). With the IPA approach, researchers are concerned with ordinary everyday experiences, which are made significant when reflected on as a part of a situation. In IPA research, it is believed that all data retrieved from participants can be analysed to reveal something of their sense making in relation to a particular phenomenon (Smith, Flowers & Larkin, 2009). IPA is a dynamic approach in which researchers actively connect with but do not intervene with the participants' world. That is, the two-stage interpretation (or double hermeneutic) process is adopted (Smith & Osborn, 2008; Pringle, et al, 2011). In simple words, while participants are making sense of the experience, the researchers are trying to make sense of the participants' trying to make sense of their experiences (Smith & Osborn, 2008). Without involvement of the researcher in the analysis, accounts of experience will be very limited (Pringle, et al, 2011). While generalization is not the purpose of an idiographic study like IPA, commonalities are sought across the data (Pringle, et al, 2011).

In IPA, the research commences with a primary research question that has minimum preconception or prior theoretical in-put (Smith, Flowers & Larkin, 2009). The aim of IPA is to retrieve rich data and subject it to detailed analysis case-by-case. With such a focussed thorough process it is considered reasonable to have a small participant pool purposively selected (Smith & Osborn, 2008). Three to six participants can constitute a reasonable sample in IPA if the pool is of a homogeneous nature. Data collection in IPA focuses on data that are likely to elicit detailed experience. Therefore, in-depth interview, a conversation with purpose, is normally adopted to derive participants' information. Participants and researchers reciprocally engage in the interview with the initial question with the inquiry developing to allow contingent interesting areas to emerge. The researcher's role is to encourage and guide participants through the interview. Unanticipated stories are an asset likely to reveal unanticipated outcomes (Smith, Flowers & Larkin, 2009). Interview data are then transcribed verbatim.

The first stage of IPA analysis involves reading and re-reading to immerse and familiarise the researcher with the data. Moreover, the rereading process allows the researcher to develop further suitable interview questions and interview strategies.

The next stage focuses more on details and requires more time. This stage is described as free textual analysis focussing more on content and language. In summary, this analytical approach involves: 1) descriptive comments in relation to the content of participants' responses, 2) linguistic comments which focus on the use of language, expression, repetition, degree of fluency, and metaphor, and 3) conceptual comments involving engaging with data at a conceptual interpretive level, as well as with feelings and emotions (Smith, Flowers & Larkin, 2009). Essentially, the task is to reduce detail while keeping the essential complexity of meaning, match or group relevant connections and patterns to facilitate the emergence of themes which when considered collectively across participants may produce super-ordinate themes. In a large group of participants, looking for reoccurrences among participants is a vital step. However, there is no rule to identify reoccurrence. The final step is to identify the set of criteria for the recurrence themes (Smith, Flowers & Larkin, 2009).

IPA has been adopted in several studies in psychological research initially in health psychology. For example, Snelgrove and Liossi (2009) adopted IPA in the study of living with chronic low back pain. The main objective of their study was to extend existing knowledge by providing a detailed and contextualized understanding for participants with long-standing experiences of chronic pain. Schweitzer, Griffiths and Yates (2011) studied childhood experiences of cancer from an IPA viewpoint. Children's experiences of being patients with a diagnosis of cancer were explained. The results revealed five significant themes: the experience of illness, the upside of being sick, refocusing on what is important, acquiring a new perspective and the experience of returning to well-being. IPA has also been used in applied social and clinical psychology. For example, Young (2009) studied micro-level appreciation of facilitative and inhibitory factors among Welsh nurse prescribers. IPA in Young's study was used to explore personal perception and sense making of using nurse prescriptions effectively. Johnson (2002) explored women's experience of care at a specialised miscarriage unit using an IPA approach. Data were collected with a semi-structured interview protocol. The protocol had a simple temporal order in which participants were asked to elucidate their experience of miscarriage from when they first experienced symptoms of miscarriage, through to their experiences of aftercare. Further in public health, especially in field of nutrition, Fade (2004) provides

examples of using IPA in eating behaviour research from the perspective of a group of African Caribbean teenagers. At the time of this study, and recognising that IPA has a very short history, the review of literature found no examples of the use of IPA for research explicitly located in the fields of environmental or design psychology. It also found no examples of the use of photo-elicitation in IPA studies.

3.2.6 Photo elicitation

Photo elicitation has been used in social science research in such fields as psychology, education, and sociology (Loeffler, 2004). It originated in 1950s developed by John Collier in his research to examine how families adapted to their residence among ethnically different people (Harper, 2002). To retrieve psychological qualitative information from participants, Collier found that there was difficulty in obtaining information by survey or interview. Collier found that using photographs made explicit participants' hidden memory and reduced researcher predominance. Consciously, the human brain engages with visual information more deeply than with verbal information (Harper, 2002).

In photo elicitation, photographs are used in the research interview as the medium of communication between the researcher and the participants. In the other words, the photographs are inserted into the interview as a tool to gain information from the participant. Combining photographs with in-depth interview leads the researcher to an alternative effective way to retrieve information from the participant (Ortega-Alcázar & Dyck, 2012). In photo elicitation, the participant adopts a leader role in the interview. In education research, a study using photo interview with children showed that photo interview provided an effective way to obtain rich information from children (Cappello, 2005). In inductive research participant-produced-photographs used as stimuli in the interview is a reasonable responsive approach (Clark-lbaNez, 2004). Photographs used in photo elicitation are not always selected or generated by the researcher (Clark-lbaNez, 2004; Cappello, 2005; Hinthorne, 2012). Photo-feedback, photo-self-elicitation, photo-interviewing, and photo-essays can also involve participants taking their own photographs to be used during interviewing (Cappello, 2005). Cordle and Vera (2001) introduced participant-produced-photographs in their research and found that for participants who have no skill in taking photographs, the photographs still provided for a rich

source of information. Because this research aims to avoid forced data and obtain unadulterated information from participants as much as possible, a participant-produced-photograph (PPP) approach is considered a crucial approach. In the thesis study, participants were asked to take photographs by themselves. High quality photography was not expected from participants; only what was sufficient for achieving richness and representativeness of information.

3.3 RESEARCH APPROACH

This section describes the overall approach in implementing the research (Figure 3.1). In addition to outlining the stages of the research, attention is also given to participant selection, data collection and data analysis.

3.3.1 Research Design

To reiterate, this research was primarily prompted by a personal need to further understand how people experience buildings that are part of their everyday routine and how such understanding could contribute to a holistic theoretical framework. At this point, an initial literature review showed that although there was research in environmental psychology and person-environment research concerned with environmental appreciation including buildings and the built environment, the research were generally very selective and failed to focus on or provide a holistic experiential understanding as developed by the general community through everyday engagement. Furthermore, most research employed experimental approaches detached from the participants' lived experience and the actual buildings that were part of this experience. In acknowledging the need for a grounded approach aimed at theory generation, it was decided to use Grounded Theory (GT) methodology. In accordance with this evolutionary approach the research commenced very tentatively with a pilot stage as depicted graphically in Figure 3.1, which also conveys the other three main stages of the research: walking on the street, entering a building,

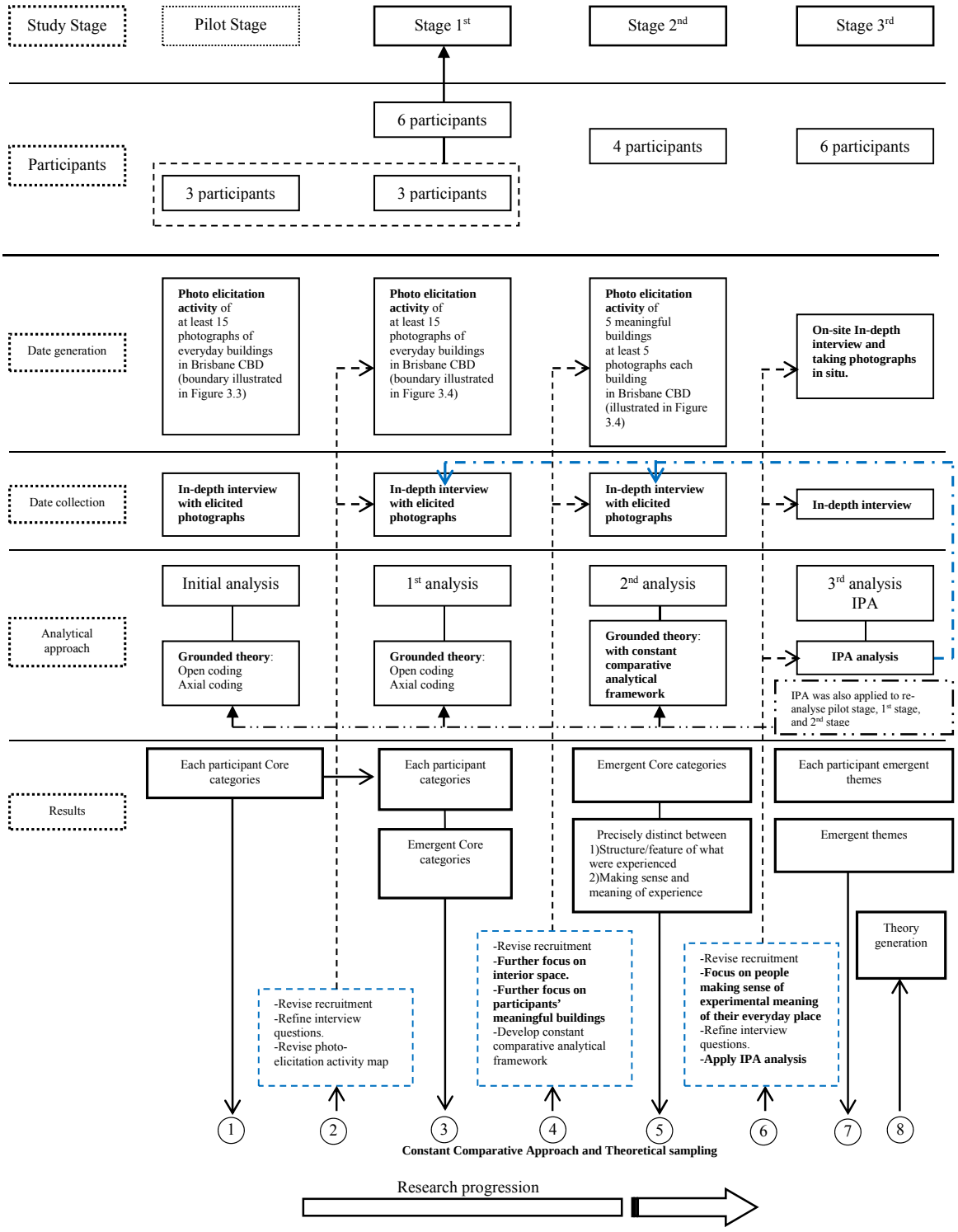

Figure 3.1: Progression of study from stage one, two, and three

occupying a building. In the first case, stage one, 'walking on the street', participants were invited to identify buildings that they usually passed and that they liked and disliked. In the second case, stage two, the emphasis was on the experience of entering buildings of their choice. In stage three, the third case, the interest was in the experience of occupation. In these three case stages, semi-structured interviews with photo-elicitation (specifically PPP) were adopted for generating data for GT and IPA analysis.

Before the pilot stage commenced, it was necessary to apply for and receive ethical clearance. While the nature of the research was not significantly invasive, as we are reminded engaging with people at whatever level is never risk free (Wiles, 2012). As such, the researcher needs to be informed and set in place procedures that are ethically appropriate (Oliver & Eales, 2008). Here, the research was guided by the university's ethics requirements regarding privacy and confidentiality. For data confidentiality, a data collection and data storage plan was developed. Interview data, both audio and visual formats, as well as participant-produced-photographs were stored in a digital format on the university server with a secure data encryption system. Participants' personal information such as name, address, and contact details was kept secure and anonymous for the reporting process. In terms of the participant-produced-photographic process, participants were informed to be aware of privacy regulations and ensure that no images they took would identify individuals. It was also suggested that they carry the approved ethics documentation with them when undertaking the photography activity.

Participants were asked to sign a consent form before the interview was conducted. In December 2009, the research was granted ethical clearance by Queensland University of Technology Research Ethics Committee (QUT Ethics Approval Number: 0900001393). The ethical clearance considered that there were no potential risks beyond everyday living, so there was no need to conduct a risk management plan. Relevant ethics documentation is provided in Appendix A of this thesis.

In terms of the pilot stage, this was viewed as a testing and training ground for developing researcher skill in qualitative interviewing and analysis, and for further

refining participant selection and recruitment and the implementation of methodologies and methods for data collection and analysis. Given the potential of this research to inform architecture in the urban context, it was decided to restrict the buildings potentially experienced by participants to the Brisbane CBD as highlighted in Figure 3.2.

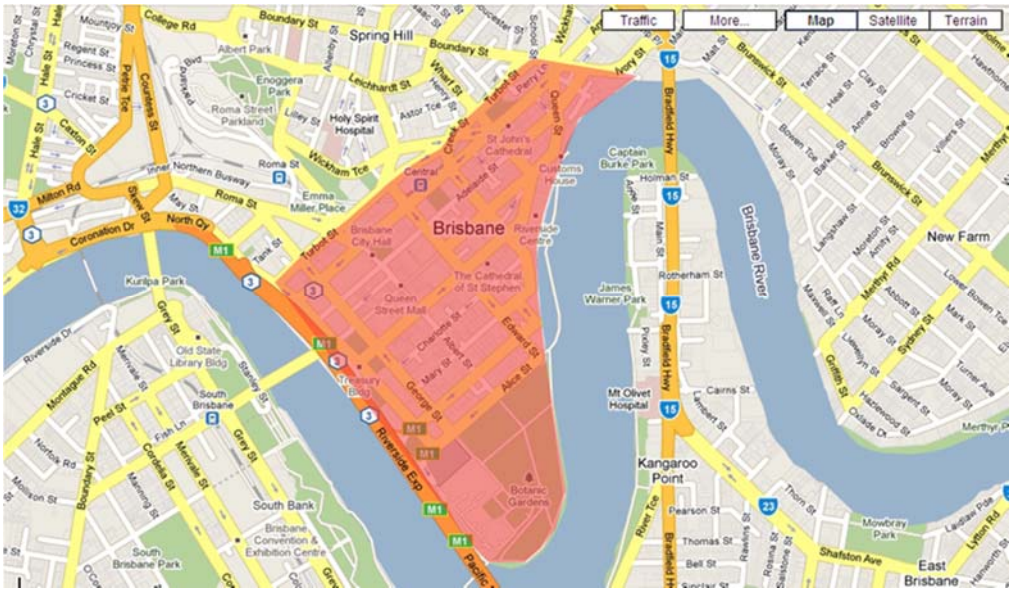

Figure 3.2 Context for photo elicitation activity for pilot stage

Due to the research's interest in 'everyday' understanding, the issue of familiarity was given explicit attention with a decision made to only include participants who had been in Brisbane for at least three months and who had varied backgrounds and experiences. For the pilot stage, three participants were asked to take at least 15 photographs of buildings they liked and disliked in the Brisbane CBD demarcated as shown in Figure 3.2. The photographs were then used as the basis for semi-structured interviews. The interviews were transcribed and analysed using open and axial coding GT techniques. Note that at this stage the need to use IPA was not yet apparent. A review of the pilot stage confirmed the need to expand the number and diversity of the participant group and, in response to participant feedback, to extend the CBD boundary for the purpose of the photo elicitation activity. The revised map is shown in Figure 3.3. It was also decided that prospective participants would be asked to clearly classify a set of 'like' and 'dislike' photographs by placing each category (like/dislike) within different folders. In addition, interview questions

were reconsidered and refined so as to facilitate more fluent conversation. Questions used in the interviews have been sequentially developed through stages of the research.

Figure 3.3 Expanded CBD context for Stage 1.

Following the pilot stage, *stage one* ('walking on the street') was implemented. For this stage, the participant number was expanded to six interviews. Data derived from participants' interviews were transcribed and analysed as for the pilot stage. Core categories were generated, and again, at this point constant comparative analysis introduced theoretical sampling to consolidate emergent core categories.

Although emergent categories in stage one revealed new insights in terms of the research questions, there was concern that these had not been fully saturated highlighting the need for additional participants and to open the relationship to the building to include inside as well as outside. The various recruitment strategies used in stage one were also used for stage two with four additional people indicating their interest to participate. For *stage two* ('visiting the building') four participants who volunteered to be involved were asked to select only five buildings that had specific meaning to them as part of their everyday activity and to take photographs of the interior of the selected buildings as well as the exterior. To generate data from stage two, interview and photo-elicitation (PPP) remained key methods.

In stage two, data were analysed using the same coding process as for the previous stages with the addition of constant comparative analysis involving categories form the previous stages. While the cross-studies analysis unveiled emergent core categories emphasising the features of the buildings that were significant to the participants, they were limited in their capacity to reveal the experiential and relational/contextual nature of the participants' engagement with buildings. This prompted the introduction of IPA and its use in reanalysing data from stage one and two. It also prompted a third stage involving occupation and place.

For *stage three* ('occupying a building'), a recently constructed Ecoscience building was selected as a case of (work) occupation. It was chosen for two reasons: it accommodated a diverse group people, researchers, technicians, administrative staff; and previous involvement with the precinct facilitated access for the researcher. In this case, interviews were conducted on site at a place chosen by the participant. Six people volunteered to participate.

To further highlight, the design of each stage, from passing-by buildings to entering-buildings and occupying-buildings, was informed by the prior stage. As indicated, IPA was eventually chosen and used to analyse data merged as an integrated whole from the three stages in order to afford a more multi-dimensional (holistic) understanding of everyday architectural experience. Together the three stages and the complementary use of GT and IPA produced sufficient data to develop the conceptual framework presented in the findings chapter. In the next two sections, further information is provided regarding participation recruitment and selection as well as data collection and analysis.

3.3.2 Participant recruitment and selection

There were sixteen people who volunteered to participate in the research: 1) six participants in stage one—"Walking on the Street", 2) four participants in stage two—"Visiting the building", and 3) six participants in stage three—"Occupying a building".

To recruit participants for the pilot stage and stage one, flyers inviting participation in the research were circulated in different ways, for example, as a

poster (Appendix D), on public notice boards, an advertisement in a local newspaper (Figure 3.4), and as an email sent through the Queensland University of Technology's e-mail networks. However, in all only three people responded and signed the research consent form before the interviews were conducted (Appendix A). The ethics application process was described previously.

Figure 3.4: Participant recruitment in the local newspaper

The pilot stage involved three people, P-P1, P-P2, P-P3. The first participant (P-P1), a female, aged 43 years, was a postgraduate science student, having an educational background in statistics. She had lived in Brisbane for more than 5 years. She was born in Sydney, and moved to Melbourne to work. Finally, she moved to Brisbane to continue her education. P-P1 mentioned that the reason she was interested to participate was that photography was her hobby, and she had a personal

interest in capturing the character of different cities. The interview, which took about an hour, was held in her office.

The second participant (P-P2), a male age 40 years old, was an international student from Saudi-Arabia and had an educational background in architecture. He had been a lecturer in school of architecture in his country for at least 10 years. He had been studying and living in Brisbane for 3 years. A set of photographs he took in response to directions outlined for participants were sent to me via e-mail in preparation for the interview conducted in his workspace and which took approximately 45 minutes.

The third participant (P-P3), a female age 28 years old, was a postgraduate student in the creative arts area. She had lived in Brisbane for her whole life with her family. She had worked in Brisbane CBD before continued her study. She also had personal interest in historic buildings in Brisbane. P-P3 was also personally interested in photography, but not at a professional level submitted her photographs to me via email. The interview was conducted in my office, taking about 30-35 minutes.

In the next stage of the research, stage one, a new round of recruitment added another three participants to the previous three participants. In terms of the additional participants, participant 4 (1-P4) was a female age 27 years old. She had been in Brisbane for one and a half year before the interview. She also spent most of her free time in Brisbane CBD while her husband was studying. She had an educational background in business administration. The interview was undertaken at her house and took about one hour.

Participant 5 (1-P5), a female age 34, was born in Scotland. She moved to Australia 15 years ago and was married to an Australian. She had been living and working in Brisbane for 10 years. She had an educational background in advertising and public relations. Normally, she used public transport to get to her office in the city, and seldom used her car. With her route of walking from the bus station to her office, she was very familiar with CBD urban context. The interview was held at her house taking around 45 minutes.

Participant 6 (1-P6), a female age 30, was a postgraduate business student. She was born in a small town in northern Queensland where she lived with her family. She had moved to Brisbane where she has been working and studying for the last 6 years, going back to visit her family at least twice a year. Her workplace was located just next to Brisbane CBD. She would walk from there to the university located in the Brisbane CBD. The interview was conducted in my office and took about one hour.

As previously indicated, although emergent categories in stage one revealed new insights in terms of the research questions, there was concerns that these had not been fully saturated highlighting the need for additional participants and from the participants' responses to open the relationship to the building to include inside as well as outside. The various recruitment strategies, used in stage one, were also used for stage two with four additional people indicating their interest to participate.

Participant 1 (2-P1), a male age 35, was an international industrial design student from Indonesia. He had been living in Brisbane next to the CBD for 2 years and normally took public transport to go into the city. He was familiar with Brisbane CBD. The interview was held in his workspace and took around one hour.

Participant 2 (2-P2), a male age 32 years, was a postgraduate landscape architecture student. He was an international student from Turkey. He had been living in Brisbane for two years and normally travelled to university on his bike. The interview was conducted at university and took around 45 minutes.

Participant 3 (2-P3), a female aged 25 years, was a postgraduate student in business. She was an international student from China, had been living in South-East Brisbane for two years. The interview was undertaken at my office and lasted for about 45 minutes.

Participant 4 (2-P4), a female aged 32 years, was also a postgraduate student in business. She was an international student from Singapore, and had been living in Brisbane for 2 years. She normally passed through the CBD on her way to the

university. The interview was conducted at a coffee shop in Brisbane CBD taking around one and a half hours.

At this stage of the research and in line with GT and its goal to capture a range of perspectives, the participant profile revealed diversity in age, gender, culture, professional background, familiarity with Brisbane, mode of transport around the city. What was common to many of the participants was the fact they were students at either postgraduate or undergraduate levels. While IPA research generally advocates for a homogenous sample in order to study psychological variability within one particular type of group, the interest in this research on buildings in an urban context experienced by different groups suggested the need to have diversity as well as commonality.

To extend diversity and open up the potential to capture existential engagement with buildings, the next stage of the research involved people who were engaged with a building over a longer period of time such as while they were at work. This led to the selection of the Ecoscience building in a suburb of Brisbane. The precinct was designed to be a highly collaborative working environment comprising research and educational laboratories, insect houses, controlled environment rooms, greenhouses, and workshops. It occupies around 50,000 square metres and accommodates approximately 1,000 scientists from four state agencies and six science research divisions. This precinct is designed under the design concept of a new facility “without walls”, enhancing people knowledge exchange and sharing spaces and experience with others. The goal of collaborative engagement is reflected in the design of the building comprising three wings, oriented north-south and connected with internal multi-functional spaces and paths. Interior spaces are linked vertically and horizontally with atria, lifts and open staircases. Living hubs connect each floor acting as common areas encouraging staff to be more active and interactive. Courtyards are defined by external walkways and stairs. The three-wing buildings are separated by landscaped courtyards. The exterior façade is enveloped by a perforated aluminium veil providing soft filtered light.

For this stage, recruitment flyers were emailed to all staff who worked in the precinct. Six staff members from different departments replied and were interviewed on-site.

Participant 1 (3-P1), a male is an ecologist. He has worked at the precinct since it opened in 2010. He normally takes public transport to get to work. He spends most of his workday in his laboratory on the third level. He also has an outdoor laboratory located next to the precinct. The interview was undertaken in the foyer area of the precinct taking one and a half hour. After the interview, the participant took me on a tour of the areas where he spends most of his workday.

Participant 2 (3-P2), female, is an administrator. She had worked at the precinct for eight months at the time of the interview. She lives in the northwest of Brisbane, and takes the ferry to work. The interview was conducted in the foyer area of the precinct and took around one hour and twenty minutes.

Participant 3 (P3-Std3), female, is a librarian. She had been working in the building for 18 months at the time of the interview. Over the course of a week she spends two days in this building and three days in another building in the city. Her role in the precinct is helping and supporting research staff across the precinct providing books, literature, and other pieces of information. The interview was held in the library, and it took around one and a half hours. After the interview, she took me to look around several areas in which she spends most of workday.

Participant 4 (3-P4), male, is an administrator managing the precinct. He had been working at the precinct for two years. He takes two trains to get to the precinct. He spends most of the workday at the desk although he does have the chance to meet staff from different departments during his daily routine. The interview was conducted in the foyer area taking around one hour.

Participant 5 (3-P5), male, is the science leader in a particular area. He started his job at the precinct in 2011, one year before the interview. He generally takes a train to the precinct, and occasionally uses his car. He spends most of his day in his

own private office and sometimes outside the precinct for meetings. The interview was undertaken in his office in the building.

Participant 6 (3-P6), male, is the leader of a group of scientists. He has worked in this precinct since November, 2010. Normally, he takes two trains to the precinct, and it takes around 45 minutes. However, if he drives his car to work, it takes only 15 minutes. The interview was conducted in his office taking around one hour.

3.3.3 Data collection and analysis

After participants replied and indicated their willingness to be interviewed for the pilot stage, they were sent instructions for the photo elicitation activity, including the map (Figure 3.2) and the ethics information and consent form. An appointment for the interview was also made. Each participant was informed to freely choose a suitable place and time for the interview. Participants normally took at least two weeks to finish the photo elicitation activity. All participants sent participant-produced-photographs (PPP) via email. Photographs were prepared in a suitable format to be viewed on a computer screen during the interview. In the semi-structured interview, a set of questions was used to guide the discussion (Appendix B). The interview commenced with general questions regarding participants' backgrounds, such as educational background, socio-cultural background, and personal familiarity with Brisbane CBD. It then focused on the images of the buildings photographed by the participants using them as prompts to invite and support the participants is explaining why they had selected the buildings and what they meant to them. Interviews were audio recorded with the permission of the participant. At the end of the interview, participants were asked if they would be interested in a possible follow-up interview. The interview recordings were transcribed verbatim by the researcher with the images inserted where relevant (Figure 1 in Appendix F).

In the pilot stage, GT was adopted as the initial analytical process. Each transcription derived from participants' interview data was firstly read and re-read separately in order to allow the researcher to get familiar with data. Then, sequences of coding; open coding and axial coding, were applied (see excerpts in Figure 1, 2, 3

in Appendix F). Each participant's emergent categories were generated (Figure 4 and 5 in Appendix F).

In stage one, participants were asked to take participant-produced-photographs of buildings that they liked and disliked with at least 15 photographs of each category in Brisbane CBD as determined and illustrated in the activity map (Figure 3.3). Participants submitted participant-produced-photographs to the researcher via email, and were prepared in same way as for the pilot stage. The interviews were also conducted in the same way (Appendix B). Within the table format, original transcriptions were placed in the first row of the table along with participant-produced-photographs. In the second row, open coding was employed line-by-line enabling an 'overview approach' to the data (Birks & Mills, 2011). In open coding, the process focussed on three elements of the data, 1) descriptive comments; general descriptive content that participants used to explain their experiences (for example, rendered in red in second row of the table in Figure 6 in Appendix F), 2) linguistic comment; how participants use linguistic expression such as tone (positive and negative expression), repetition, and metaphor (for example, rendered in green in second row of the table in Figure 6 in Appendix F), 3) conceptual comment; abstract expression within participants' words such as words that refer to sense of openness (for example, rendered in blue in second row of the table in Figure 6 in Appendix F).

The outcome of open coding was further investigated using axial coding as shown in the third row to generate emergent categories. In the fourth row were located interpretative summaries involving descriptive comments of correlative interpretations from the third row needing further consideration. In the fifth row, the researcher's feelings, thoughts, and insights were written helping to map and maintain audit trails for analytical processes. Memoing considered as a contemporaneous record of events in the research assisted the researcher in tracking but also in helping to conceptualise the data (Birks & Mills, 2011). Additionally, data from the first three-participants (P-P1, 1P-P2, and 1P-P3) in pilot stage were also included in the analytical process of stage one (in stage one the first three-participant in pilot stage were renamed as 1-P1, 1-P2, and 1-P3). Eventually, categories emerged from each participant from 1-P1 to 1-P6 (Figure 7 in Appendix F) were brought into cross-participant analysis in order to generate the higher conceptual levels. Emergent

categories of each participant were explored in terms of similarity and difference to create emergent core categories (Figure 7 to 12 in Appendix F). These were then considered together to create core categories across participants (shown in Figure 13 and 15 in Appendix F)

In stage 2, participants were asked to freely take photographs of at least 5 buildings, including the interior space if possible, which were meaningful to them. The quality of photographs was of less concern than whether they enabled reflection by participants' of their experiences of those buildings within their familiar context. Participants were allowed to use any type of camera device, such as a professional camera, compact camera, or mobile-phone camera. In contrast to the stage one, the interview took a more open approach concerned more with the experiential features of the participants' experience of buildings inside and outside. As is allowed in GT, this stage used two conceptual approaches in environmental psychology to support the GT coding process and further understand the relationship between conceptual content and emotive content.

The approach by Nasar (1984, 1994, 1998) portrays physical elements in terms of abstract qualities and comprises three kinds of qualities: firstly, a formal quality, which concerns the design qualities such as complexity, simplicity, and order; secondly, symbolic quality of physical elements expressed as a style, such as classic, neo-classic, modern, and post-modern; lastly, schematic qualities which refer to typicality or goodness of the function of a particular building (Steg, et al 2013; Gifford, 2007). The second approach by Cassidy (1997) uses a cognitive schema, which links to people's memories. Exerpts of an analytical table from stage two involving constant comparative analytical frameworks (rendered with different colours) are shown in Figure 16 to Figure 19 in Appendix F. The original transcriptions were in the first row with participants-produced-photographs. In the second row, interview data were coded with analytical frameworks (rendered with different colours). The first three frameworks derived from Jack Nasar's approaches; 1) Formal, 2) Symbolic, and 3) Schematic. In the 4) fourth framework are schema derived from Tony Cassidy's. The other four analytical frameworks were developed from emergent categories in stage one 5) perceptual condition, considering conditions or situations in which participants perceived the context; 6) emotional

expression, concerning the way participants expressed their feelings and emotions in positive and negative expression; 7) the way of engaging information, focusing on the way people react with their perceived visual information such as comparing and referring currently perceived scenes with others and anticipating functions or meaning of buildings' elements; and 8) the other was for content that could be of additional concern derived from participants. Emergent categories from each participant were then generated. Eventually cross-participant comparison was conducted to reach the higher level of abstraction for emergent categories (shown in Figure 20 in Appendix F).

Despite the richness emerging in stage one and two the findings were still deemed to lack experiential depth. As such, the focus shifted in stage three to the inhabitation of a building and to the use of IPA. In stage three an in-depth interview technique was employed. As previously indicated interviews were conducted on site. Interview conversations were guided with questions (Appendix C). The participants chose the date and time of the interview that suited them. Interviews were recorded in audio and visual formats. After the interview, participants were asked if they would agree to show the researcher particular areas within the precinct of meaning to them. Some did and some did not agree. Data were transcribed and arranged in table format with photographs where relevant. In stage three, the analytical method focused on individuals' sense making of experiences and meaning. At this point, Interpretative Phenomenological Analysis (IPA) and the selected case proved to be helpful in drawing out meaning-making that reflected existential as well as functional, psychosocial and emotional engagement with buildings (Figure 21 to 26 in Appendix F). Emergent themes from participants were brought together in cross-participant analysis (Figure 27, 28, and 29 in Appendix F) in order to achieve the higher conceptual themes of the research.

Because of the effectiveness of the application of IPA as an analytical approach in stage three it was then used to reanalyse the data in the pilot stage, the first, and second stage of the research. This was considered appropriate without the need to interview again because both methodologies use similar approaches for data collection. Emergent themes from each of the three studies were generated and brought together through a constant comparative process to produce superordinate

themes and sub-themes. The process is captured in Figure 3.5 and resulting conceptual framework comprising the themes is described and illustrated with participant statements in the Findings chapter that follows this chapter.

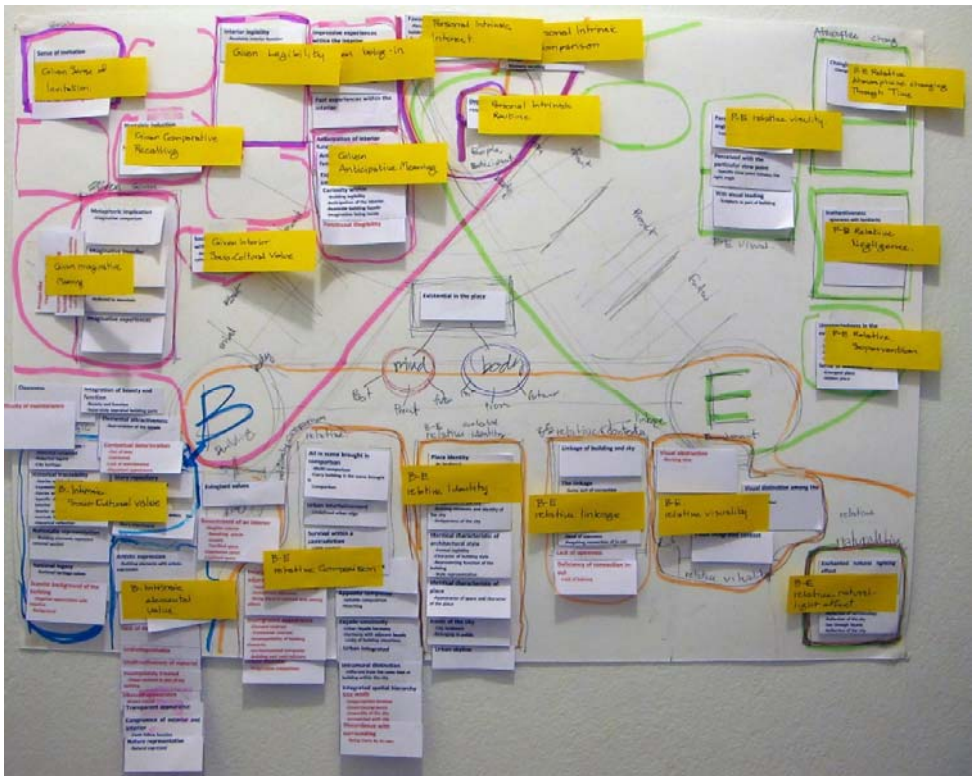

Figure 3.5: Cross-Stage Comparison for the emergence of super-ordinate themes

3.4 RESEARCH QUALITY

Quality in GT is evaluated according to the following criteria: 1) descriptive vividness - the explicit description of the site, participants, data collection, and researchers' thinking during research process; 2) methodological congruence - a precise statement of the methodological approach, including rigour in documentation, procedural rigour, ethical rigour, and auditability; 3) analytical preciseness - a clear outline of translation and transformation across several levels of abstraction; 4) obvious theoretical connectedness of developed theoretical schema; and 5) heuristic relevance; the results of a research must show a contribution to the field/s of the study (Burns, 1989). What is reflected in these criteria as presented by Burns (1989) is an assessment of quality based on the relevance of the outcome and the processes by which it was produced. Similarly, Birks and Mills (2011) categorise

their list of criteria according to: 1) researcher expertise evaluated in part by evidence of researcher familiarity with GT methods; 2) methodological congruence – for instance, whether the methodology is appropriate for the aims of the research; and 3) procedural precision with evidence of appropriate application of methods including memoing (pp. 153, 154).

In many respects, these criteria also align with those for IPA as proposed by Yardley (2000) for qualitative research and endorsed by Smith, Flowers and Larkin (2009) such as: 1) commitment and rigour involving as examples demonstration of attentiveness to the participant and to the appropriateness and thoroughness of the way in which analysis is undertaken; 2) transparency and coherence – relating to how clearly stages are described and exemplified as well as whether phenomenological and hermeneutics sensibilities are present; 3) impact and importance referring to how interesting, important and useful the research is. An additional criterion identified by Yardley (2000) not as evident in GT is that of: 4) sensitivity to context evidenced through such things as the choice of methodology and methods, how the researcher/participant relationship is managed and conducted ideographically with attention to the particular (pp. 180-183). An example in this research is the need particularize building engagement such through the different cases – walking on the street, visiting a building, occupying a building.

3.5 SUMMARY AND CONCLUSION

In response to the issues of quality and rigour just outlined, the research described in this chapter has been undertaken as faithfully as possible to GT and IPA. As explained and conveyed in Figure 3.6, the research commenced as a GT study but as revealed after two stages was found to be lacking in enabling greater existential engagement with the data. Indeed as pointed out by Smith, Flowers and Larkin (2009), GT was originally intended as a systematic guide to qualitative fieldwork and the development of theory or a general conceptual structure of a phenomenon. After stage two it was decided to adopt an integrated GT/IPA approach whereby the goal of a conceptual framework could be retained but developed in more textural and nuanced ways as is the nature of IPA.

4 Results

This study focused on exploring the lived experiences of three groups of individuals in relation to buildings they routinely pass by, enter into, or work in. In the first stage of this research (or case as these were eventually regarded as), '*walking on the street'*, six participants comprising the first participant group were asked to select buildings and photograph those buildings using up to 15 photographs, within a defined area of Brisbane CBD that they would normally pass through on the way to work or university and that they liked and disliked. The participants were then interviewed using the photographs as a vehicle for helping to explain why they had selected the buildings and what it is that they liked or disliked about the buildings. For the second stage of the study, '*visiting the building*', four participants were asked to select at least five buildings that had particular meaning to them and that they visited regularly. As in the first stage, the process involved photo elicitation and interviewing. In the last stage of the research '*occupying a building*', six participants working in various departments of a building located in a nearby science research precinct were interviewed regarding their experience of the building as a place to work. In this case, participants were able to point out particular aspects of the building to the interviewer.

In this chapter, the findings obtained by integrating a GT and IPA approach to analyse the interview data from the three case stages will be presented. As will be illustrated, several themes emerged through the analysis of the three cases. These themes were then further categorised according to four super-ordinate themes that together contribute to an overarching theme highlighting how people make sense of buildings 'in context'. In all, this theme and its super-ordinate themes represent the way in which people in the study collectively make sense of buildings that are part of their 'everyday' urbanscape experience. While the description of the themes and their illustration through the voices of the participants honours the individual voice and experience characteristic of IPA the aim of extending this to have meaning collectively reflects a GT concern for a broader conceptual outcome. As highlighted throughout this thesis, the study aims to respond to two aims associated with the

primary aim of explaining architectural experience in the everyday context. These are:

- To describe how people make sense of buildings as they pass by, visit and occupy them as part of their everyday activities.

- To consider the essential qualities of these descriptions and how they might comprise a whole in the form of a conceptual framework for informing and guiding further research as well as architectural/design practice and education.

Reflecting these aims, the findings that follow are presented in two sections. The first section (Section 4.1) presents the different ways in which buildings are made sense of in an everyday context. The different ways are categorised in line with IPA reporting as super-ordinate and sub-ordinate themes. The themes represent a synthesis of individual experiences and orientations (for example, buildings experienced when walking by, when entered, and when occupied). The second section (Section 4.2) presents the superordinate themes in relationship to each other and how this provides the grounds for the formulation of an overarching theoretical framework.

4.1 EVERYDAY BUILDING EXPERIENCE

As identified and qualified in this section, four super-ordinate themes emerged from analysis of data from the three stage cases. These are labelled as: (1) building in urban (text), (2) building in (text), (3) building in human (text), (4) and building in time (text); with the bracketed 'text' reflecting the study's hermeneutic quality. These themes represent the main facets of building experience. Associated with these in some instances are 'ordinate' and sub-themes revealing further the (con) textural quality of how people engage with buildings. Not all super-ordinate themes emerged from each participant in each stage, but rather super-ordinate themes were built from the integration of all three stages and participants' experiences across these stages. This approach reflects the aim of developing a framework that has sufficient abstraction to supersede individual and case experience.

4.1.1 Building in urban (text)

As conveyed through this super-ordinate theme, one of the major ways in which participants make sense of buildings in this study is in relation to some 'thing' else, in this case, in relation to aspects of nature or the built environment that are directly or indirectly connected to the building in some way.

4.1.1.1 Building in relation to nature

For many participants the relationship of the building to natural environments and elements such as a garden with plants, a lawn park or entrances and transitional area using natural materials was significant for their sense making about the building. This relationship of the building to nature was significant for participants in three senses: the building as experienced from the outside in relation to its natural surroundings; the building as experienced from the outside looking inside the building; and the building experienced from the inside in terms of the participant's relationship to the outside.

Outside to outside

When asked what interests the participant about the building, she replies: "I think the natural environment around the building", the connection of which she goes on to imply is facilitated by the veranda articulation of the façade and its slightly protruding centrally placed entry.

In the following statement the connection to nature is expressed texturally through façade detailing as in Figure 4.1 and the following statement:

"I do like this façade. It's unique. It looks like we can climb up an artificial mountain"

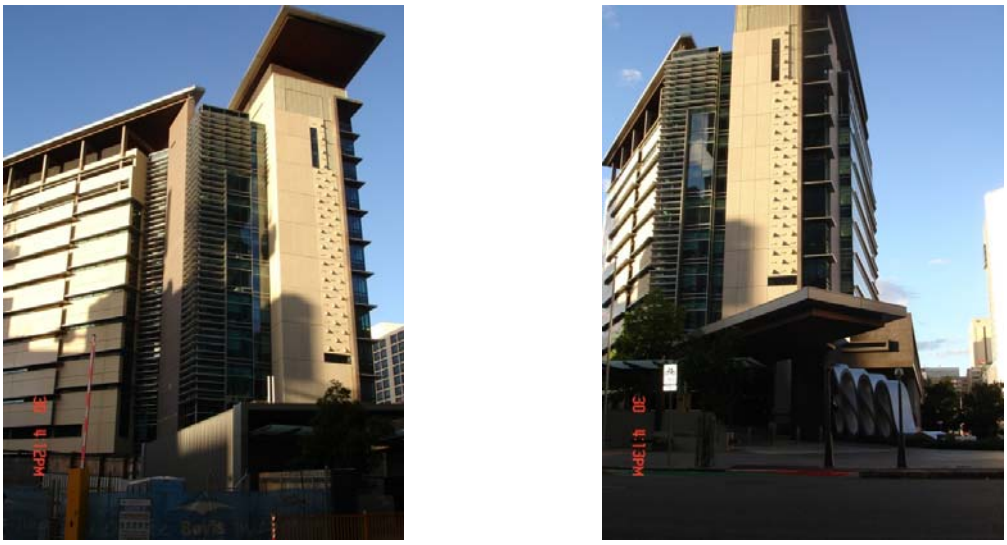

Figure 4.1: Building in Urban (Text) /Building in relation to nature--Outside to Outside from stage one participant.

For several participants, buildings that have attached courtyards or covered transitional spaces of natural materials connecting to other buildings and parts of the city are particularly appealing, and in some cases such as with a participant in stage one, offer a counter balance to what they perceive as a "revolting" building (Figure 4.2).

> *"This is the courthouse…the inside area is revolting…but I mean this [the courtyard] is lovely. The sail is very beautiful; the palm trees take up the space very nice[ly]".*

Figure 4.2: Building in Urban (Text) /Building in relation to nature--Outside to Outside from stage one participant.

Even small-scale examples of minimal natural landscaping were perceived to be positive in their facilitating interaction between the building and the street through definition of public and semi-public areas as described by stage one participant in relation to the image (Figure 4.3).

Figure 4.3: Building in Urban (Text) /Building in relation to nature--Outside to Outside from stage one participant.

For one participant, the relationship between the building and its style and the choice of planting (Figure 4.3) that fore grounded it was seen as incongruent:

"I think that looks like old Gothic. I think except the palm trees of course. There are no palm trees in the Gothic landscape".

The connection to nature can be implied as well as physical as conveyed through the image provided by the participant illustrating articulation of a façade exaggerating the illusion of the vertical convergence of lines and the connection of the building to the sky (Figure 4.4).

"…my concern is about the connection between building and the sky…"

Figure 4.4: Building in Urban (Text) /Building in relation to nature--Outside to Outside from stage one participant.

Several participants also noted how depending on its materiality the building's facade enabled a connection to nature by reflecting natural elements such as the sky, the river, or trees in its windows. A couple of examples include that of a stage one participant who explains why she likes the building (Figure 4.5). In her words:

> "*Ah, this is a new building. I do like it. I like it because it's down on the river and it reflects the blue that's down there, like it's very sunny, and the windows take on the different shapes".*

Figure 4.5: Building in Urban (Text) /Building in relation to nature--Outside to Outside from stage one participant.

For another participant in stage one, the building shown in Figure 4.6 despite some perceived irrationalities such as the stepped roof had appeal due to its glass façade and how it reflected the sky.

"It actually shows the reflection of the sky. It's nice."

Figure 4.6: Building in Urban (Text) /Building in relation to nature--Outside to Outside from stage one participant.

For several participants buildings were attributed meaning through how open (or not) they were to the 'world' as explained by a participant when selecting a building with full-width verandas and multiple arched doorways (Figure 4.7).

"…It's got that and the openness to the world. And you know..not..closed stuff with..you know..no openness…"

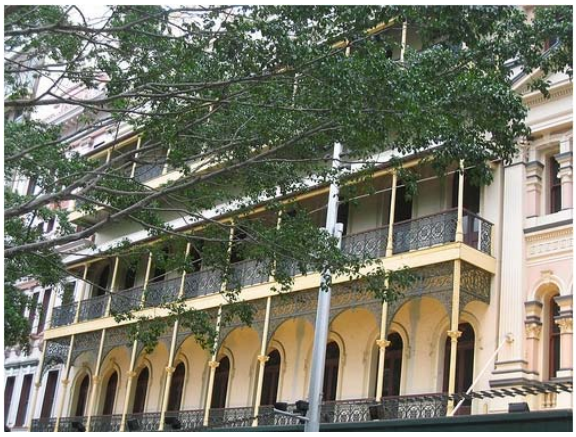

Figure 4.7: Building in Urban (Text) /Building in relation to nature--Outside to Outside from stage one participant.

In several cases participants revealed an association between buildings, climate and geography. While one could debate whether the structure depicted in Figure 4.8 is a building it was selected by a participant as something that made sense in terms of the climate and that distinguished Brisbane from other cities.

> *"…It is part of the external sun-screen, which is again. It is more common place for Brisbane's architecture. You know…"*

Figure 4.8: Building in Urban (Text) /Building in relation to nature--Outside to Outside from stage one participant.

The outside-to-outside, here, was also emphasised by the participant. The relationship of building outside-outside was revealed through comparison with the natural surroundings (Figure 4.9).

> *"…this building is the government tower…yeah…which is that I saw as well. It's in the middle of the park, standing alone, just tall…you have pretty nice buildings such as treasury casino and then the actual casino cross the road. And then it's just this building that does not even match [old] parliament house at all. I don't know why they built it …"*

Figure 4.9: Building in Urban (Text) /Building in relation to nature--Outside to Outside from stage one participant.

Outside to inside

To explore participant's experience of building in terms of habitation, a specific workplace was chosen. In this particular building there was a concerted effort by the designers to bring a natural planting landscape into the interior of the building. As several of the participants noted this was significant in their meaning making of the building. For the following participant the large scale planting created between wings of the building under the one roof created a sense of novelty, surprise and non-conformity further engendering a sense of personal liberation and enjoyment.

"…it's nice to share this with you in the interview sitting here. It's generating a positive reaction. And as I say to my colleagues that if there's anything I enjoy about the building, it is its environment. It's quite a surprise coming into the building. It's an oasis inside, high of activities, and its atmosphere's so beautiful…it's not a usual environment. It's [different from] the everyday concrete jungle in the city. And it's just another surprise seeing trees greenery and space as such natural light come through. …You know, it frees you within yourself…"

"I'm taking you to one of my favourite areas, especially in summer. Oh, someone just came and did some gardening. It's getting very wild. You can sit in here having lunch. You get fresh air".

Inside to outside

The two storey planted internal courtyards also facilitate the entry of natural light into the building and for those who have their desk near a window adjacent to a courtyard the experience of a visual connection to natural landscaping was very much appreciated.

"…When I first started? Ahm..I just remember that how much I like the spaces here in the garden. There is a lot of natural light compared with where I work. I'm working two places. For me I get a desk just next to the big window looking to a green space. For me, that's the wealth of working here. It's..yeah…it's very open…"

"What I like about it mostly….for me it's natural light, having access to be able to see the outside, the changing of the weather…and the day through the sun and shade. That's really important to me".

In the case of the Ecoscience building just described the natural landscaping and design that opens to the outside blurs the boundary between inside and outside.

"Every level of each floor you can look down, the greenery and green is a passive colour. And you also can see the sky".

The use of nature to blur boundaries is also evident in other building through the use of water (Figure 10-11) or natural building materials.

Figure 4.10: Building in Urban (Text) /Building in relation to nature--Inside to Outside from stage two participant.

"…this is the interior design, just took it from inside the main hall. It also represented the connection between inside and outside. I just like water…"

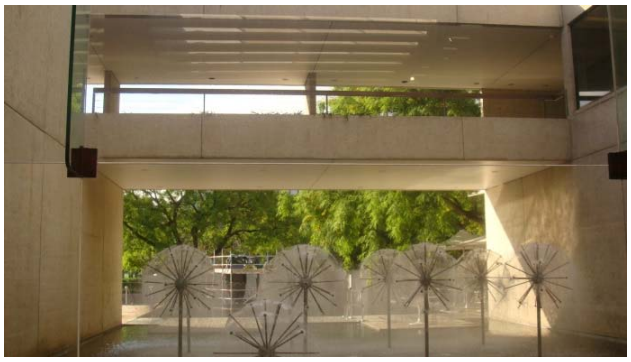

Figure 4.11: Building in Urban (Text) /Building in relation to nature--Inside to Outside from stage two participant.

Interior spaces that utilised natural landscapeing such as stone paving, casual seating to invite the presence of people relaxing and the forms and colours of nature through art work were found to be particulary soothing (Figure 12-14).

"The passage, the colour of the paving and the feeling of it. I think its different. It doesn't look like a typical business building. That's why I like it…the warm colour is welcoming".

Figure 4.12: Building in Urban (Text) /Building in relation to nature--Inside to Outside from stage two participant.

Figure 4.13: Building in Urban (Text) /Building in relation to nature--Inside to Outside from stage two participant.

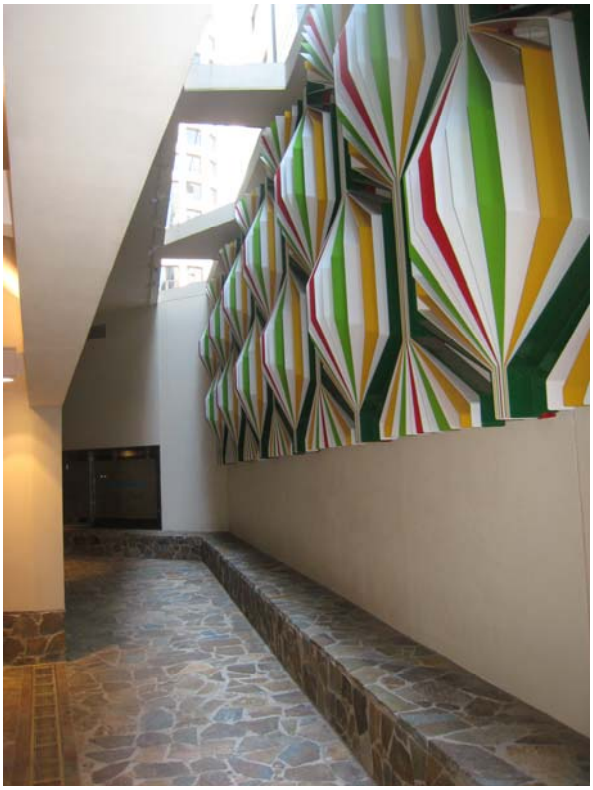

Figure 4.14: Building in Urban (Text) /Building in relation to nature--Inside to Outside from stage two participant.

4.1.1.2 Building in relationship to other buildings and built environments

Many participants emphasised as significant relationships between the buildings and other buildings and built environments such as adjacent buildings, public spaces, and street elements. This relation was also expressed in three senses: the building as experienced from the outside in relation to others outside built surroundings; the building as experienced from the inside looking outside the building; and the building experienced as place to place.

Outside to outside

In terms of buildings having spaces allowing connection to other areas around the building, there were several examples including older as well as more contemporary buildings. For a participant in stage one, the Brisbane GPO is very much appreciated for its arcade enabling transition from one street in front of the building to the street behind. “I love the big walk way through it on the side, the big lane…”. (Figure 4.15).

Figure 4.15: Building in Urban (Text) /Building in relation to other buildings and built environments--Outside to Outside from stage one participant.

Similarly for another participant, "Santos place is the building that I'm interested in. Donovan Hill architects designed this building. And the reason why I like it is because…this is the passage connecting between the two sides" (Figure 4.16).

Figure 4.16: Building in Urban (Text) /Building in relation to other buildings and built environments--Outside to Outside from stage two participant.

Another building is selected by the same participant for how it connects to the city. When focussing on images (Figure 4.17), the participant describes how:

> *"…this is the inside of the plaza. It's nice because it is separated from the city, but it's also some sort of connection…It's not totally isolated. It's still part of the city that …you can feel it…nice…the big open space, the old building there, the tower. It's easy to connect to Brisbane itself…"*

Figure 4.17: Building in Urban (Text) /Building in relation to other buildings and built environments--Outside to Outside from stage two participant.

An understanding of a building in terms of connection is also conveyed in the selection of a building that not only accommodates a government department but that also acts as a bridge over a street between two buildings (Figure 4.18).

Figure 4.18: Building in Urban (Text) /Building in relation to other buildings and built environments--Outside to Outside from stage one participant.

Many participants when focussing on a selected building compared it to other buildings or building nearby. In the example that follows, meaning is established by the participant through comparison to adjacent buildings based on colour and level of

interest created through the articulation and detailing of facades with the most visually complex and adventurous regarded as the most favourable (Figure 4.19).

> "*…Different details. You don't become bored. If you, for example, live in this tower or another part, you don't, I mean, become bored to see this place everyday. For example, compared to this form (the building nearby), they are boring. The colours are very dark. Very, very repetitive, simple. But here, it's very different. Even from the botanic park, you can see the beautiful view of this building…"*

Figure 4.19: Building in Urban (Text) /Building in relation to other buildings and built environments--Outside to Outside from stage one participant.

Similarly for the building shown in Figure 4.20 an unusual arrangement of forms and decorative detailing were noted in explaining the significance of this building for a participant.

> *"…what I like of this of building are its strange elements that are different from other buildings…"*

Figure 4.20: Building in Urban (Text) /Building in relation to other buildings and built environments--Outside to Outside from stage one participant.

Dramatic expression through colour including the use of colour and contrast to reveal and communicate a high level of attention regarding fenestration is of special significance particularly when juxtaposed with buildings that appear to have not had the same level of attention (Figure 4.21).

> *"…This is another one going down on Edward Street. What I like a part from intricate lovely decorated windows up here. It's also it's been painted in a dramatic stylized way compared with other buildings around it…"*

Figure 4.21: Building in Urban (Text) /Building in relation to other buildings and built environments--Outside to Outside from stage one participant.

While some participants were drawn to buildings because they are visually complex other participants highlighted simplicity of colour and pattern as appealing especially when contrasted against a backdrop of more highly patterned building facades (Figure 4.22).

> *"…This building seems to [stand out] among other buildings along the river, and the reflection is very beautiful. I like its simplicity and white colour. So, I took the photograph. Comparing it with the Mercure building, the Mercure looks so messy.…"*

Figure 4.22: Building in Urban (Text) /Building in relation to other buildings and built environments--Outside to Outside from stage one participant.

In addition to comparing a building with an adjacent building, participants also used typology as a basis of comparison such as in the example that follows where a church is deemed to stand out due to it being of a different architectural style and size compared to other churches in the area as remembered by the participant. Such contrast is made even more conspicuous when viewed in relation to a church opposite (Figure 4.23).

> *"…This church, because it is so unique. There are no other churches in the city similar to this church that are so beautiful. But comparing it with other churches downtown, its size is small because it is located opposite other [taller] buildings.…"*

Figure 4.23: Building in Urban (Text) /Building in relation to other buildings and built environments--Outside to Outside from stage one participant.

As conveyed in the photograph, the church also stands out because of its proximity to the modern buildings nearby, something which is also noted by the participant when discussing the photograph of the building (Figure 4.24).

> *"…for this picture I would like to compare this old building with the modern one on the back of it…"*

Figure 4.24: Building in Urban (Text) /Building in relation to other buildings and built environments--Outside to Outside from stage two participant.

For some participants, the buildings they selected in Brisbane were significant because of their contribution to the character of the city that helped distinguish it from other cities. Architectural styles, street elements, street façades, and building materials were highlighted as playing a role. As related by one participant when explaining the selection of the photograph in Figure 4.25:

> *"…One of reasons is I have been quite interested in architecture. Brisbane is very different from the other capital cities. Well, there are three capital cities I know quite well. I was brought up in Melbourne. I'd lived most of my life in Sydney, and I went to work in Melbourne, in about 2001…"*

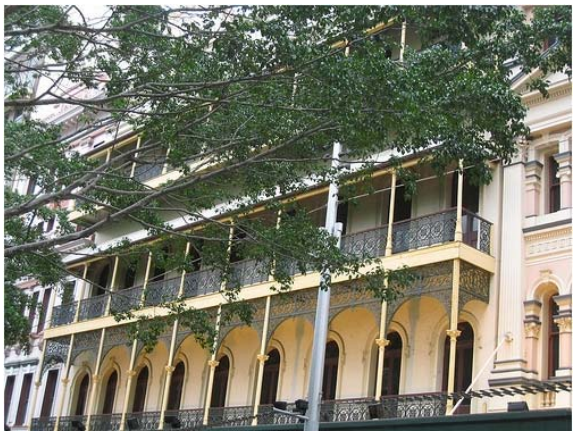

Figure 4.25: Building in Urban (Text) /Building in relation to other buildings and built environments--Outside to Outside from stage one participant.

The same participant also discussed how building material helps to characterise a city (Figure 4.26).

> *"…Yes. It's sand stone, but it's different. Sydney's sand stone is golden. This is pink. And Melbourne builds in what they call blue stone. Just a very grimy black stone, it's the stone of Melbourne jails, cathedrals. It's horrible actually. It's just its black, particularly in the rain. It shines. It's just a really black colour. But Sydney, in the early afternoon, when you are walking along George Street, you just see the sun on the town hall. It glows golden building. I mean Sydney is golden sand stone, and it's just a characteristic of this city. It's golden sand stone. So, you know here is purple stone. This is the funniest building…"*

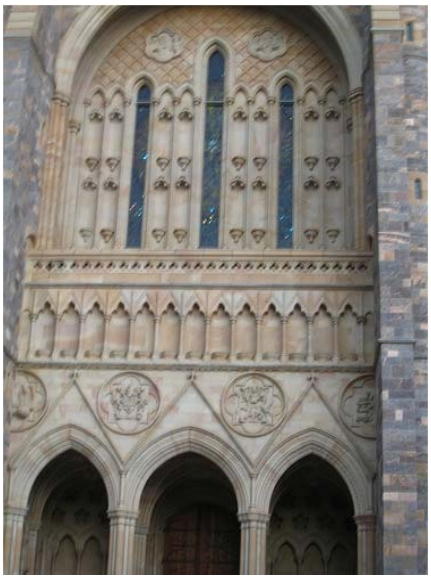

Figure 4.26: Building in Urban (Text) /Building in relation to other buildings and built environments--Outside to Outside from stage one participant.

Another excerpt from a participant in stage 1 showed dissatisfaction for the relationship between building and other building/ built environment. The building was considered incompatible with its surrounding environments (Figure 4.27).

> "*…This section (left-side façade) is every average and primitive design, but then you see this section (top-part of the building) added to the main building. I'm not sure, if one of my students design something like that I may fail him. Millions of dollars have to [be spent] to build this building. I think all of the residents have the right to complain about this. For me, I as an owner, if my grant, my investment, you destroy the view of the city. For example, if this building is yours, you can have very ugly art form. But it's not yours. It's part of urban space and view. All of the residents can see it from everywhere. There are many things that can say about un-proportion, un-harmony, ugly colours, textures and everything…*"

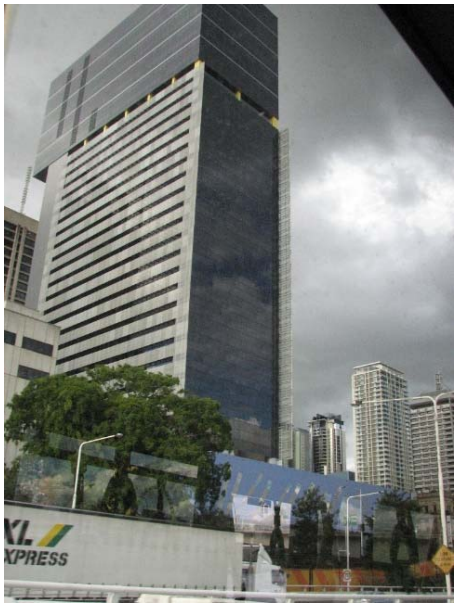

Figure 4.27: Building in Urban (Text) /Building in relation to other buildings and built environments--Outside to Outside from stage one participant.

Several participants also drew attention to street sculpture and their relation to buildings, as explained by one of the participants in Figure 4.28:

> *"I put one in because that's one thing I like…It's nice, isn't it…you've got some quite nice rhythm…"*

Figure 4.28: Building in Urban (Text) /Building in relation to other buildings and built environments--Outside to Outside from stage one participant.

And as conveyed in the photograph (Figure 4.29), there is an obvious relationship between the sculpture and the building with the building façade contrasting the sculpture and vice versa.

Figure 4.29: Building in Urban (Text) /Building in relation to other buildings and built environments--Outside to Outside from stage one participant.

The relationship of the building to its location was also considered and in the example (Figure 4.30) that follows found to be inappropriate for a landmark site:

> *"Of course, I hate it. You know this part with this colour, texture, and the windows…maybe are not bad if it were an exhibition for only one week, but it stands on an important point of the city".*

Figure 4.30: Building in Urban (Text) /Building in relation to other buildings and built environments--Outside to Outside from stage one participant.

The relationship of a building and its contribution to the city as a whole was also a point of discussion in relation to the building shown in Figure 4.30. According to the participant in relation to this building:

> *"I think all the residents have a right to complain about it…for me [this building] destroys the view of the city. For example, if this building is yours you have a very ugly art form. But it's not [just] yours. It's part of the urban space and view. All of the residents can see it from everywhere. There are many things you can say about it—unproportion, unharmony, ugly colour, textures, and everything. I'm not sure about the function".*

The same participant also made mention of the building following (Figure 4. 31) and how it does not contribute the shape of the skyline.

Figure 4.31 Building in Urban (Text) /Building in relation to other buildings and built environments--Outside to Outside from stage one participant.

For another participant, the position of the building (Figure 4.32) in relation to a particular viewing point made them feel uncomfortable:

> *"This is the side elevation. The building orientation makes me feel uncomfortable when I'm looking at it".*

Figure 4.32 Building in Urban (Text) /Building in relation to other buildings and built environments--Outside to Outside from stage one participant.

Inside to outside

In the previous section, participants described how they made sense of buildings by comparing the buildings as viewed from the outside with other buildings either in the same city or other cities. When experienced from inside, participants also sought to make a connection to the outside especially if spending time in the building as is the case with the third group of participants in this study. As noted previously some of the occupants of the building in the third stage of the research worked near windows having a strong visual connection to the outside. Where this was not always possible and participants felt divorced from the outside they actively moved to positions where such prospect was possible as evidenced in the following comment (Figure 4.33 and Figure 4.34):

> *"…The only place I like is the greenhouse on the rooftop. When I'm up there, its like…oh this is a good place…So, normally, I spend a half of my morning in the lab inside the building, and the other half at my desk, working on document works".*

Figure 4.33: Building in Urban (Text) /Building in relation to other buildings and built environments--Inside to Outside from stage three participant.

Figure 4.34: Building in Urban (Text) /Building in relation to other buildings and built environments--Inside to Outside from stage three participant.

The same participant also commented how spaces not occupied by people have views to the surrounding cityscape.

> *"…it makes you feel weird. You can't see outside view clearly…", "…The only place you can see the view is at the corridor outside, but it's just the end of the walk-way…"*

A comment from a participant in stage 1 showed his concern about the interrelation between interior elements and outside environment. (Figure 4.35):

> *"…In the next picture, if you can bring it, you can see beautiful connection across the street. It sort of the connection in different levels by building. And connected separated areas in the city. It's very useful interesting I think. When you pass by [on the] bus…"*

Figure 4.35: Building in Urban (Text) /Building in relation to other buildings and built environments--Inside to Outside from stage one participant.

Place to place

The buildings were considered as the connection among places which exist in people's lived experiences. The places were viewed in relative and comparative ways. For a participant in stage one, the Victorian buildings in the scene reminded her of three big cities where she lived several years ago.

> *"…Ah..one of the things that was interesting about Melbourne. Of course, it's terrific re-rich 19th century heritage, and also early 20th century heritage. It was the capital city of Australia up to 1930 something or later. It was a major city of Australia for a long time, also very wealthy city from the gold and its agriculture. And so it got quite… its buildings particular its terraces. It's Melbourne. Aha much grander than anything in Sydney which is quite mean. And its streets very different. And one another thing that was very interesting when I first came to Brisbane was it also had. It's also clearly very wealthy 19th century town. And it has a lot of that legacy there that I'm quite interested in capturing because of a lot of 20th century stuff is the same…"*

The workplace in the third stage was also considered in relation to where the occupants worked over twelve months previously. In many instances, the comparison was mixed with some aspects held to be enthusiastically positive while others were deemed to be profoundly negative. For a participant in stage three even though the previous workplace was smaller, it was not as crowded and had more accessible green spaces.

"…I'm afraid that the old place was a lot better than this one. It was a very small place. There were not many people there. [It was] a lot more of a familiar setting. It was the nice area, a lot of green spaces. Yeah, there are a lot of green areas in the [new] building, but I'm working on the third floor. I don't use those areas quite often…"

Despite being in a newer building as conveyed not only by how it looks but also by how it smells, and despite both places being surrounded by trees, the current building is judged by this participant to have less character which is interpreted to mean there are fewer things that make it special and endearing at an existential level. There is the suggestion that the newer building is too perfect.

"…It's very nice, because it's all brand new. It smells new....ah everything...that was really nice. But it doesn't seem to have the character of the old place where we were surrounded by trees. Oh now, we are surrounded by trees, but it's different, well it's fine…"

For another participant even though the previous building is fifty or so years older and quite ordinary, it is more desirable because it has more natural light.

"…the previous building, I was working in the government building on Ann Street. There it's a typical building in 60s or 70s. And it's very traditional building block, tall building. It's same like a lot of buildings, but it has more openness about it. So, I say I didn't dislike it. If you see it you can see more open, more allow you to see and get more natural light when the sky is clear. Yeah, I still like it.…"

What is highlighted as more beneficial by a participant in relation to the newer workplace is that because of its size there is the opportunity to interact and collaborate with more colleagues.

"…I think that's good, each of them. This gets a lot of advantage for our colleagues. Here we interact with more people. Where the other one is very nice with its surroundings. There are only twenty or thirty people around the [old] research centre, here hundred plus. …"

As well as their previous workplace, participants also described their understanding of the building in relation to another place – their home. Unlike their previous workplace, this workplace has no free staff parking necessitating paid parking off site or the use of public transport to travel to and from work. For many depending on the distance public transport is more time consuming and problematic.

"…I drive my car because I live in the western suburb. There is no good connection… It's about 25 minutes, but if you use public transportation, it will take like one and a half hour…" (Participant in stage three).

"…And, getting, at the last research centre, I actually live in the same street. I just cross the road to work. But now, I have to come by train. Two trains. I come from Sherwood. I go to Roma Street. It's taking up to 45 minutes to get to work by train. Just depends on the number that you miss the connection at Roma street. While, if you drive across, it takes just about twelve minutes…" (Participant in stage three).

In contrast, some participants enjoy the opportunity to have less stressful travel to and from work and as alluded to by a participant to support more environmentally sustainable travel.

"…Yes, it's very well arranged, and that's a surprising thing too. I'm living in the northwest, I have to cross the river and it's enjoyable… It's just a half of hour. It's brilliant…" (Participant in stage three)

"…Well it works. It takes about an hour and ten or fifteen minutes in the morning….. That's alright. It's less stressful. I used to drive to the old place. That's stressful…with two trains, I stop at the central first, but the time seems very well. That's pretty good." (Participant in stage three).

"…From the north-side, I get the train here. So, 90% transport by train. Occasionly by bus depending on where you come from. And sometimes by car but it very occasionally depends on where I have to go on that day. The train is good for me…" (Participant in stage three).

"…yes, I'm sure that it is. I know that they've tried to keep many vehicles out of CBD and this area as much as possible. And I'm sure they do it well. We are served very well with public transportation. It's pretty good. And, I think that they are going to have the other train link, and going to have a station here, from the Eastern side of the CBD heading to Caboolture. And there are quite a few buses outside. But, we really can't complain that way. But if you are in the position that it doesn't quite suit…" (Participant in stage three).

4.1.2 Building in (Text)

Building in (text) represents a second super-ordinate theme to emerge from the data. As will be described in this section it describes sense-making of a building in relation to the building itself and its component parts. For the participants this can happen in four major ways: the exterior of the building in relation to the interior; the interior of the building in relation to the exterior of the building; the exterior of the

building in relation to a part or parts of the exterior; and in interior part of the building in relation to another interior part.

4.1.2.1 Building exterior in relation to interior

As conveyed in the following transcription extract, having a visual connection from outside the building to the inside invoked greater appreciation for the building (Figure 4.36):

> *"…It's very beautiful, so you can just see the interior in that part from the outside…"*

Figure 4.36: Building in (Text)/Building exterior in relation to interior from stage two participant.

It appears that glimpses of the interior encourage imagining of what happens or could happen inside; in other words a sense of anticipation is created as illustrated in the following statement (Figure 4.37):

> *"…This one, I don't know what's really inside the building. I presumed that's a screen to cut out some of the heat load… I would think so. It allows people to look out, but I'm sure that a heat load type screen, external. And it's every decorative and I think it's fabulous. God knows what the building is like I mean it could be a dogs breakfast inside. It's very lovely external screen, I think…"*

Figure 4.37: Building in (Text)/Building exterior in relation to interior from stage one participant.

The sense of invitation to experience the building in the inside is not only facilitated through visual access to the interior via perforations or transparent/semitransparent cladding but also through some formalisation of entry expressed architecturally. According to a participant in stage one (Figure 4.38):

> *"…I guess that this area is a hall which can contain a lot of people. There will be good activities there. The blue glass makes a good match with a natural concept of the building. You can see what is going on in there and at the same time it doesn't look too clear inside. When you look at the entrance, you can feel sort of invitation…"*

> *"…it was in the newspaper. It's the greenest building in Brisbane. I don't know what's inside. But looking from the outside, the main entrance is attractive. It had been renovated. Another side, river side is so simple, but this main entrance is beautiful…"*

Figure 4.38: Building in (Text)/Building exterior in relation to interior from stage one participant.

Despite imagining an inside as being unappealing the fact that it looks inviting creates a more positive relationship for this participant in relation to another more historic building (Figure 4.39).

> *"…It's a historical building. Grand…Casino…and somehow it invites you to go inside, but for me it looks stuffy inside, not good ventilation. However, because it's a historical building, once in a life time, if you can stay in this building only one night, it will be great…"*

Figure 4.39: Building in (Text)/Building exterior in relation to interior from stage one participant.

This desire to engage more experientially with the building via its interior is expressed again by a participant in stage one (Figure 4.40):

> *"…This is the entrance. Car….this way…People this is the way. The entrance is really wonderful. Inside, it looks so nice. Why did I was so interested in the entrance of the building? I don't know. Maybe a nice entrance attracts my attention to stay in the place. For this building, it looks cosy and comfort. It doesn't like other old hotels in Australia, for example in Sydney where there are some conservative buildings and they don't be allowed to change anything much. The entrance always looks too small, frustrating. But, for this hotel, they renovated the whole entrance and it's nice."*

Figure 4.40: Building in (Text)/Building exterior in relation to interior from stage one participant.

Several participants also noted how certain buildings without balconies were a source of confusion or discomfort based on a previous experience (Figure 4.41).

> *"This building…ah..is a book store. I don't like it because this is no balcony. Actually, it's a hotel, but there is no balcony. Maybe, it's an old building. They might not like wind or it was too cold in the winter".*

Figure 4.41: Building in (Text)/Building exterior in relation to interior from stage one participant.

"It's an old building 'YMCA' there is no balcony. If I have to stay at a hotel, I won't choose this building. I don't know how to escape in case of fire. I had an experience staying in an old hotel at Sydney. I feel cramped". (Figure 4.42).

Figure 4.42: Building in (Text)/Building exterior in relation to interior from stage one participant.

Participants appreciate buildings that gave an indication of use. Here one participant is critical of a building (Figure 4.43) that does not look like what they expect a certain building should look like.

"It's Queensland Government building. The lower part is beautiful but the upper part is too simple. If there were no Queensland sign we could not realise what the building is"

Figure 4.43: Building in (Text)/Building exterior in relation to interior from stage one participant.

Sometimes a space presents itself in a mysterious and secretive way inviting exploration and discovery (Figure 4.44):

"…And sometime these doors are closed. You don't even know where it is. And then when there are opened, you can look through as the secret hidden space and you can go down and have coffee in there. There is a little garden on the side. I like the way that this hidden space. It's sort of accidently discovered. Yah…It also invites you in. The door is opened having what you want to walk in…"

"…And I like this little garden. It's just next the…you know…because it like really hidden. And sometime these doors are closed. You don't even know where it is. And then when there are opened, you can look through as the secret hidden space and you can go down and have coffee in there…"

Figure 4.44: Building in (Text)/Building exterior in relation to interior from stage one Participant.

4.1.2.2 Interior of the building in relation to building exterior

In the previous section reference was made to how participants appreciated having a visual or imagined connection to the interior of the building. In this example, the participant discusses how it is meaningful for them to be able to see an architectural formal relationship between an interior element such as a spiral staircase and the dome of an adjacent building. In this way a two-way outside/inside/outside relationship is established (Figure 4.45).

> *"…But, equally I mean I'm certain that this is the part the architect was playing with when he built it. It has this interior curve. Cause that's the interior curve, and then you picking up the dome…"*

Figure 4.45: Building in (Text)/Interior of the building in relation to building exterior from stage one participant.

4.1.2.3 Building façade and façade elements in relationship

In the following statement a special relationship with a building is described in terms of the shade and shadows created by deeply recessed windows and doorways, and projecting building elements (Figure 4.46 and Figure 4.47).

> *"…And also, I think, if you pay attention to the form, in my opinion they are beautiful and some shade and shadows, you know, are different…"*

Figure 4.46: Building in (Text)/Building façade and façade elements in relationship from stage one participant.

> *"…I focused on this building (building decorated with arches) and also this…I'm not sure what it is? For this elevation, it seems that you have make movement. I'm not sure if it relates to inside or not. Maybe they can help to save the building from being simple, but I think for harmony they are not beautiful…"*

Figure 4.47: Building in (Text)/Building façade and façade elements in relationship from stage one participant.

The relationship between building façade and natural environment was highlighted. With the effect of natural light on a building, the following statement reveals an appreciation of how artificial lighting can be used in relationship to such elements as windows to create an appealing effect (Figure 4.48).

> *"…You can have public tour. They can get you around, so inside it like any parliament house…stuff like that, but it's nice. And in the afternoon, they light up the arch way. They actually got a bar in here as well. Like a drinking bar for the minister…"*

Figure 4.48: Building in (Text)/Building façade and façade elements in relationship from stage one participant.

In terms of the building façade then participants are particularly drawn to buildings that have strong definition created in the following example by the exposed columns articulating the glass windows (Figure 4.49).

> *"…Yeah, another clean building. I like the windows, the blue of them,and then the kind of breaking up the blue by the strip, but again I just find it's very attractive…"*

Figure 4.49: Building in (Text)/Building façade and façade elements in relationship from stage one participant.

This is also the case with the following example, albeit a more simplified example, with the participant also referencing in a positive way the building's reflective qualities (Figure 4.50).

> *"…Particularly like this one… has an interesting orange sheen on it. And I like the way that reflects the different parts of the city as well. You can see other buildings on it…"*

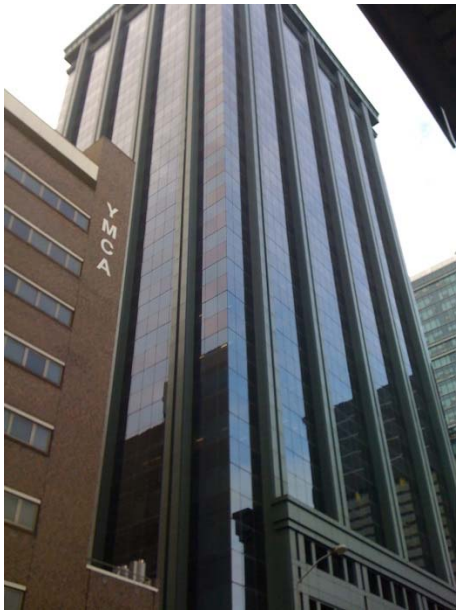

Figure 4.50: Building in (Text)/Building façade and façade elements in relationship from stage one participant.

Similarly, the same participant is drawn to another building because of the façade's reflective quality (Figure 4.51).

> *"…And again this one here, I like it because of the glass part. It reminds me how to fix this part on the building, and again I like the glass, the reflection…"*

Figure 4.51: Building in (Text)/Building façade and façade elements in relationship from stage one participant.

In the following example, a participant in stage one explains his selection of a building in terms of several qualities such as: contrasting materiality and form of one part of a building compared to another; and the scale and proportion of elements which despite possible incongruence are still considered favourably (Figure 4.52).

> *"…But this building, you know, the top is beautiful. Again and here, it's not expected to have that one. The continuity of the first floor... In scale, I mean, in proportion of each other…are not compatible, but in other aspect it might be…"*

Figure 4.52: Building in (Text)/Building façade and façade elements in relationship from stage one participant.

Several participants also described how they liked buildings that appear clean, neat and well maintained; in other words that have decorum and show that they are cared for. For some this is evident in intricate detailing or in the following example together with a reference that suggests an accord with detailing that unifies the building and positioning enabling access that provides a more holistic view of the building (Figure 4.53).

> *"…That's near the central station at the other end. I just think, it's the cleanness, the balcony and also the trim on the top, and the kind of you can go around…"*

Figure 4.53: Building in (Text)/Building façade and façade elements in relationship from stage one participant.

Even buildings with disruptive elements were considered positive when materials and other detailing produced a 'clean' appearance (Figure 4.54 and Figure 4.55).

> *"…that again it's the blue of the window. The blue of the windows, and design likes the kind of square looking. It's interesting. Its got this window coming out here. Its got this kind of but it still has a clean looking…"*

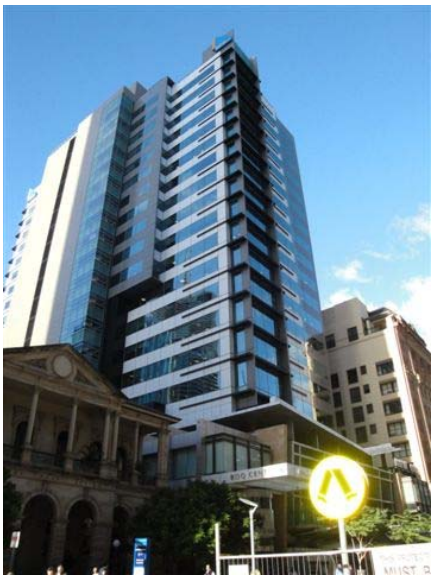

Figure 4.54: Building in (Text)/Building façade and façade elements in relationship from stage one participant.

"…I just walk around and took photos all morning. Yeah, I like the blue of its. I like wave along the windows. I don't know that somethings clean about it. And it also has the concrete line, not just the windows, which is also very quite nice…"

Figure 4.55: Building in (Text)/Building façade and façade elements in relationship from stage one participant.

Controlled repetition of elements were also considered to express neatness and cleanliness (Figure 4.56).

"…like this elevation, I quite like it. Because it's quite neat and clean look..."

Figure 4.56: Building in (Text)/Building façade and façade elements in relationship from stage two participant.

The appeal of buildings that appear neat and clean is further expressed through the following example where a building does not display such qualities (Figure 4.57).

"…I don't like it because of these grilles which make it look like a prison, and might be difficult to clean. I think it useless and not beautiful. That's it… You see. They didn't clean event the arch. Just a little bit of mould. I think, that would make a little bit nicer…"

Figure 4.57: Building in (Text)/Building façade and façade elements in relationship from stage one participant.

In addition, a participant in stage one showed her personal interest in paying special attention to buildings' façades.

> *"I got quite interested in picking up this external screen. So, I did that the whole series of screens around the place. But they are outside the range that you are interested in. The number of them made by the same architect. Not this one but this one..on a hospital and it's also..something called Ice tersest works..Ice..works..on the Paddington, same person…Ah..if I'm interested enough. Yeah. I do. But a lot of them I don't know"*

The relation among façade elements and the way there are designed and arranged in addition with natural light were concerns for a participant stage one (Figure 4.58).

> *"…This one, I like the way they play with the façade. Because the sun light comes from the south..this way. So, they put the horizontal grilles. On the front façade, I do not maybe they don't want more wind in the building. I don't know what the designer thought, but there is a balance and some kind of connection of the front grill and also its colour metallic looks beautiful. The first floor of the building is wooden decoration that makes it looks so natural. It's good, beautiful…"*

Figure 4.58: Building in (Text)/Building façade and façade elements in relationship from stage one participant.

4.1.2.4 Interior elements in relationship to each other

From the inside of buildings participants looked for relationships between interior elements in their sense making. In the case of the Ecoscience building, the participant draws attention to a vertical discord between specific spaces in the building exacerbated by lifts that do not connect all levels of the building.

> *"…I will take you to my lab using this elevator. There are three main elevators in each block. This one of for B block, that A, B, and C there. But the silly thing is that the elevator that can take you to roof-top are on two far-side of the building, so it doesn't make sense, you have to walk across the building to take the elevator to get to the greenhouse…"*

Another participant in stage three describes how activities that are highly connected are separated verticality necessitating moving material, specimens and other resources between the basement and the roof (Figure 4.59).

"…I think it works with...I got this interesting structure, rooftop facilities. And that's all supported by stuff on the basement. That's a bit difficult to go down, bring stuff, pots, soil, and then back to through the lift. The big issue is that if you need to bring serious pests through, and we have extra garden on the roof. That could be an issue, seem to be…"

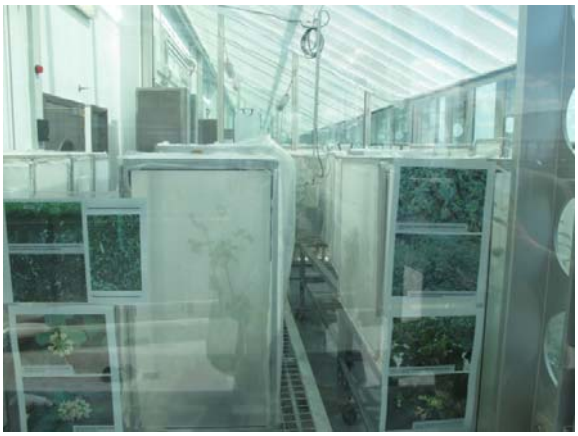

Figure 4.59: Building in (Text)/ Interior elements in relation to each other from stage three participant.

In the following example, the participant describes how an access point to an underground storage area provides better access to the building and where they work elsewhere because it is closer to the car park outside (Participant in stage three) (Figure 4.60).

"…This is another area storage area; you can see that for the fishery department. They have a big boat. Mostly they, they have fields studies… and you see that door, I always use this door instead of the front door because it's just next to car park outside. I'll take you to the store in the car park…"

Figure 4.60: Building in (Text)/Interior elements in relationship of each other from stage three participant.

4.1.3 Building in Human (Text)

This super-ordinate theme represents another way in which participants make sense of buildings that they either work in or which they encounter as part of their 'everyday' experience. For this theme participants make sense of buildings in relation to themselves and/or in relation to others.

4.1.3.1 Building/ Self relationship

For those inhabiting a building for a period a time such as for work, several participants regarded the building in terms of how it supported or did not support their work practices functionally and psychologically. While the following response identifies noise as a potentially disturbing issue, access to natural light and green space were considered significant in providing for an enjoyable work environment.

> *"…When I first started? Ahm..I just remember that how much I like the spaces here in the garden. There is a lot of natural light comparing with where I'm work. I'm working two places. For me I get a desk just next to the big window looking to a green space. For me, that's the wealth working here. It's..yeah…it's very open. It can be very noisy sometimes at around lunchtime or people coming in group to use conference facility. The sound is a bit like an airport, people dancing around this…generally I really enjoy this thing. …"* (Participant in stage three).

For the following participant, availability of meeting rooms, size and functionality of facilities were considered significant.

"…From my point of view, I spend most of times in the office. So, I certainly do have meetings from time to time. There are good meeting rooms, plenty of them, all good size. Facilities work well. I sit in the office sending emails, and send them through before the meeting. And, my office is just big enough for me and a couple of people having a small meeting. So, it's very well serve for that…" (Participant in stage three).

For participants moving into a new workplace, issues of control and adaptability were at the forefront. In some cases, individuals were able to adapt to the environment or conversely adapt the environment to their needs, in other cases, the environment or designated work practices thwarted their attempts producing a tense relationship between the building and the occupant.

"…And we don't have any…ah…you know normally in any office…you have a rubbish bin near your desk when you want to get rid you rubbish, but we don't have it here… We just throw it on the floor….hahaha…no..we have our own bin but we have to be responsible to empty them. So, in the kitchen area, I can show you, there's a waste bin just for general rubbish and another one for recycle materials…" (Participant in stage three)

"...Twice a week I work here, and two days a week I work in the city. In another. It's the same employer, but we have different library branches. It's the horrible old government building, the other one. It's the department of industry on Ann Street. There is no, not really any windows. There is the air-conditioning unit underneath us. So, we get vibration coming up from underneath and sometimes you can hear it. It's just really ugly. There must be over a hundred light bulbs in the space. It's so…" (Participant in stage three).

"...I think the office space is quite open. There are noises from other people. I'm working on statistic, So, I need to concentrate on it, but with the open-office it doesn't work well. At my previous work place, I had my own private office. It made me feel more comfortable to concentrate on my works. I'll bring you inside to my office..." (Participant in stage three). (Figure 4.61)

"...No...it just the defined space, but now my definition is just a little bit like that. And at my old place when everyone there, there are four or five voices in my back. But here now, I have fifteen to eighteen people that you can hear. That's quit noisy. And that's what I dislike. It's very stressful sometimes. That's what I really dislike..." (Participant in stage three).

"…yeah...I heard a lot about the complaint. Because I'm not in the open plan, but I think I maybe people they just get use to the office they were in the past. I understand that…" (Participant in stage three) (Figure 4.61)

Figure 4.61: Building in Human (Text)/Building / self-relationship from stage three participant.

In addition to an issue such as lack of light, there was also the issue of inequity and how depending on where you were in the building you may or may not have access to natural light.

> *"…is anything ah...somebody office there is on...ah I mean the offices that don't have windows to the outside. And, for example, on the block where I'm on the west wing. The corner office, the corner one has got light, but then the next couple don't. What's the matter they let the natural light come in…"* (Participant in stage three).

Reflecting more directly on what influences participants in terms of their sense making of buildings, participants noted how the routine of their everyday activity and other contextual factors and conditions that they find themselves in obscure the nature of their relationship with a particular building in the sense of it becoming very familiar. As conveyed in the following extracts, such factors and conditions include: being in a rush or predominantly passing by the building when it is very busy and there are many people around.

> *"…Because of the awnings in fact. It sort of…it's hidden by the touring and flowing of people, and I was quite surprise. So, it took three years of walking down. I'm not walking down in queen's street all that often, but I didn't see it in till third year walking down…"* (Participant in stage one).

> *"But one of the things that I find it's horrible when you are walking in the city is that you are always in the rush. And there are always too many people, and you don't have to rest to look around. So, I have got no idea. This is late afternoon. That's why this shown up in brightly…"* (Participant in stage three).

"…That was a big surprise. Well just a long George street. It's quite close to the parliamentary and Annexe Building. I was busy taking in portability memorial himself, which are very pool. I mean. There are number memorial of dead police men, and God knows what all along there. They were very cheap memorial, and they did no honour to anyone. You know people who were dead. That was horrible. I was busy to take all of that in. It's quiet Saturday, near the Anzac Day or something. I think. Ah..It's a Monday, the day after the holiday, and the city was very quiet. I was walking try to avoid people step on me from the rear, try to avoid people step on people from the front…" (Participant in stage three).

As one participant noted, it also depended on the particular route taken during the course of their journey to and from work (Figure 4.62).

"…Ah. I walked pass it when…it depends on whether I got the train to work. If I got the train to work I pass this one. I kind of go around the city a bit but yeah that one's near the train…" (Participant in stage three).

Figure 4.62: Building in Human (Text)/Building / self-relationship from stage three participant.

And as noted previously, it was enjoyable when the familiarity was broken and the participant taken by surprise or invited to be distracted in their routine (Figure 4.63).

"…And I like this little garden. It's just next the…you know…because it like really hidden. And sometime these doors are closed. You don't even know where it is. And then when there are opened, you can look through as the secret hidden space and you can go down and have coffee in there…"

Figure 4.63: Building in Human (Text)/Building / self-relationship from stage one participant.

Appreciation of the unexpected is also expressed in the following statements in relation to the buildings (Figure 4.64 and Figure 4.65).

> *"And this [glass part] unexpected like the lady skirt. You knows you don't expect the building to do [that]".* (Figure 4.64).

Figure 4.64: Building in Human (Text)/Building / self-relationship from stage one participant.

"And I think when you are on the street and you look up…it isn't expected to see something like that. So, it's like you walk in the city everyday, and you look up to see something very old and unexpected. The history is sort of there but slightly hidden". (Figure 4.65)

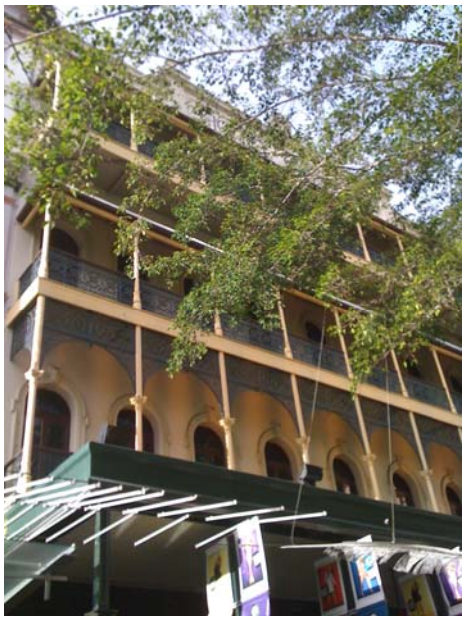

Figure 4.65: Building in Human (Text)/Building / self-relationship from stage one participant.

Experience of the unexpected is also considered positively by a participant in stage three.

"…it's nice to share this with you in the interview sitting here. It's generating a positive reaction. And as I say to my colleagues that if there's anything I enjoy about the building, it is its environment. It's quite a surprise coming into the building. It's an oasis inside, high of activities, and its atmosphere's so beautiful…it's not a usual environment. Its [different from] the everyday concrete jungle in the city. And it's just another surprise seeing trees greenery and space as such natural light come through. …You know, it's frees you within yourself…"

For some participants there was conscious appreciation of how personal interest in particular buildings and places played an important role in their experience of the building.

"…One of the reasons is I have been quite interested in architecture. Brisbane is very different from the other capital cities… And I was quite started to see it because I'd grown in it. Suddenly, I was seeing things that I never notice that were particular in Melbourne…" (Participant in stage three).

"…also…this particular style of architecture I became very interested in because it's really common in Victoria. So, let me just show you. (she is

searching in her web gallery)..This is the blood and bandages gallery …But the one that I couldn't get is this one here, which is the beautiful Melbourne building,.." (Participant in stage three).

"…And, I also do an additional research in the state library about Brisbane history. So, that's partly why I'm chasing a lot of these buildings. Because it's my interest and I like, what I really like is to have places that I can attach stories to. That seems to be a good vessel. You know what I mean…" (Figure 4.66).

Figure 4.66: Building in Human (Text)/Building / self-relationship from stage one participant.

Memories of pleasant experiences in particular buildings also evoked good feelings about the building (Figure 4.67).

"I used to go in there and I really enjoined it. I have a memory of going into the beautiful space, and it's sort of there was a museum up there. I think it used to be a hotel. I have a memory of spending a new eve in that, watching the fireworks. That was three years ago. And, I do love the little statue as well that's cute".

Figure 4.67: Building in Human (Text)/Building / self-relationship from stage one participant.

4.1.3.2 Building in relationship to others

In addition to buildings making sense based on the self, participants also made sense of buildings in terms of how they support social interaction as well as how they have value in socio-culturally.

A building's ability to support and facilitate social interaction was emphasised in this study through the selection of a building designed to foster collaboration by co-locating what were formally disparate groups of scientists. While the building provided several different types of communal spaces and the co-location of laboratories, several participants noted little change in behaviour.

> *"…I think maybe it takes a long time for the groups to break down. I don't know…it's the nature for the kind of people here…a little bit more focus…so it's not like if you have the groups of social scientists…all the people in here will more out looking at people. People still get together. We have different activities. At lunch time, we have language conversation groups that meet here…"* (Participant in stage three).

On the other hand, for a different group of people, the building was experienced as facilitating and encouraging greater social interaction.

"I think the café down there [in the building] …is a good meeting place particularly if you come and have a quick meeting with your friends. Its' more informal…It's more relaxing".

"…yes…because this is our idea to do this. Like when we have the new book coming out, so we can do thing like why they don't have a morning tea and have a look for the new books and talk about your books. We can engage with clients in different ways. And it's the nice space to get people to come in…" (Participant in stage three).

In addition to contemporary spaces, buildings were also appreciated for their ability to relate something about past social practices. As conveyed by a participant the building (Figure 4.68) is meaningful to them because of the stories it directly and indirectly tells of the history of Brisbane (Figure 4.69).

"…This one. That was the long Albert St. if you don't know, but it should have on the photograph. That one of the reason I gave it to you like this because it all documented. And you can find out where something is. This is a blood and bandages building…"

Figure 4.68 Building in Human (Text)/Building in relation to others from stage one participant.

"…And it has a lot of that legacy there that I'm quite interested in capturing because of a lot of 20th century stuff is the same. But what is that makes it different. I mean you will see some of the other photographs. That's the capturing of 19th century heritage. So, that's capturing the Brisbane street trees…" (Participant in stage one).

"…Yes, ah..It was built as six flats for parliamentarians and for a lady doctor. And it's quite curious. Here some of the pictures that you can see it in some Victoria too. If you look up at the top, I didn't get it in this photograph here; it

got a cat, for god sake, sitting on the top you know. And I can see it in Victoria too…" (Participant in stage one).

"…I will go back here (she's searching through her gallery to find some photograph), because I want to show you why I think it's a funny building. But, if you look at it, it's very dull house. It's quite an unusual church building. Partly all this fitting. You know, its feeling there. If you look at the towel, Ho Rapunzel Rapunzel. It's art of the fairy tale. It's quite unusual church architecture. I think..you know..various things…" (Participant in stage one).

"…I think this is a design company of something. I don't know what they do. I think it uses to be a beer place. If you see the mark, but you can read the line of the top. I like the old..I don't know the resolution on this email. I don't know what it is called. Is that art deco?..." (Figure 4.69).

Figure 4.69: Building in Human (Text)/Building in relationship to others from stage one participant.

"…I like it because of the thing on the side here, and I like this intricate veranda. It likes has very big exploring about it. It also has a very long history, and Queensland Club is sort of prestigious. Well I think it is. So, there is a lot of very wealthy people right there in that kind of thing…" (Figure 4.70).

Figure 4.70 Building in Human (Text)/Building in relationship to others from stage one participant.

> *"…This is quite interesting, I think, because again reflects the wealth of Brisbane, at 19th century Brisbane. It also reflects the concern they had. I mean, Queensland is pretty strong for the federation because they felt very vulnerable at the north, I think. It's quite interesting a lot of 19th century ports by the river…"* (Figure 4.71).

Figure 4.71: Building in Human (Text)/Building in relationship to others from stage one participant.

For one participant churches are particularly noteworthy in their ability to say something about a particular community and their cultural practices.

> *"…The nicest churches actually show a real history within them. So, this one does. It got a funny little side chapel, which is sort of..I think it's done by the Greek, for the Greek community or the Greek Orthodox or something. What's a strange?.. sort of a little change something different. They are also quite interesting because, you know, they have more of people who die and have*

enough money to be commemorated. They are interesting places…" (Participant in stage one).

4.1.4 Building in Time (Text)

Buildings were also made sense of in terms of time whether over the course of a day, from day to night, or over a period of time. As expressed by one participant:

"It's nice when you see some of the storms come this way. And you look out of the window…oh, it's time to go home. And if you kind of live in the city…you know you can't see around, what's going on around you…but this [building] lets you have a connection with the outside, daylight. For me it's really important" (Participant in stage three).

The building in Figure 4.72 is "liked" because

"…it reflects the buildings. And it's so much nicer than the HPSC building. Just another concrete one. You see, the glass takes the different colours, throughout the day…"

Figure 4.72: Building in Time (Text) from stage one participant.

For a participant in stage two and another participant in stage two, a day time experience of a building is compared to a night time experience. At night the building is regarded more favourably because of the artificial lighting exposing the interior as bright against the dark of the night.

"…it's the casino. Actually I want emphasis that actually in the night time it looks more beautiful…" (Figure 4.73).

Figure 4.73: Building in Time (Text) from stage two participant.

"..And the light, it's like yellowish, yellow colour…yeah..different time. There was a function here during the river fire… The light here gave us the nice event, yellowish colour and it's bright. It's quite nice…" (Figure 4.74).

Figure 4.74: Building in Time (Text) from stage two participant.

A sense of the temporal also emerged in a participant's excerpt in relation to experiencing interior spaces of the particular building. The following excerpt illustrates this in relation to the interior space (Participant in stage one) (Figure 4.75).

"…Anyway, this is the purposed built for the height all the less of it. And, in fact, a lot of 19th century buildings, which comprised the large space, had a special size for that. Where they have a big room, it was a high roof ceiling, and it's quite typical of a lot of 19th century buildings.…"

Figure 4.75: Building in Time (Text) from stage one participant.

"…They often have a lovely wood works and stuff like that…but yeah, the best church just has the interior richness that reflects a long period of time. So, you know, this would have, for example stuff from the forties and fifties commercial wall, chapels for the dead, whatever…memorial. So, it got..you can see a whole linear history just within the building which is quite nice,..and also very different, you know, in terms of style, pattern…" (Participant in stage one).

"…I like it. it's sort of traditional building with a beautiful elevation. You can see empty space or material combining with each other, create some rhythm. And also, in different levels, like I mentioned before. Everything is defined. It's sort of complex. It changed, easily change the different angle of each other. Add something to it or move something from it. It completes an evaluated design. Also people can relate to the history. This is in George. All of these I think are located in George Street…" (Figure 4.76).

Figure 4.76: Building in Time (Text) from stage one participant.

"...I think it's only the centre building because there are many main buildings, and this one was where I start from. Ho..It likes the UQ book picture. I just go inside and turn around to another building. I really like ancient structure, but there are not a lot here in the city. Yes, and when I was walking in the courtyard. It looks magnificent. You can feel like here there is a history..." (Figure 4.77).

Figure 4.77: Building in Time (Text) from stage two participant.

"…For this picture I want to capture the name of the building, and I think it tells something about the story or history of this building. I think Brisbane has its own long history. I think is really messy between the new buildings and the old ones..and yeah it's not properly structure. The old one looks good on its own if you do not compare with the background. It looks good…" (Figure 4.78).

Figure 4.78: Building in Time (Text) from stage two participant.

While time is identified here as a separate dimension it is in fact an integral aspect of people's everyday experience of buildings; an experience that unfolds over time as people go about their daily routines.

4.2 THE 'BUILDING-IN-CONTEXT' CONCEPTUAL FRAMEWORK

This chapter describes the outcome of this analysis in the form of a conceptual framework comprising four super-ordinate themes: (1) building in urban (text), (2) building in (text), (3) building in human (text), (4) and building in time (text) and associated sub-themes as depicted graphically in the following diagram (Figure 4.79).

How buildings connect with nature as experienced outside, while visiting and when occupying buildings for periods of time was identified as significant by participants in relation to their sense making about their relationship to buildings. Nature in this context includes actual natural elements such as plants, natural materials such as stone, air, light, including sunlight, sky, and water. It also includes built forms that mimic nature, for instance, organic forms and shapes, natural colours. The relationship between buildings and nature was understood in various ways such as ones of juxtaposition, reflection, implication, and materiality. Such relationships were made possible through building and interior attributes involving window openings, furniture layout, and climatic control devices such as awnings. The existence of natural elements in relations to buildings prompted various

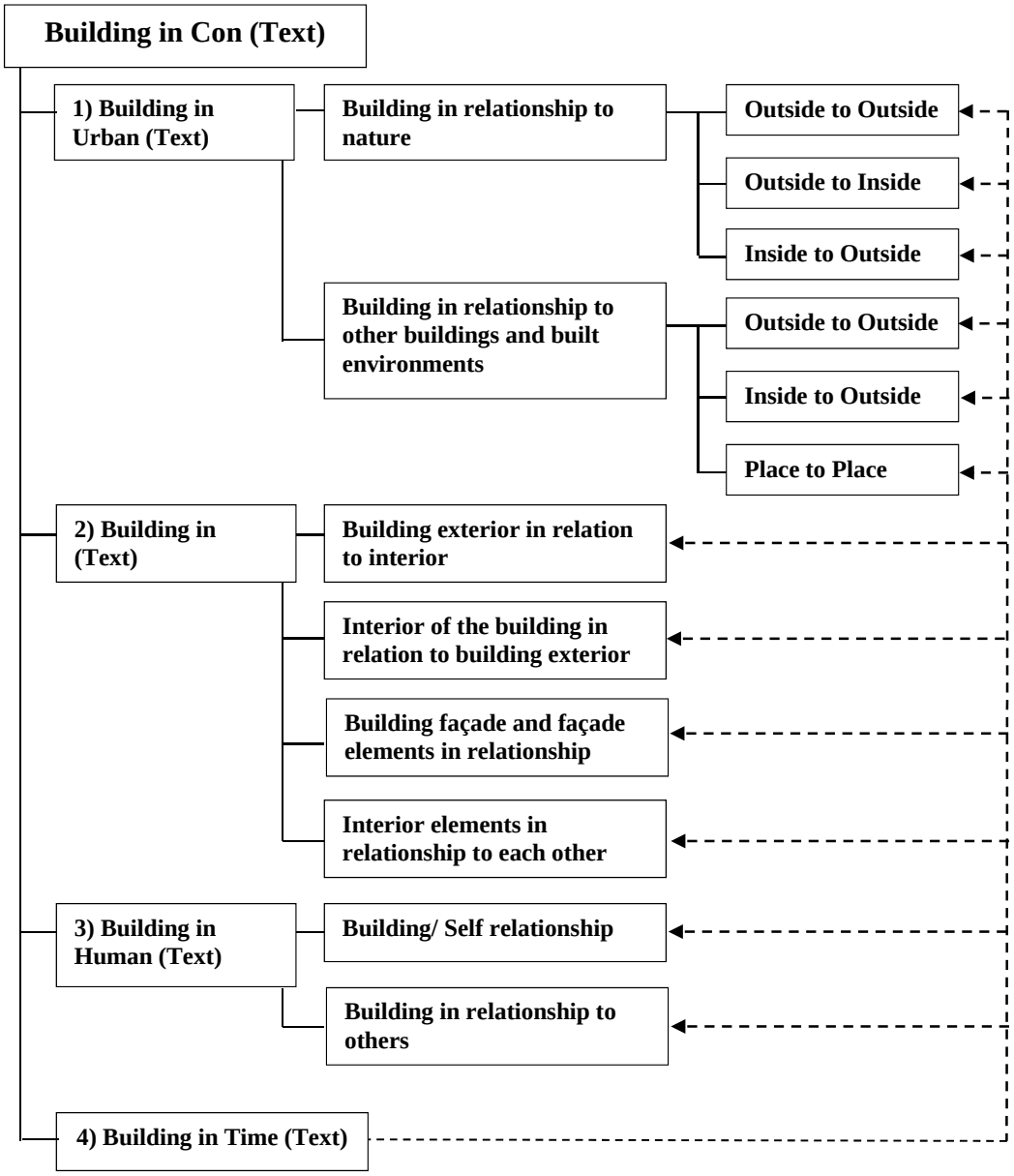

Figure 4.79: The 'Building-in-Context' conceptual framework and its associated themes.

responses including: surprise, liberation, relief, legibility, location, sense of wellbeing, comfort, informality, to mention but a few.

In addition, participants described how a building's relationship with other buildings or built environments/elements when experienced outside and inside influenced their appreciation of that building. Examples of other built elements include the city skyline, public places such as plazas or courtyards, street sculpture,

streets. In this respect the relations could range from quite close to very distant with the other built environments playing different roles including as connectors facilitating location in space and time, as bases for comparison and emphasis. From inside, building elements such as windows enabled views to the city skyline as well as the more immediate urbanscape. Certain buildings and their style also triggered memories of other buildings and places evoking feelings of melancholy, alienation, sense of belonging, familiarity. Buildings as places of work were compared to other places of work or to home. As places of work, for example, participants noted the building's role in supporting psychosocial needs as well as physical and existential needs. Buildings informed comparisons between cities and understandings of past times and culture.

While buildings as places suggested that they are more than the sum of their parts, the relationship of parts was also noted as contributing to sense making of that building. A central aspect of this is the relationship between inside and outside, as well as between interior spaces. Relationships between exterior elements of buildings were also highlighted as playing a significant role. For participants relationships were negotiated visually and/or kinaesthetically. Some participants made reference to sounds and smells. Many relationships were imagined or inferred. Visual connection aided by windows and doors that showed glimpses of people or furniture provided a sense of what to expect if one were to enter the building. Participants made judgements about the interior of buildings based on building expression central to which were the size and shape of windows or whether or not there were balconies and how open and inviting were entrances. Some entrances were encountered accidentally and had a sense of mystery inviting exploration of what lay within or beyond. Transition between inside and outside was understood to be facilitated by elements that were continuous and consistent.

Internally, participants highlighted functional reasons for spaces to connect horizontally and vertically in logical and efficient ways and for the relationship of spaces to accommodate activities in ways that facilitated particular activities and reduced stress.

With respect to the exterior of buildings attention was directed to various design elements such as line, shape, colour, texture and pattern and how these were expressed through particular compositional façade elements such as windows contributing to relationships of proportion and scale or balance and rhythm. Participants articulated their responses in the form of buildings as ugly or beautiful, as simple or messy, as dirty or well maintained and cared for, as comforting or scary, as congruent or incongruent, as plain or colourful, as authentic or contrived. In some cases, the same building evoked conflicting responses such as it being confused yet clean. Participants appreciated the use of contrast, shade and shadow, reflective materials. They tended to dislike the juxtaposition of different architectural styles in the same building.

Buildings were also understood in relation to self and others. In several cases, participants recognised the influence of attributes of self on their sense making such as previous experiences, their training and their routinized behaviour as well as of their physiological, psychosocial and existential needs and desires. Important then was an appreciation of the extent to which there was fit between themselves, the building and the broader environment physical and social.

Central to their engagement with buildings was time conveyed in various ways such as in terms of the desire to be able to see outside and the time of day as indicated by the path of the sun or changing reflections in the buildings nearby. From the outside, participants appreciated the different meanings evoked when buildings were viewed during the day in natural light compared to at night through the use of artificial lighting. Many of the buildings chosen by participants were older neoclassical buildings. Here buildings were attributed meaning through the stories they told of past times. Environments that were highlighted as special places were environments experienced while being or dwelling in those environments for periods of time.

As highlighted in the framework (Figure 4.79), time was an aspect of all themes and as such is understood as playing a significant role in connecting the themes as a whole. This is conveyed in Figure 4.79 through the lines back to the respective themes. Explicit reference to time also reflects the finding in the study of

the dynamic and changing nature of building experience. The relationships between/among the themes highlights how experience is understood in relation to spatial, situational, and social as well as temporal circumstances. The phenomenon of building experience conveyed in the framework was described initially from the position of different types of participants in different situations with the relationships revealing a transactional pattern contributing in a cohesive way to a framework. In graphically depicting the framework, a concerted effort was made to show these relationships as not being between elements where one element is understood to discretely cause a change in another element but rather that aspects of the person and context coexist and jointly contribute to meaning and the nature of aesthetic experience of buildings.

4.3 CONCLUSION

In presenting the findings of the study in this chapter, the focus of experience has been described as 'building' rather than 'architecture'. In the main, this is because of the concern that participants see the subject/object of this focus in an everyday pragmatic sense. The next chapter, Chapter 5, discusses the significance of these findings in relation to the literature reviewed and how ultimately they respond to the question: what is architectural experience in the everyday context?

5 Discussion

5.1 INTRODUCTION

This chapter discusses the significance of the findings presented in the previous chapter and that emerged through analysis of the first hand data collected in relation to participants' experience of buildings they selected as significant in their everyday life. It does this by reference back to the research aim; an aim that acknowledges a gap in current research. As previously noted, the thesis aimed to identify the various ways in which people make sense of buildings that are part of their everyday context in order to develop a holistic and contextual conceptual framework of this architectural experience. In this respect, the substantive objective of the thesis is to provide architectural and spatial design educators and practitioners with a pragmatic and accessible framework that captures the main elements of architectural experience and how they are interconnected informing a deeper more comprehensive understanding of the potential role of architecture and design in people's everyday lives; and from this the design of more meaningful and sustainable environments. It is also intended that the framework form a conceptually robust basis for future research and on-going refinement of the framework. Correspondingly, the research also sought to develop and implement an appropriate methodology.

In the following sections, a case is made for the value of the research in terms of its substantive and methodological contribution to knowledge of relevance to environmental psychology, design psychology and the spatial design disciplines of architecture, interior design and urban design.

5.2 SUBSTANTIVE SIGNIFICANCE

As just highlighted, one of the main drivers of this study is responding to the need for a contextualized, holistic framework for capturing architectural experience of the everyday. The need to capture the complexity of the everyday environments people experience has been identified by an increasing number of environmental psychologists and design theorists and commentators (Ittelson, 1978; Canter &

Craik, 1981; Bell et al, 1984; Altman & Rogoff, 1987; Nasar, 1994), and more recently by Smith (2001), Upton (2002), Gifford (2007), Kopec (2012), Steg, et al (2013), Gifford (2014), to mention but a few. Invariably this research points to the significance of buildings given their dominance in the built environment and our everyday lives and by association to the need to make buildings more meaningful and humane.

In this regard, the previous chapter presented the framework (Figure 4.79) developed by analysing the personal experiences of buildings as they are encountered in different ways such as a pedestrian, a visitor and an occupant. This multifaceted approach produced superordinate themes and sub-themes that very vividly reflect the contextual and textual nature of these experiences. The experiences of the participants clearly show buildings are not regarded exclusively as single or sole entities but rather as always having a relationship to other aspects natural, built or human that are part of it or perceived to be in proximity to it. In addition, the research reinforces early research such as that in environmental psychology by Marans and Speckelmeyer (1982), in architecture and interior design by Smith (2001), and that in urban design by Gehl (2006) of the influence of the person's relationship to a building (as a passer-by, a visitor, an occupant) on their experience of the building. Further to this however, the thesis research develops a conceptual model that synthesises and supersedes role specificity while also accommodating it as central to enriching understanding of how buildings as a whole are experienced.

5.2.1 Accommodation and extension of transactional theory in environmental psychology

As indicated in the literature review chapter (Chapter 2), of the research in environmental psychology that has sought to explore and better understand the relationship between people and environment this has been highly selective and restricted for the most part to simulated and highly controlled situations. While not as conceptually rigid, this is also the case for transactional theory, which professes to be more accommodating of the dynamic and contextual interplay involving people and their everyday settings. Extensive phenomenological research to do with the everyday and everydayness, place and sense of place, and aesthetics including environmental and architectural aesthetics, in addition has failed to make an impact

to any great extent. As highlighted in the following discussion, this thesis addresses these limitations and gaps through the 'Building-in-Context' conceptual framework (Figure 4.79) developed by undertaking an IPA-informed grounded theory study as detailed in the Methodology Chapter (Chapter 2).

To reiterate, "A fundamental feature of transactional research is its emphasis on the dynamic interplay between people and their everyday environmental settings, or 'contexts'" (Stokols, 1982, p. 42). More than any other research, the 'contextual' nature of person-environment interaction is very clearly evident in the respective superordinate themes and how they interconnect to form the 'Building-in-Contxt' framework. As will be described in this section, the framework captures as a whole how from a transactional perspective: "Contexts and settings include the qualities of the physical and social environment that may be psychologically relevant, the nature of tasks and instructions, the flow of events, how the settings relates to other aspects of a person's life, the 'meaning' and interpretation of the situation by the participants, and the familiarity of the participants with the setting" (Altman, 1992, p. 33).

In the urban context, for example, buildings are understood to have meaning through their relationship with natural as well as built elements ('Building in Urban (Text' superordinate theme). In this regard, nature, natural elements including climate associated with a particular geography, and outdoor spaces with organic forms and planting are identified by participants as playing significant roles. The significance of the juxtaposition of nature with a building was most evident in the case of participants working in a building. As noted in the findings chapter, visual and physical access to natural environments created a sense of novelty and surprise engendering personal liberation and enjoyment. Views of nature from inside buildings to the outside were also described as important in orientating the building and occupants in time and space.

When experienced from the outside, buildings were found to be more meaningful when they were physically or visually connected to other built elements. Several participants found buildings that facilitated access to other spaces and buildings very appealing. The relationship of buildings to other buildings or natural

environments offered opportunities of comparison and benchmarking. Juxtaposition of buildings also emphasised certain buildings inviting comparison based on typology as well as personal knowledge and past experiences to add other levels of meaning. Buildings understood to be out of context to other buildings nearby in terms of their formal and material qualities were judged to be incompatible and inappropriate.

For inside to outside, in 'Building in (Text)', the research reveals that when inside buildings, several participants noted the importance of being in the building could offer opportunities to connect to the outside, in these cases to the built environment. In one instance, a rooftop offered prospect to the surrounding urban scape and relief to working inside.

As noted previously, buildings were also understood to facilitate sense of place including place attachment (or detachment/alienation). The nature of place is conveyed in descriptions of cities once inhabited for a period of time, such experiences providing a basis for meaning making in relation to new environmental experiences. Present workplaces were compared to past workplaces. In this context, notions of place are expressed in various, multiple, and for people in the same place, often conflicting ways such as: perfect/imperfect; natural/unnatural; new/old; having character/soulless; crowded/open; dark/well-lit; difficult (and more expensive) to get to/easy to get to; old smell/new smell; social/antisocial.

For some participants in this research, it was apparent that there was a strong emotional bond between themselves and a particular city or workplace and that the characteristics of buildings, their symbolic meaning and what they supported, were very influential. In this respect, then, we see situations that appear to accommodate at least two models of place attachment proposed by Stedman (2003): the 'meaning-mediated' model which suggests that people become attached to the meanings that physical features represent rather than the actual physical features themselves; and the 'experiential' model which proposes that places become meaningful through personal experiences in them.

Returning to the contextual framework developed in this study and elaboration of its contextuality, attention now turns to the second superordinate theme of 'Building in (Text)' and how certain building elements such as the relationship between the exterior facade and the interior, the relationship of the façade and its elements, and the interior and its internal elements are instrumental in meaning-making about the building. For example, in terms of the inside/outside relationship, we see an understanding of the building mediated by what can be viewed of the interior, what is imagined to occur in the building and how design elements in a building's façade may impact on the experiences inside. Participants also tried to make sense of façade elements seeking a purpose for the experience inside the building. Buildings were understood favourably when they discretely revealed the activities accommodated within and had an 'inviting' (large) entrance. For others, spaces were inviting through being mysterious and by not revealing too much about what may lie within.

The opportunity to make accidental discoveries was noted as appealing. In addition, participants looked for congruity between internal and external façade elements. With respect to the façade elements formal and compositional characteristics were identified that in themselves created a sense of harmony or that when considered in relation to how they mediated light produced a positive level of interest. This was also the case with detailing on the façade that had strong, clear definition through contrast of line, shape, colour, texture, or pattern or was comprised of materials that lightened the building such as reflective glass.

As well as there being a very direct relationship between the building as perceived participants also engaged with buildings symbolically. For instance, clean buildings were viewed as buildings that were cared for, with cleanliness helping to make a building more appealing even though it has other less appealing qualities.

In the literature, focusing primarily on environmental assessment, likability involving subjective assessments of feelings about the environment comprises two kinds of variables: visual aspects of scenes and evaluative responses (Nasar, 1998). Nasar defines attributes of environmental preferences in terms of likable feature into five elements: 1) naturalness, 2) upkeep/civilities, 3) openness, 4) historical

significance, and 5) order. Comparing the notion of 'decorum' as highlighted in this study with the literature, we see here a connection to the 2nd and 5th element. Analysis of data also revealed desire for logic in relation to internal spaces vertically as well as horizontally and for the building to facilitate movement from one space to another efficiently. The notion of order was also expressed in relations to building elements, such as columns, windows, and sunshades.

The third superordinate theme ('Building-in-Human (Text)') illustrates the contextual nature of sense making in relation to buildings through its emphasis on the participant themselves as well as other people. This was particularly evident in the data collected from participants working in the selected building with attention drawn to the building and its effectiveness in supporting their work practices and activities including social interaction formal and informal. Various factors were identified as causing stress and discomfort such as: noise from fellow workers or other sources; inadequate lighting; inequitable access to natural light. Not being able to address these by adapting the environment or their behaviour and location was also understood as contributing to lack of control. Several participants appreciated it when they found buildings that told stories of past uses and events and of society in general at a particular time.

Critically reflecting on themselves as pedestrians, visitors and building occupants participants identified routine, pace and other people as obscuring aspects of buildings and contributing to their taken-for-grantedness. Buildings or elements of buildings that disrupted the routine or were not the norm usually invoked positive feelings. Some participants were aware of how past experiences or interests informed their sense making in relation to buildings.

While the three superordinate themes just mentioned have a temporal dimension, responses by several participants drew explicit attention to how time was significant in their sense making, inviting the categorisation of the fourth superordinate theme 'Building-in-Time (Text)'.. Changing reflections and colours on buildings reinforced 'day time'; artificially lit interiors captured in windows heralded 'night time'; types of detailing, materials, signage and spatial characteristics spoke to a time in the past. The emphasis of time in this study is noteworthy given that it is

rarely explicitly mentioned and considered in environmental psychology studies (Gifford, 2007; Barnes, 2006).

Another concept used to differentiate a transactional world-view, which is also connected to the concept of contextualism, is that of holism. Holism considers that phenomena should be studied as 'holistic' unities comprising people, psychological processes, the physical environments, and temporal quality and that time and temporal qualities are integral to such phenomena. This latter aspect as just described is very vividly captured in the framework through the feedback loops of the Building in Time (Text) thematic element. Further to this, the framework highlights people (Building in Human (Text)) and physical environments (Building in Urban (Text) and Building in (Text)).

To date, the discussion has emphasised environmental elements. With respect to persons and factors such as age, personality, culture, experience, gender, and motivations, comparison across participants did suggest an influence of these factors on their experience and their articulation of that experience. This was particularly evident regarding training and educational background with designer participants preferring to use a design language to explain their relationship to a building. However, as previously discussed the aim of the thesis was to produce a framework that had general conceptual value demanding involvement of participants with diverse attributes and movement beyond the individual as the ultimate unit of analysis to the group collectively.

In considering the participant person and the value of experience in-situ, the research for the first two stages also very consciously invited participants to choose buildings that were part of their everyday experience and that they liked and disliked. While the research was interested in why they chose specific buildings, it was not the intention to draw correlations between specific personal and environmental attributes but rather to accommodate their potential influence captured sufficiently to develop a framework that highlights contextual dimensions of person-building relationships and enables further more detailed attention from a broader contextual position. Also of relevance from a person perspective is the way in which the physical orientation

of the participants to the building influenced the nature of their description of their experience of the building.

In relation to place attachment, Gifford (2014) extends 'persons' to include the people associated with a particular place and that place has meaning to people because of those people associated with it. This is evident in this study in various ways, for example, in references to buildings having meaning because of what they say about society at a particular time, in a workplace facilitating social interaction or impacting negatively because of the noise generated by fellow workers in open plan offices. As previously highlighted, the significance of 'persons' in this study is reflected in it being identified as a superordinate theme of 'Building in Human (Text)' acknowledging two dimensions of the building/self-relationship and the building/other relationship.

In terms of psychological processes, Gifford (2007) describes these as comprising psychological process for example, exploring, working, playing, socialising, and learning. According to Altman & Rogoff (1987) in citing Dewey & Bentley (1949), psychological phenomena are described using actions verbs like acting, doing, talking. Certainly most of these are evident in this research but what is also evident because of the study's phenomenological focus are the processes of 'being' and belonging/not belonging and of the activities associated with these processes. There are several levels of 'being' to highlight including being a passer-by who is relatively new to the city or who is very familiar with it; being a visitor to a building; being a worker in a building. Associated activities include walking from A to B or just wandering around looking for somewhere to eat at lunch time, travelling via some other mode such a car or train, entering new or familiar spaces, interacting with others, standing/sitting and contemplating. In some of Gifford's later work (for example, Gifford, 2014), there is explicit recognition of processes involved in place attachment; these being: place-related distinctiveness – knowing where one is in relation to other places; place-referent and place- congruent continuity – appreciating similarity between places; place-related self-esteem – feeling good in a place; and place-related self-efficacy – appreciating that a place satisfies needs.

As was evident from the review of the everyday and everydayness, the processes and activities mentioned previously are not disparate but are integrally connected through the condition of everydayness. Central to this are the trajectories associated with spatial practices (influenced by buildings) and the "unforeseeable sentences, partly unreadable paths across a space" (de Certeau, 1988, p. xviii) formed by these trajectories. The participants in this research are "the ordinary practitioners of the city [who] live "down below", below the thresholds at which visibility begins – walkers whose bodies follow the thick and thins of an urban "text" they write without being able to read it" (de Certeau, 1988, p. 93) – a text that this study via the participants rhetoric of walking and working attempts to represent (albeit in only a very humble and tentative way given the invisibility and elusiveness of everydayness) through the titles of the superordinate themes and their descriptions.

Herein the research also plays homage to the role of the body and the notion of embodiment as described in the literature to do with seminal research by existential phenomenologists such as Merleau-Ponty and more recently by Upton (2002) who calls for research that draws attention to the physicality of everyday life and the materiality of architecture. As is evident in this research, the embodiment of the everyday is multisensory; it is also affective as well as functional and social. And as conveyed through this study and supported by research of place, it is always in relationship with something in a continual process of becoming, of responding to our anticipations (Finlay, 2011); and, as such, it is inherently existential (and pragmatic).

As is overtly evident in this research, buildings are places as well as objects and spaces. For Gifford (2007, 2014), places constitute a broad range of physical objects and settings spanning houses, streets, buildings and natural environments. Places also vary in scale from small objects, to cities, to countries. The routine mobility of bodies in space creates "place-ballets" (Seamon, 1982). Place then is lived space the essence of which is largely unselfconscious but profoundly meaningful (Relph, 1976a). In terms of the thesis study, the analysis revealed modes of place experience as described by Seamon (1982). For example, several participants identified urban settings to which they have a strong sense of belonging. This constitutes an 'insideness' mode of place. Feelings of disconnection and alienation were more evident for some participants in their experience of their new

workplace representing an 'outsideness' mode of place. Buildings experienced from the outside tended to reveal more objectified relationships and modes of place. In some cases, buildings were regarded as incidental to other activities.

The experiences of participants in the new workplace also revealed behavioural processes of familiarisation and a preparedness to be open about new ways of encountering the work 'place'. Participants were also open to being surprised, seeing value in places that were mysterious and not totally disclosing. While buildings may be perceived as objects, particularly when experienced from the outside, this research revealed a desire by the participants to interrogate them internally and externally (visually and kinaesthetically), it would appear in the hope of finding something more meaningful or at least more pleasant. The opportunity to obtain glimpses inside buildings particularly of other people undertaking activities enabled that place to be vicariously experienced. In all, the research supports constructs of place that recognise integration of various person and environment features such those by Gustafson (2001), Stedman (2003), Kyle, Mowen and Tarrant (2005), and Turner and Turner (2006).

Generally, as proposed by Gifford (2014) it seems for the participants in this research that buildings are made sense of as place through their ability to engender a sense of security; that facilitate sense of belonging and fit involving the person; that provide a sense of continuity; and that enable successful pursuit of one's goals. Earlier work of Bell, Fisher, Baum and Greene (1984) makes note of this in their understanding that people in their everyday situations perceive the environment holistically. Here 'holistic' refers to processes that enable comprehension and identification of information that serves individual goals and values and action appropriate to the setting or for adapting the environment to suit specific goals or needs.

5.2.2 Accommodation and extension of other environmental psychology theories

As conveyed in Chapter 2, Kopec (2012) identifies four theoretical approaches to understanding the nature of person-environment relations: stimulation theories; control theories; behaviour setting theory; and integral theories such as transactional

world-view emphasised in the previous section. The description just provided of the contextual nature of sense making in relation to buildings highlights the significant role played by buildings and related elements (built, natural and human) as sources of sensory information. It also reveals how similar elements are interpreted differently by different people or in different situations and how participants manage stimuli. In this respect, we can see how other theories such as stimulation and control theories have a place within a broader conceptual framework. As in the case of the Ecoscience building, the study revealed attempts by participant occupants to understand the nature and impact of stimuli such as noise, to adapt to this in a way to relieve stress and enhance well-being and performance. In the case of the Ecoscience building we also see attempts to take control by regulating social transactions and/or regulating boundaries to define personal space and territory.

In addition, the Ecoscience building is an interesting case from the point of view of behaviour setting theory with the intention of the management to inform through design prescribed patterns of behaviour and programs (greater collaboration and innovation through colocation). Apparent here is how well these features fit and serve the goals of some people but not others. Also apparent here and through the other stages of this research is how context influences behaviour which aligns with the ecological model underpinned by behaviour setting theory.

5.2.3 Accommodation and extension of environmental perception and spatial cognition theories and approaches

In terms of environmental perception, the review in Chapter 2 drew attention to: Brunswick and probabilistic functionalism; Gibson's affordance theory; Berlyne and collative properties; psychophysical theories, psychological theories, and phenomenology. While this research did not produce findings that support Brunswick's or Gibson's theories, it did not produce findings that suggest irrelevance. This is unlike Berlyne's theory where participants described being attracted to specific environments or environmental features and to properties such as novelty, incongruity, surprisingness and fittingness. In addition, participants talked about particular aspects of building evoking particular emotions and in this sense psychophysical theories may be appropriate for exploring this further. Psychological theories through their emphasis on mental process and influential factors such as

knowledge, expertise and past experiences are highly relevant as already appreciated in the participant profile and observations of apparent influence on sense making. Shifting the focus from the brain to the body in space and the world as immediately experienced are phenomenological theories. Here a distinction is made, as is the case in this study, between the subjective and habitual body and the objective body as observed. In recognition of this, Interpretative Phenomenological Analysis (IPA) is used as a methodological lens to help guide as in the hermeneutic tradition interpretation of the participants' sense-making (also involving interpretation).

The theories just described are significant to this study in their connection to the field of aesthetics. Descriptions by participants in relation to their chosen buildings reveal a range of beliefs such as: buildings should be functional (in line with Kant); the function of buildings is a condition of its beauty (Schelling); buildings should express their structure and materiality (Schopenhauer). In general, however, the participants recognise that buildings fulfil several roles: practical; emotional; social; cultural; existential and while some regard them formally in their objective stance as they would objects of art, they also regard them as environments and spaces to be engaged with and experienced; understanding buildings pragmatically through the habits of daily life and an associated sense of fitness (Ballantyne, 2011). The previous discussion accommodated in this research framework supports the view of Carlson (2010) that the various aesthetic positions should not be seen as mutually exclusive and in conflict but rather as complementary.

Shifting now to theories of spatial cognition, we see in this research indication of participants engaging interactively with parts of the environment, not passively as in simulation research (Evans, 1980). In this respect, environmental information is meaningfully involved with the real world setting. As the participants walk around the city or through the building they work in two processes are central: cognitive mapping and way-finding. Helpful in this regard is the legibility of the street including buildings or the interior of the building. In various comments, participants make reference overtly or implicitly to paths, edges and districts. In addition, participants also mentioned how views to adjoining elements or environments such as the outside from inside a building helped orientate them in time, space and place.

In all, the participants' responses constituted appraisals involving personal impressions of particular streets, buildings or parts of buildings. Undertaking their appraisal, participants used various descriptors found in a variety of studies. For instance, buildings were appraised in terms of: pleasantness and unity (Kuller, 1980); novelty, incongruity, surprisingness and fittingness (Berlyne, 1951); complexity and order (Nasar, 1984); coherence, legibility and mystery (Kaplan & Kaplan, 1982). In line with Nasar (1994), these abstract qualities were often complemented with attention to symbolic qualities such as design style and schematic qualities such as the categorisation of the building as a church. Further to this and in support of Gifford (2007), buildings were also appraised in terms of: place attachment – the profound experience of being part of a place; ideological communication – the way a building signifies a concept such as a philosophical concept; personal communication – what the building says about its occupants (for instance, their socio-economic status); and architectural purpose – the building's function in relation to its form. In some instances, participants expressed attitudes as in the case of the value of the building to the city and to society. Because of the holistic person-centred approach of this research, it did not involve environmental assessment. This is in contrast to many studies in environmental psychology and also practices in architecture such as post occupancy evaluations which although undertaken rarely generally focus on performance aspects of the building such as energy usage.

As highlighted in Chapter 2, research in environmental psychology has essentially three foci: personal influential factors and attributes such as age, gender, culture, and education and professional training; environmental factors and attributes that contribute to aesthetic and visual quality; and person-environment relational factors. While this research adopts the latter focus in response to the identified need for more comprehensive and overarching frameworks, the discussion to date has attempted to illustrate the accommodating potential of the framework for a range of integrated studies as well as for studies adopting an environmental focus or a person focus. In addition, the framework represents a mechanism for further developing the relationship between design and environmental psychology and the emerging area of design psychology.

Also reviewed in Chapter 2 are various approaches to and methods for studying person-environment interaction. These will be considered in relation to the current study in the following section that highlights its methodological significance.

5.3 METHODOLOGICAL SIGNIFICANCE

This study contributes methodologically in various ways. In terms of environmental psychology and design psychology, the research responds to emerging recognition as highlighted in Chapter 2 of the value and potential of phenomenological research for complementing experimental approaches that have tended to dominate environmental psychology research. As illustrated through the overview of environmental psychology, studies of the built environment and user interaction are generally experimental in nature, that is, undertaken in controlled situations through simulation. In contrast, phenomenological studies offer the chance of studying behaviour in-situ or as close to this as possible responding to increasing awareness of the contextualized nature of meaning. The theoretical framework developed in this study is very much a testimony to its phenomenological approach and of "…the need for methods that do justice to emerging contextualism and integral approaches" (Gifford, 2007, p. 17).

Phenomenological studies do however as noted by Gifford (2007) appeal to different sorts of researchers than those who adopt experimental approaches. Chapter 3 of this thesis describes in detail the explorative and open-ended nature of the approach and the need for the researcher to develop sensitivity to the context and to adopt an iterative approach. This more nuanced approach demanded the complementary use of an overarching methodology Grounded Theory with Interpretative Phenomenological Analysis (IPA). Here, Grounded Theory provided guidance in undertaking a highly qualitative study to inform a theoretical outcome, although as noted previously, the contextual framework is at this stage more a conceptual as opposed to a theoretical framework. In this regard, the framework very much reflects IPA used to more fully understand how people make sense of buildings that are part of their everyday context. Given this research interest in the role of the built environment, in this case buildings, the research adapted IPA to be more responsive experientially and environmentally. One of the ways in which it did this

was through the use of photo elicitation as a method for immersing the participant in context and for drawing attention to the built environment. In these respects, the research also makes a contribution to Grounded Theory, IPA and experiential phenomenology.

5.4 PRACTICAL SIGNIFICANCE

In response to the study's aim, the framework developed was intended to have immediate practical ('ordinary') value for design researchers, design practitioners and design educators. Integral to this was an understanding of the role of buildings as central to an aesthetics of everyday life. Unlike discourse that maintains that buildings are not architecture unless they evoke a sense of the whole (Goodman, 1985; Mitias, 1999), this research suggests that a person's relationship with a building, even if just walking by, is always something more than a relationship solely with its physical structure. As conveyed in this research, participants in their relationship with buildings actively search for potentialities to be realised and that this involves attempting to understand the building spatially; a significant aspect of which are visual and/or conceptual projections to the inside, and when inside, from the inside to the outside. In the everyday context, then, and as expressed in the title of this thesis, buildings are experienced architecturally.

Pragmatically, for researchers, the framework has the potential to help position past and current studies that deal with architectural appreciation alerting them to the fact that most emphasize only certain aspects of the person-environment relationship rather than necessarily representing a comprehensive understanding. The framework's accommodation of various environmental psychology frameworks and theories of perception and cognition, and building assessment and appraisal provides a conceptual basis for directing the application of specific approaches and lenses to particular aspects of the person-environment relationship, for example, issues of territoriality, while also appreciating that such issues exist within a broader context.

Furthermore this research indicates that for the most part studies conducted in environmental psychology of architectural appreciation have not accounted for qualitative differences in people's experience and of the multidimensional nature of this experience encompassing in an integrated way functional, psychosocial and

existential qualities. This study provides insights which would inform a more expanded and sophisticated understanding of building meaning making especially by laypeople and in this way constitutes a basis for reconciling the different ways in which architects, designers and lay people relate to buildings.

Professionally, the framework demands reconsideration of the relationship between the architect/designer and the user; a relationship that recognizes an exploratory collaborative role for each and of the personal and socio cultural value of buildings and architecture that connect meaningfully at an everyday level across diverse groups of people. With its recognition of the role of nature, space and place including other people, the framework also reinforces the need for a multidisciplinary approach to design, one that seeks the collaborative engagement of other disciplines such as landscape architects, urban designers and interior designers. In terms of building evaluation, the framework is the impetus for more comprehensive and inclusive approaches; approaches that focus on process as well as outcome; that relate quality to user health, wellbeing and satisfaction as well as to quantitative measures of building performance and the more formal visual benchmarks of aesthetics. Also highlighted in this study is the need for building evaluations such as post occupancy evaluations (POEs) to more effectively consider the building in context (walking past and entering buildings as well as occupying them) as well as time and how user experience is impacted directly and indirectly.

The previous insights afforded by the outcome of this study in the form of the conceptual framework also have implications educationally including the need to expand design curricula dealing with aesthetics to move beyond the building in exclusive physical formal terms to environment that is contextually located and experientially inhabited. Associated with this is the need for greater attention to how design students can be taught to communicate and work with clients in exploratory and sensitive ways rather than the more traditional prescriptive and patriarchal ways. Central to this is access to knowledge about person-environments behaviour and for such knowledge to have an overt presence within a course. Also important is an appreciation of tools and techniques that facilitate shared understanding such as photo elicitation. As an example of a very pragmatic basic application, the

framework offers a template for guiding design generation and evaluation. For example, it could be used to pose questions such as:

- How is your proposal sensitive to the urban context (natural as well as built)?
- In terms of nature, how have you conceptualized this and how have you considered its experience from different locations and orientations?
- How have you considered time and its direct/indirect influence on users?
- What assumptions have you made about the users and how have you attempted to reconcile individual needs with collective needs and desires?
- How have you attempted to reconcile your conceptions of quality design with what you understand is valued by users?

5.5 CONCLUSION

In conclusion, the findings of the research in the form of the building-in-context framework and associated thematic descriptions contribute significantly to research in environmental psychology, design psychology, Grounded Theory, IPA and the spatial design disciplines of interior design and architecture including urban design. As highlighted, the framework is accommodating of environmental as well as design psychology macro level theories and concepts of person-environment interaction through to micro level theories and concepts of perception, cognition and experience.

The research found that architectural appreciation involving buildings extends beyond physical and formal qualities and that this is particularly obvious when buildings are considered by visiting them and working in them rather than just viewing them from the outside, the latter being the main focus of studies on architects and lay persons appreciation of buildings. Even when viewed from the outside, the research utilizing phenomenological sensitive photo elicitation revealed a form of engagement that went beyond a concern for the building's objective physical properties with the suggestion that this was more prevalent in the case of non-architects. When the experiences of designers and non-designers were considered together across the three cases of engagement, the research found a highly dynamic, complex and contextual form of engagement. In this respect, the research

challenges previous research such as that by Brown and Gifford (2001) that proposes that closing the gap between designers' and nondesigners' relies (solely) on a better understanding of the relationship between the physical or formal properties of a building and its conceptual properties as understood by designers and nondesigners respectively. Such a proposal is deemed by this study to be too narrowly focussed on the building as observed rather than experienced. Overall, then, the framework invites a contextual consideration of our relationship with buildings and in this regard provides an expanded basis for further understanding how buildings can be meaningful to diverse groups of people.

This research provides a number of important insights based on aspects of the findings which have immediate and broad relevance in terms of implications and application. In particular, these aspects of the findings are:

- The role of context associated with the lived everyday experience of people with buildings and its various person, environmental and relational dimensions
- The multifaceted nature of engagement with buildings wherein people can have conflicting views of buildings and where some aspects are given greater emphasis or priority
- The significant roles played by nature and time independently and jointly.

The research shows that internal-external value orientations are implicated in how people regard buildings. In this regard, the researcher knows of no other studies which have provided such an extended and inclusive conceptualisation. Further, this qualitative study illustrates how people make sense of buildings and demonstrates that while there is variability there is also potential through the different forms of engagement for buildings to be meaningful for diverse groups of people.

With no studies investigating architectural appreciation in a way that integrates micro and macro levels of analysis phenomenologically, any studies of architectural appreciation conducted with demonstrable sensitivity to the prescriptions of an integrated GT/IPA approach, may at this time be regarded as contributing timely and useful perspectives to these methodological areas as well the emerging field of design psychology. As identified previously, whereas there have been many studies

of how people (architects and lay people) conceptualise buildings, studies adopting a phenomenological approach for this purpose in environmental and design psychology are surprisingly rare. Further the researcher believes that the present study is the first in environmental and design psychology to adopt a phenomenological approach while also aiming for a broad conceptual outcome. From this perspective, the research can be seen as significant in contributing much needed insights into building engagement and how people in an everyday urban context make sense of this relationship. Such contribution however needs to be considered within particular aspects of the research that have constrained it. These are identified in the following chapter informing recommendations for future research.

6 Conclusion

6.1 THESIS SUMMARY

This thesis responds to the need for a comprehensive, contextualized understanding of how people make sense of buildings. Integral to this was an exploration of how people articulate their relationship with buildings as they pass by, visit and occupy them when undertaking their everyday activities. Further to making this understanding usable in education and practice, the research sought to develop a pragmatic conceptual framework that was accessible but also conceptually robust. Underpinning this is the desire for architecture to more fully exploit its potential regarding the design of more meaningful and sustainable environments.

In terms of how people experience buildings in the everyday context, the study found that this was highly transactional with various facets contributing to a holistic (aesthetic) appreciation. These facets are described in terms of four interrelated themes categorised as: (1) building in urban (text), (2) building in (text), (3) building in human (text), (4) and building in time (text). The themes constitute the 'Building-in-Context' conceptual framework which extends transactional theory and in so doing makes a substantial original contribution to environmental psychology as well as to architecture and design educationally and professionally. As described, the framework presents the lived experience of buildings as dynamic and unfolding as opposed to static and constant; as emotive and existential as well as conceptual and perceptual. The thesis also contributes methodologically through the integrated use of GT to guide the development of the conceptual framework and IPA to capture the aesthetic nature of our relationship with buildings.

In summary, the thesis document commenced by establishing in **Chapter 1** the impetus for the research, its aims and objectives, and its scope and significance. The second chapter of the thesis, **Chapter 2**, the literature review, positioned the research within the domain of environmental psychology, and more specifically, research adopting a transactional perspective. As highlighted, these studies invariably employ approaches ranging from environmental simulation, to semantic analysis, to

environmental descriptors, to statistical methodology. Specific data collection methods most generally involve self-reporting, time sampling, behaviour-inference methods, psychophysical models, and, with increasing recognition of its value, phenomenological approaches reflecting various orientations most notably existential phenomenology with its concern for the 'life-world' and how people make sense of and behave within their everyday world. To this end, the review then focuses on key concepts such as the everyday, place, and aesthetics.

Drawing on the foundational work of Lefebvre and de Certeau, the everyday is described as a set of ritualised, 'ordinary' activities that connect systems and major sectors of life. In terms of the settings in which these activities are played out buildings play central roles. Despite this, however, theories of the everyday have had little deep and enduring impact in design and architecture inviting calls for more extensive and genuine attention to the embodied physicality of everyday life and the materiality of architecture. While Lefebvre and de Certeau acknowledge the relevance of phenomenology in relation to everydayness, this has been ignored for the most part by more contemporary researchers and commentators including environmental psychologists. This is despite their calls for a greater understanding of the physicality of everyday life as noted above and despite significant research by existential phenomenologists in respect to dwelling and place as outlined in this chapter. As highlighted in the section on aesthetics, the conception of architecture as art, particularly high art, has in many ways compromised its consideration at a 'mundane' level where buildings are judged pragmatically through life-habits and how they are accommodated socially, emotionally and existentially as well as functionally. Also missing from research is the idea of spatiality as a source of aesthetic enjoyment and of the need to give closer attention to interior and exterior spaces. The neglect of urban 'space' in comparison to the building as object is perplexing given the relatively long history of environmental aesthetics and its concern for similar issues in relation to the natural environment and what are deemed to be the major contributing factors of aesthetic experience. In this respect, there is growing support in emerging research for a conjoining of what tends to be understood as disparate emphases in relation to person and environment.

In the concluding section of Chapter 2, the emphasis shifts to the design professions of architecture, interior design and urban design, and to the need for environmental psychology to better inform design and address the gap that exists between designers and users. To do this however the thesis argues for a pragmatic conceptual framework that reflects a holistic, contextual view of building engagement and that accommodates theory focussing on particular aspects of person-environment experience; a framework generated from the everyday lived experience of people in the urban environment, in particular buildings that play a central role as we pass them on the street, and as we visit and occupy them.

In **Chapter 3** of the thesis, the methodology of the research is presented. It was apparent from the research question that the research needed to be conducted in an inductive way and that any emerging conceptual framework needed to grounded in the context of peoples' everyday routines as they traversed the city and engaged with its buildings. For this reason, Grounded Theory (GT) was chosen. As required in GT, Chapter 3 commenced by making explicit the interpretative philosophical underpinning of the research question in the process making a case for the compatibility of GT with the aims and objectives of the research. The next section then provides further detail on GT and IPA; the latter methodology being introduced later in the research to better capture the existential and idiographic nature of the participants' experience of and with their selected buildings. The inclusion of photo elicitation proved to be a very effective method for enabling participants to talk openly and freely about their experience of the building in the photograph taken by them. Following an outline of the study's methodological underpinning, the chapter provides detailed information of the research approach with specific sections addressing participant recruitment and selection, and data collection and analysis. As outlined in the concluding section on research quality and rigour, a concerted attempt is made in this chapter to be detailed and transparent, so as to substantiate this research's commitment to rigour, and of special significance, its contextual sensitivity.

In **Chapter 4** a holistic, contextual conceptual framework is presented through superordinate themes that are the result of integrating thematic coding outcomes of the three stages of the research: 1) walking on the street, 2) visiting the building, and

3) occupying a building. With respect to the research question: How do people make sense of buildings in their everyday context?, the research found that people make sense of buildings in context; that is, meaning making is an outcome of both the person and the environment. What this means at a finer grain level is conveyed in the superordinate themes of: (1) building in urban (text); (2) building in (text); (3) building in human (text); (4) and building in time (text). These can be explained further through the findings that sense-making is influenced by the person and their relationship to the building as it relates to other environmental elements such as nature as well as its relationship to other buildings and environmental elements and that there are different dimensions to this depending on whether the person is on the outside of the building looking around, or on the outside of the building looking in, or on the inside looking to other interior spaces or to the outside.

In addition, the framework captures the meaning of environments as places wherein memory plays a significant role of enabling comparison with environments visited in other cities and other times; memories that when explored reveal emotional and existential connections to particular environments. Sense-making is also facilitated by the person's relationship to the building and to the elements of which it is comprised. In addition, meaning-making involves a relationship with oneself as well as with others. Not apparent in most other person-environment studies is the role of time, which in this study constitutes the fourth superordinate theme. Here the participants note the influence of the time of day, or a particular historical period. In Chapter 4 these superordinate and sub-themes are illustrated through the voice of the participants and their photographs.

The significance of this conceptual framework just outlined very generally is explored in the Discussion chapter, **Chapter 5**. Here arguments are made to the contribution of this research to transactional research in environmental and design psychology, Grounded Theory, IPA and the spatial design disciplines of interior design and architecture including urban design. As highlighted, the framework is accommodating of environmental as well as design psychology macro level theories and concepts of person-environment interaction through to micro level theories and concepts of perception, cognition and experience. In this respect, it is envisaged the framework will facilitate the translation of research into practice and inform the

development of a more coherent and distinctive core for environmental as well as design psychology.

For the spatial design disciplines, the findings address a number of limitations in design knowledge and practice. While environmental research has highlighted a discord in how designers appreciate buildings compared to non-designers, this study suggests that while non-designers may not use the same language as designers their everyday experience of buildings represents a complex multifaceted and sophisticated appreciation of buildings and architecture, which in many ways may be richer than a more narrow discipline informed focus. In all, this research is a reminder for designers of the dialectic and contextual nature of experience and of the need for buildings to be regarded as part of a complex, dynamic relationship. The inclusive approach adopted by this research was intended to produce a framework that could inform the design of urban environments that are relevant for a range of users.

In addition, the research makes an original contribution methodologically. It responds to the perceived need by environmental psychologists to undertake more phenomenological research and in doing so also makes a contribution to the on-going development of GT and IPA both independently and as integrated methodologies. In all, the framework as well as the methodologies and methods have procedural pragmatic value for designers and researchers. Its value however can only be evaluated within the constraints impacting the research. These are now discussed in this Conclusion chapter, **Chapter 6**.

6.2 LIMITATIONS OF THE RESEARCH

The research outlined in this thesis was influenced by various constraints, or what are referred more generally as limitations. Some of these were imposed internally in order to manage the research and respond to the requirements of a PhD; some were externally imposed.

In terms of external constraints, what could be termed a constraint but that was also an opportunity was the absence of research substantively and methodologically such as what has been conducted in this study. In this respect, the research was

largely dependent on strict application of methodology, however as noted by Gifford (2007) a methodology employing phenomenology requires a certain type of researcher. In this case, both GT and IPA are relatively new methodologies so again there were only a few studies that could provide guidance and fewer still that adopted an integrative approach. The systematic and iterative nature of both methodologies however was of substantial support in helping develop skills over time and respond to the limitation of researcher inexperience. However, as highlighted, the methodologies were highly compatible with the philosophical position adopted by the thesis delimiting the tension that can sometimes occur when there is a mismatch between research goals and methodology. Substantively, the research topic covered various disciplines including the very extensive and complex area of environmental psychology as well as aesthetics. While the focus on the transactional perspective in environmental psychology may be considered restrictive in that as explicitly recognised in the thesis it represents only one of several perspectives, this was considered relevant given its alignment with the ontological and epistemological nature of the research question.

Another issue impacting the research was the difficulty in recruiting participants from the general population. Fortunately, this was accommodated through the inductive nature of GT reflected in the staged structure of the research and the idiographic nature of IPA supporting a small number of participants, although some uncertainty remains as to how well this was reconciled suggesting recommendations made later on regarding further smaller, in-depth studies of homogeneous samples as well as broader, more diverse samples.

As mentioned previously engaging sufficiently with the literature and developing data collection and analysis skills took considerable time. The degree to which this possible was constrained by the time allowed internally for this study. Factors that exacerbated this included arranging an interview schedule that addressed the availability of the participants, the time needed to communicate effectively with participants whose first language was not English, and the time taken and skill needed to personally produce transcriptions of the interviews. It was also thought that the research could be better managed by defining the boundaries for the photo-elicitation activity however invariable participants wanted to select buildings outside

the boundaries ultimately necessitation a much more flexible approach and interpretation of urbanscape.

The constraints and limitations identified in this section inform recommendations discussed in the next section.

6.3 RECOMMENDATIONS

To address the limitation previously noted and further refine the conceptual framework, the study makes the following recommendations:

- The inclusion of homogenous groups of participants in IPA studies to extend depth of understanding of how particular groups of people and how specific attributes inform sense-making in relation to buildings. Such an approach provides opportunity to further understand the nature of the difference between designers and the general public in terms of their appraisal of buildings and to explore ways in which such difference can be bridged
- GT studies that involve larger groups with greater diversity so as to open the potential for wider translation and application
- Additional integrative studies that extend our understanding of the value of complementary micro and macro analysis
- Studies that focus on specific types of buildings in various climatic and cultural environments
- Studies of the inside-outside/ outside-inside relationship and how its spatial affective quality further informs aesthetic experience
- Studies of built environments apart from buildings, for example, interior environments, urban environments
- Consideration of the framework in how it can be adapted to accommodate contemporary issues of social and environmental sustainability
- Publication of the thesis to disseminate the findings and invite peer review and further research

This thesis also suggests recommendations for architectural and design practice and education such as:

- The application of the framework in practice as a basis for facilitating holistic and comprehensive understanding of the person-environment relationship and as a way of reconciling the tension between individual and collective requirements; and designer/layperson architectural appreciation
- The application of the framework as a structure to guide more experientially based post occupancy evaluations of user satisfaction
- Consideration of the use of GT and IPA as methods for better understanding and mapping user needs and desires therein also supporting evidence based practice.

For architectural and design education, it is recommended that the framework:

- Provides the incentive and basis for guiding the development of design psychology curricula and the formal inclusion of such units of study in architectural and design courses
- Encourages greater sensitivity to the value of the everyday relationship with buildings as 'architecture'.

6.4 CONCLUSION

To close on a personal note, not only has this study given me the opportunity to develop advanced research skills and to make a substantial original contribution to knowledge but as an architect and educator it has rewarded me with a wider and deeper understanding of how people interact with buildings which as noted are central to our everyday lives. It has also provided me with a framework that will inform and sensitize my future practice as an academic as well as an architect. My hope is that it inspires greater awareness of the nuanced and highly textured way in which we engage with the world around us, and that for architects, designers and users this informs collaborative partnerships and the production of more humane environments. For me, although it has been a long journey to complete this research, it has also been a remarkable experience.

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Appendices

Appendix A: Participant Information for QUT Research Project and Consent Form

Queensland University of Technology Brisbane Australia	PARTICIPANT INFORMATION FOR QUT RESEARCH PROJECT
Architectural Appreciation of the Everyday QUT Ethics Approval Number 0900001393	
Research Team Contacts	
Thirayu Jumsai na Ayudhya Phone: 0406307377 Email: thijumsai@gmail.com or thi.jumsai@student.qut.edu.au	Professor Jill Franz Phone: 31382674 Email: j.franz@qut.edu.au

Description

This project is being undertaken as part of my PhD. The purpose of this project is to extend the understanding of aesthetic appreciation and judgment in architecture as reflected in the everyday experiences of people. You will be invited to take photographs of buildings such as commercial buildings, residential buildings, government buildings, and educational or institutional buildings in the Brisbane CBD, after which you will be invited to participate in interviews seeking further understanding of your choices.

Participation

Your participation in this project is voluntary. If you do agree to participate, you can withdraw from participation at any time during the project without comment or penalty. Your decision to participate will in no way impact upon your current or future relationship with QUT.

The research will be conducted in the Brisbane CBD Queensland Australia and will involve taking photographs followed by interviews. The photo elicitation activity involves taking photographs of **5 buildings** where possibly you will also be requested to photograph. You will be given a map showing the boundary for the photo elicitation and you may use your mobile phone or digital camera to take the photographs which can then be emailed to my email address at archappreciation@gmail.com.

I will then print the photographs ready for our interview (45 minutes). The pictures will be used as basis for interviews in this research only and will not be linked to you personally. Please be informed that all research materials cannot be withdrawn, once they have submitted to the research team.

Expected benefits

It is expected that this project will not directly benefit you. However, it may help architects and designers better understand the features of buildings which people like and dislike. This may inform the design process and contribute to more effective design guidelines.

Risks

There are no risks beyond normal day-to-day living associated with your participation in this project.

There are only low risks that are anticipated from your participation in taking pictures of buildings along the street.
The first potential low risk is sun exposure, the appropriate control are following:

1) Avoid exposure during hottest part of day.
2) Wear appropriate clothing and hat to protect from sun and use SPF 30+ sunscreen on all exposed body areas.
3) Drink plenty of water.

The second one is pedestrian accident, the appropriate control are following:

1) Follow all traffic rules
2) Wear seatbelt wherever possible
3) Wear appropriate safety gear if travelling by motor bike or scooter
4) Maintain first aid kit and contact with emergency services

However, you must not take photographs of individuals from which their identity can be recognised.

It should be noted that if you do agree to participate, you can withdraw from participation at any time during the project without comment or penalty.

Confidentiality

All comments and responses are anonymous and will be treated confidentially. Only the research team involved in the interviews will be aware of the identities of participants. All pictures, audio records, summaries and documents collected as part of the research process will be kept in a secure place and only the research team will have access to them. Comments will not be verified by the participants prior to final inclusion nor will any identifying information about individuals will be used in any paper or reports that may result from the research. All interviews records will be not available to participants for checking, but they may require a copy if they desired.

Consent to Participate

We would like to ask you to sign a written consent form to confirm your agreement to participate.

Questions / further information about the project

Questions related to this project are welcome at any time. Please direct them to Mr. Thirayu Jumsai na Ayudhya (archappreciation@gmail.com or thi.jumsai@student.qut.edu.au) or 0406 307 377.

Concerns / complaints regarding the conduct of the project

QUT is committed to researcher integrity and the ethical conduct of research projects. However, if you do have any concerns or complaints about the ethical conduct of the project you may contact the QUT Research Ethics Unit on 07 3138 5123 or email ethicscontact@qut.edu.au. The Research Ethics Unit is not connected with the research project and can facilitate a resolution to your concern in an impartial manner.

Thank you for helping with this research project. Please print this sheet for your information.

QUT Queensland University of Technology Brisbane Australia

CONSENT FORM FOR QUT RESEARCH PROJECT

Architectural Appreciation of the Everyday

QUT Ethics Approval Number 0900001393

Research Team Contacts

Thirayu Jumsai na Ayudhya Phone: 0406 307 377 Email: thijumsai@gmail.com or thi.jumsai@student.qut.edu.au	Professor Jill Franz Phone: 31382674 Email: j.franz@qut.edu.au

Statement of consent

By signing below, you are indicating that you:

- have read and understood the information document regarding this project
- have had any questions answered to your satisfaction
- understand that if you have any additional questions you can contact the research team
- understand that you are free to withdraw at any time, without comment or penalty
- understand that you can contact the Research Ethics Unit on 3138 5123 or email ethicscontact@qut.edu.au if you have concerns about the ethical conduct of the project
- agree to participate in the project
- understand that the project will include the audio and/or video recording

Name _____

Signature _____

Date _____

Media Release Promotions

From time to time, we may like to promote our research to the general public through, for example, newspaper articles. Would you be willing to be contacted by QUT Media and Communications for possible inclusion in such stories? By ticking this box, it only means you are choosing to be contacted – you can still decide at the time not to be involved in any promotions.

☐ Yes, you may contact me about inclusion in promotions

☐ No, I do not wish to be contacted about inclusion in promotions

Appendix B: Participants' Information and Guide Questions for Stage one and Stage two

Date...../...../.....

No. .....

Research Title: Architectural Aesthetic Appreciation of the Everyday

Part A: Participant Demographics

Gender ☐ M ☐ F

Age ☐8-25 ☐26-35 ☐6-45 ☐46-60 ☐60+

Do you have any aesthetic type of hobby?, if so, please explain (for example, painting).....

.....

Highest Qualification

☐ High School ☐ College ☐ Undergraduate ☐ Post-graduate
☐ Other.....

What is you major of study in the undergraduate course?.....

What is you major of study in the master course?.....

What is you major of study in the doctoral?.....

Occupation.....

How long have you been in Brisbane?.....years.....months.....days

Familiarity with Brisbane CBD

☐None ☐Slight ☐ Good ☐Very good ☐ Excellent

Part B: Photo Elicitation Interview

1. Why do you choose this building? (of each photographs)
2. What do you like/dislike about this building?
3. Which is your favourite building style?
4. How do you feel about this building? (in positive and negative ways)
5. What features of this building have influences on decision? (in both positive and negative way)
6. Does this building has any meaning to you, or does it remind you of anything?
7. During what time do you like/dislike this building in terms of beauty?

Part C: Aesthetics Attitude

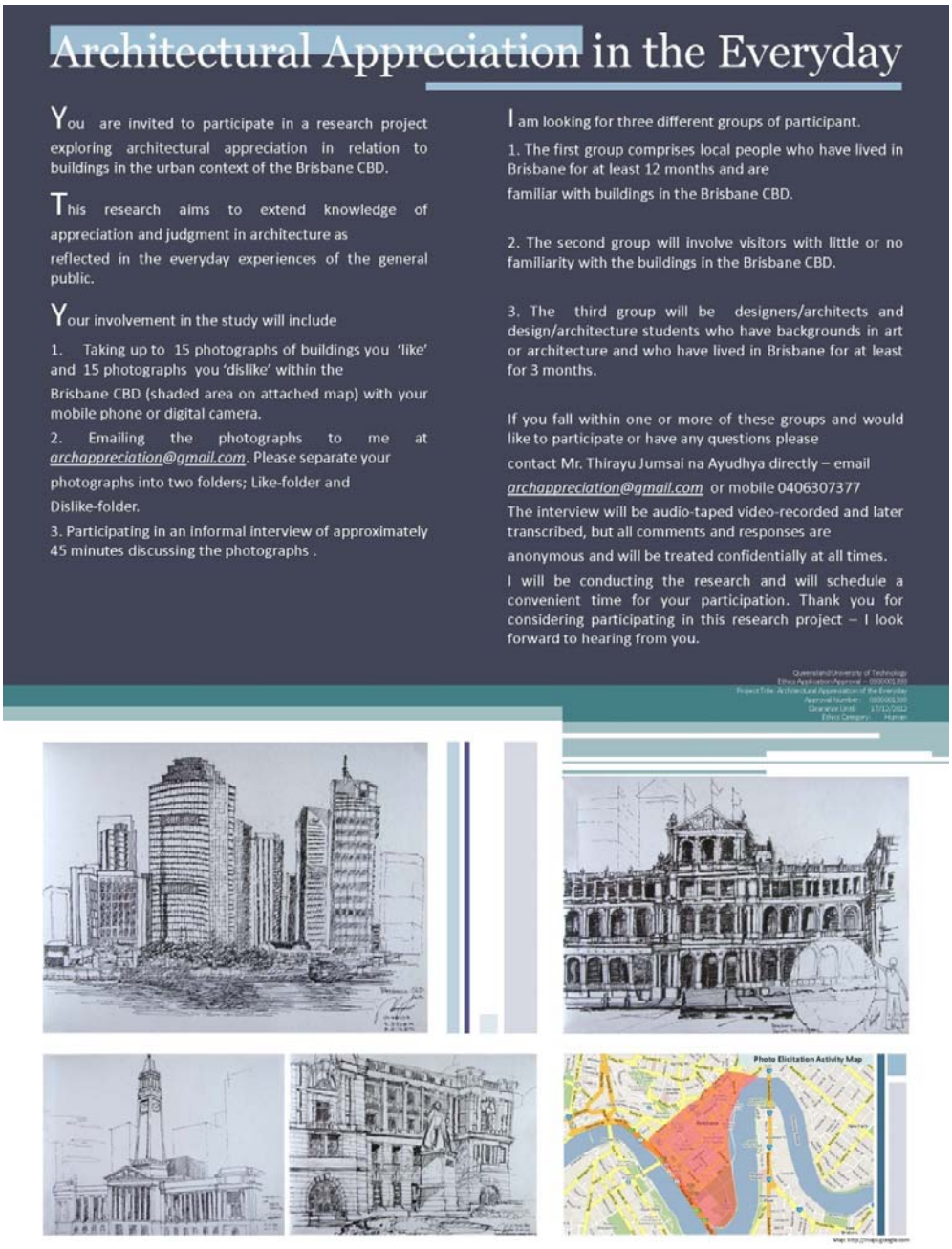
8. Do you have any experience in making art works such as painting and sculpturing?
9. What kind of art work do you like such as painting, sculpture?
10. Which style of art do you like most?
11. In the pass, what was your experience influencing your aesthetic judgement?

Appendix C: Guide Questions for Stage three

Stage 3rd Questionnaire

1. What is the nature of your work in the Ecosciences Precint?
2. How long have you been working in the Ecosciences Precinct?
3. How do you get to work?
4. What was your first impression of the Ecosciences Precinct? Outside and inside?
5. What is your impression of the building now?
6. How does this building compare to the building you previously work in?
7. When you stand outside and look at the Ecosciences building what does is represent it to you?
8. What do you think the architect was trying to achieve with the building.
9. What do you like/dislike about the building and why?
10. How would you describe the relationship between the outside and inside of the building?
11. Is there any part of the building you would change? Why?
12. Where do you enter the building?
13. When you enter the building what do you feel? Why? How?
14. What activities do you undertake in the building? Please describe a normal day for you?
15. How does the interior environment support/not support these activities?
16. Are there any specific places in the building that you like/dislike? Can you take me there?
17. What do you think of natural landscapes in the building?
18. Do some places evoke certain moods?
19. What do you think of the layout, materials, colours, lighting and etc.?
20. Is you experience different depending on the time of day, season?
21. Using only one word how would you describe the interior of the building?
22. In general how would you describe your experience of the building?
23. Are you proud to work in the building?
24. How does the building support/not support social interaction?
25. Has it contributed to greater collaboration?

Appendix D: Recruitment Poster for Stage one



Appendix E: Recruitment Poster for Study 2nd

Understanding Architectural Experience

This project is being undertaken as part of my PhD. at Queensland University of Technology
(QUT Ethic Approval Number: 0900001393)

You are invited to be a part of a study interested in understanding your everyday experience of buildings in the Bribane CBD

I'm looking for :

1.People living in Brisbane for at least 12 months

2.Visitors with little or no familiarity with the buildings in the Brisbane CBD

3.Designers and Design Students with background in art or design who have lived in Brisbane for at least for 3 months

Your participation will involve:

1. Contacting me to indicate your interest. I will then provide you with more detailed information of the project and a consent form that outlines my obligations to you in terms of confidentiality.
2. Taking exterior (and, where permitted, interior) photographs of at least 5 buildings of your choice. You can use your digital camera or mobile phone camera.
3. Sending your photographs to me at 'archappreciation@gmail.com'. When I receive your photographs I will contact you to arrange an interview where we can explore your understandings of the building through the photographs.
4. Refer over to CBD area of interest in the study.

Further information please contact : Mr. Thirayu Jumsai na Ayudhya M: 0406307377
or archappreciation@gmail.com

Page 1

Appendix F: Analytical Tables

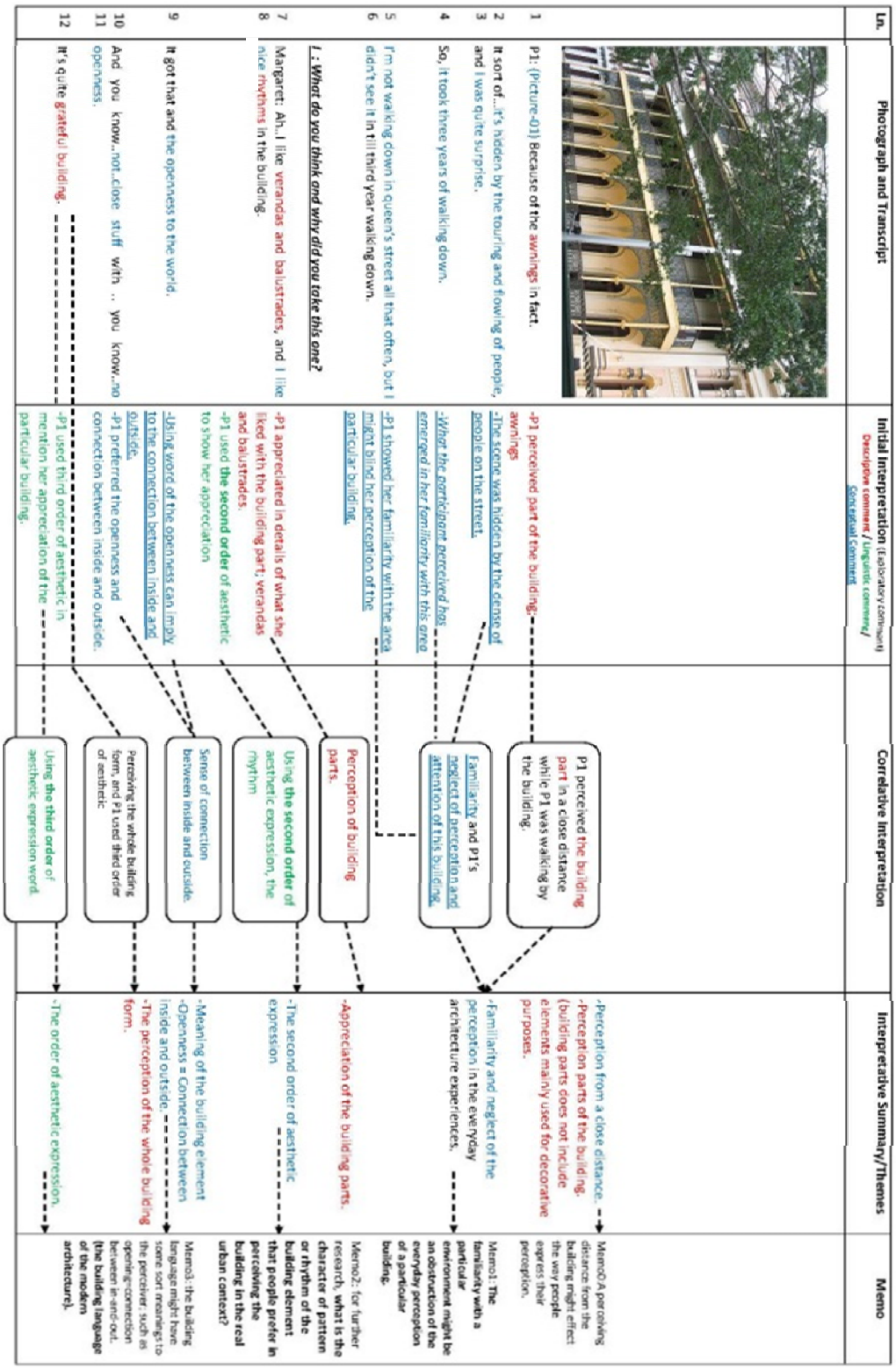


Figure 1: Excerpts of Pilot Study Coding (P-P1)

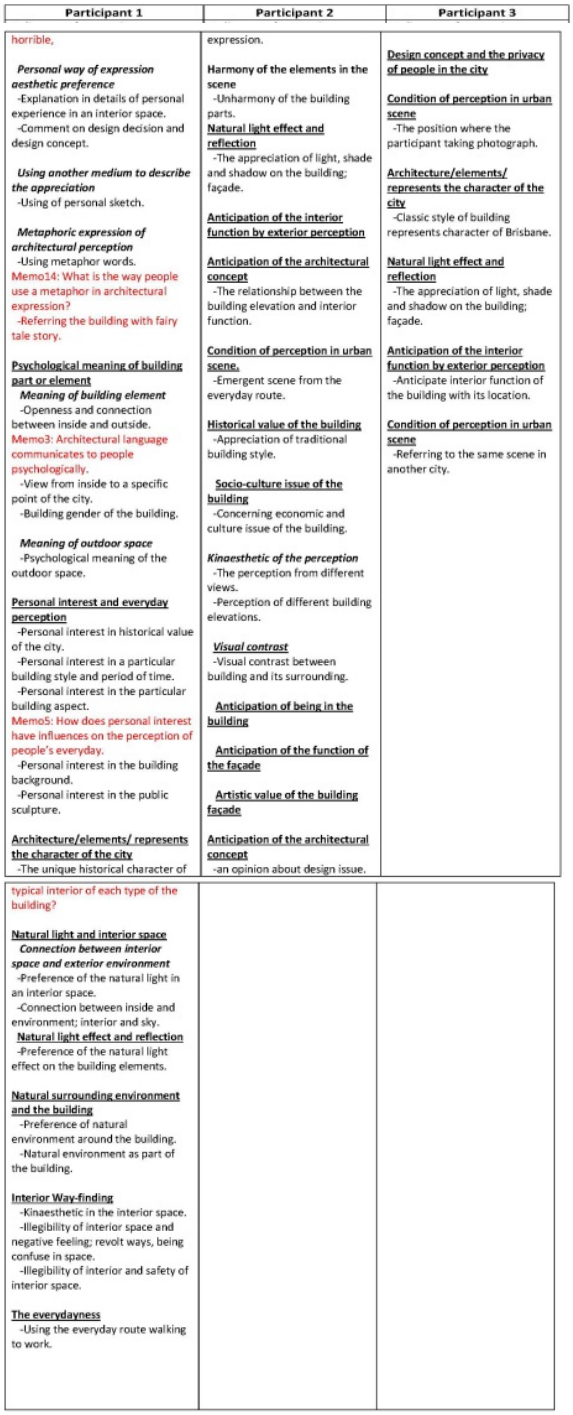
Figure 2: Excerpts of Pilot Study Coding (P-P2)

Figure 3: Excerpts of Pilot Study Coding (P-P3)

Participant 1	Participant 2	Participant 3
A distance of perception -Distance of perception in relation with the way people perceive the building, sequence of perception and object comparison in the scene. **Familiarity with the building** -Neglect of perception. Memo1: The familiarity with a particular building might be the obstruction of perception. - Emergent scene from the everyday scene. -Familiarity and neglect of building perception. -Familiarity with the location of the building, but the building. **Objective perception** ***Perceiving the whole form of the building*** ***Perception of the proportion*** -interaction between scale of building environment, place and people. -Interior space height and relation with people. -Perception of scale in the interior space. -Negative appreciation with low ceiling height. -Perception of the scale of outdoor space. ***Separated appreciation parts of the building.*** -Appreciation of building parts; the building parts are determined with its function, but the building elements consider elements without major functions. -Appreciation of architectural language of the building. ***Comparing building*** -Comparing building elements with another building in the same style. -Comparing decorative elements with different style of architecture. Memo16: How do people realise or determine architectural style by perceiving building elements? -Comparing the similar style of architecture in the city with the other cities. -Referring to similar style of architecture in another building. -Referring similar type of space in other places. -Comparing building within the same category or type. ***Building elements represent architectural style*** ***Perception focusing on the building material*** -Comparing material between buildings ***Comparing interior space*** -Unique character of interior space in a particular building. ***Contrast between interior and exterior perception*** ***Appreciation of a specific interior material*** ***Appreciation of the exterior pattern*** ***The relationship between interior function and exterior elements*** -Exterior aspects can represent interior functions. ***Appreciation of the building colour*** -Attention on variety of building colours. ***Visual obstruction*** -Obstruction with M&E elements. ***Identity of the place*** -Specific environment/building character represents the identity of the place. **The aesthetic expression** ***The order of aesthetic expression*** -The second order; rhythms of building elements. -The third order of aesthetic expression; fabulous, lovely, -Negative in the order of aesthetic expression; revolt, oppressive, ugly,	**A distance of perception** ***The relationship between the distance of perception and sequences of perceptual phenomenology*** -Hierarchy of the perception -Mediate distance from the building. -Mediate distance and comparing the building with its surrounding; following with perception of building attributes; materials, textures, and colours. -Far distance and comparing the building with its surrounding. -Close distance and focusing on details of the building. **Personal past experience** -Comparing the scene with personal past experience in hometown country. Education background and the perception **Relationship between the building and its urban context** -The boundary between the building and urban space. **Personal past experience** -Personal background and the perception. -Comparing personal background of the hometown and the perceived scene. **Objective perception** ***Perceiving the whole form of the building*** -Separated perception of the building form. ***Separated appreciation parts of the building.*** -Appreciation of building parts; the building parts are determined with its function, but the building elements consider elements without major functions. -Focusing on building materials. -The appreciation of building attributes; materials, textures, and colours. -Perception of the building parts. -Negative perception of building parts and elements. -Perception of mass and void of the building. -Perception of building details. -Contrast of building elevations. -Appreciation of shape of the building. ***Perception of the proportion*** -Contrast in proportion of parts of the building. -Proportion of building elements. ***Comparing building*** -The relationship between the building façade and adjacent buildings' façade. -Comparing different elevations in the same scene. -Comparing building elevations with other adjacent buildings. ***Perception of the building orientation*** ***Appreciation of the simplicity in the scene*** ***Perception of the proportion*** -Proportion of interior design. **Attention of function issue of the building** **Natural surrounding environment and the building** -The correlation between the building and its urban context. -The appreciation of an interaction of the building and its urban context. -the appreciation of landscape context around the building. **The aesthetic expression** -Using architectural language and concept to explain the perceived scene. -The order of aesthetic	**A distance of perception** **Familiarity with the building** -Neglect of perception. -Familiarity of the building and its location. **Objective perception** ***Perceiving the whole form of the building*** -Negative feeling of the whole building; old, dirty building. ***Separated appreciation parts of the building*** -Perception of parts of the building. ***Perception of the proportion*** - **The aesthetic expression** ***The order of aesthetic expression*** -The third order of aesthetic expression. ***Metaphoric expression of architectural perception*** -Using metaphor words. **Historical value of the building** -Perception of historical value in style of the building. **Objective perception** ***Perceiving the whole form of the building*** -Contrast among building forms. ***Appreciation the shape of the building*** ***Kinaesthetic of the perception*** -Perception the building from different views. ***Perception of the proportion*** -Negative sense of proportion among two parts of the building. ***Appreciation of the building attributes; texture of the building*** ***Focusing on interior materials*** **Relationship between the building and its urban context** -Comparing the building with its adjacent buildings. -Interaction between the building and its surrounding. -Contrast of the building and it's surrounding; negative. -Contrast of old and new building in the scene. -Similarity between buildings in the scene. -Buildings as urban visual obstruction. -The relationship between the building and its location. -Relation between building parts and the surrounding. -Suitability of the building with its location. -The building and its atmosphere condition. **Historical value of the building** -Negative historical background and negative perception. Memo2: Whether Negative historical background has a negative impact on perception of the building? -The building should represent the period of time. -The building as the landmark. **Personal past experience** -Comparison between the current city scene and others cities. **Economical concern** -Economical concern effecting on building design concept and the way people interact with the building. **Condition of perception in urban scene** -The difficulty for taking photograph of the whole form of building. **Anticipation of the interior function by exterior perception**

Participant 1	Participant 2	Participant 3
the city. -The buildings' character represents the city character. -Comparing characters among two cities. -Street elements; bridges represents the character of the city. Memo8: How does architecture represent the city character? Memo10: How does people differ the character of the city with its architectural period? -Unique character of building material represents the city character. ***Public sculpture and the identity of the city*** -Street sculptures represent the character of the city. -Comparing public sculpture among cities. -Familiarity with the location of public sculptures. -Focusing on historical value of street sculptures. -Focusing on the advantage of street sculpture of public. **Personal past experience** -Comparison between the current city scene and others cities. -Education and knowledge background in relation with an expression of personal aesthetic preference. Memo6: How do the familiarity and past experiences have influences on people architecture perception and assessment? -Personal experience in the interior space. -Personal perception of interior. -Personal preference in a particular scale of interior space. -Low ceiling cause personal negative preference. ***Knowledge of building background*** ***Knowledge of street sculpture background*** **Historical value of the city** -Historical background of the city. -Historical value reflecting on the	**Interior behaviour and exterior expression** -Concerning people behaviour in relation with architectural expression. **Interpretation of the design concept** **Anticipation of the architectural concept** -Anticipation of design concept.	
building. - **Historical value of the building** -Cultural design philosophy is reflected on the building. **Curiosity about part of the building** -Questioning about the function of the part of the building **Anticipation of the architectural concept** -Anticipation of design concept. **Anticipation of the interior function by exterior perception** -Curiosity of interior function but ignorance of paying attention. Memo11: What is the relationship between the exterior perception and anticipation of interior function? -The anticipation of interior design. **Condition of perception in urban scene** ***Difficulty in perception in the street*** -Crowded people cause difficulty. -Time in the day and the perception. -Emergent scene walking in the crowded street. -Emergent scene in a particular time of the day. ***Kinaesthetic of the perception*** -Kinaesthetic perception of the interior space -Comparing different views; elevations, of the building. **Identity of the interior space** -The character of the interior architecture is defined by architectural period. -Artistic value of the interior decorative element. -Religion symbol relates to interior details. -Socio-culture value of the interior design. -Typical character of the interior in the particular type of the building. -The distinct interior elements. -Historical values reflected in the interior design. Memo35: How do people defy the		

Figure 4: Emergent Categories from participant 1, 2, and 3 in pilot study



Participant 1	Participant 2	Participant 3
horrible, ***Personal way of expression aesthetic preference*** -Explanation in details of personal experience in an interior space. -Comment on design decision and design concept. ***Using another medium to describe the appreciation*** -Using of personal sketch. ***Metaphoric expression of architectural perception*** -Using metaphor words. Memo14: What is the way people use a metaphor in architectural expression? -Referring the building with fairy tale story. **Psychological meaning of building part or element** ***Meaning of building element*** -Openness and connection between inside and outside. Memo3: Architectural language communicates to people psychologically. -View from inside to a specific point of the city. -Building gender of the building. ***Meaning of outdoor space*** -Psychological meaning of the outdoor space. **Personal interest and everyday perception** -Personal interest in historical value of the city. -Personal interest in a particular building style and period of time. -Personal interest in the particular building aspect. Memo5: How does personal interest have influences on the perception of people's everyday. -Personal interest in the building background. -Personal interest in the public sculpture. **Architecture/elements/ represents the character of the city** -The unique historical character of	expression. **Harmony of the elements in the scene** -Unharmony of the building parts. **Natural light effect and reflection** -The appreciation of light, shade and shadow on the building; façade. **Anticipation of the interior function by exterior perception** **Anticipation of the architectural concept** -The relationship between the building elevation and interior function. **Condition of perception in urban scene.** -Emergent scene from the everyday route. **Historical value of the building** -Appreciation of traditional building style. **Socio-culture issue of the building** -Concerning economic and culture issue of the building. ***Kinaesthetic of the perception*** -The perception from different views. -Perception of different building elevations. ***Visual contrast*** -Visual contrast between building and its surrounding. **Anticipation of being in the building** **Anticipation of the function of the façade** **Artistic value of the building façade** **Anticipation of the architectural concept** -an opinion about design issue.	**Design concept and the privacy of people in the city** **Condition of perception in urban scene** -The position where the participant taking photograph. **Architecture/elements/ represents the character of the city** -Classic style of building represents character of Brisbane. **Natural light effect and reflection** -The appreciation of light, shade and shadow on the building; façade. **Anticipation of the interior function by exterior perception** -Anticipate interior function of the building with its location. **Condition of perception in urban scene** -Referring to the same scene in another city.
typical interior of each type of the building? **Natural light and interior space** ***Connection between interior space and exterior environment*** -Preference of the natural light in an interior space. -Connection between inside and environment; interior and sky. **Natural light effect and reflection** -Preference of the natural light effect on the building elements. **Natural surrounding environment and the building** -Preference of natural environment around the building. -Natural environment as part of the building. **Interior Way-finding** -Kinaesthetic in the interior space. -Illegibility of interior space and negative feeling; revolt ways, being confuse in space. -Illegibility of interior and safety of interior space. **The everydayness** -Using the everyday route walking to work.		

Figure 5: Emergent Categories from participant 1, 2, and 3 in pilot study (continue)

Participant No.: 1(M.D)
Interpretative Analysis: 01-111128

Ln.	Photograph and Transcript	Initial Interpretation (Exploratory comment) Descriptive comment / Linguistic comment/ Conceptual Comment	Correlative Interpretation	Interpretative Summary/Themes	Memo
1	P1: (Picture-01) Because of the awnings in fact.	-P1 perceived part of the building; awnings	P1 perceived the building part in a close distance while P1 was walking by the building.	-Perception from a close distance. -Perception parts of the building. (building parts does not include elements mainly used for decorative purposes.	Memo0:A perceiving disance from the building might effect the way people express their perception.
2 3	It sort of...it's hidden by the touring and flowing of people, and I was quite surprise.	-The scene was hidden by the dense of people on the street.	Familiarity and P1's neglect of perception and attention of this building.	-Familiarity and neglect of the perception in the everyday architecture experiences.	Memo1: **The familiarity with a particular environment might be an obstruction of the everyday perception of a particular building.**
4	So, it took three years of walking down.	*-What the participant perceived has emerged in her familiarity with this area*			
5 6	I'm not walking down in queen's street all that often, but I didn't see it in till third year walking down.	-P1 showed her familiarity with the area might blind her perception of the particular building.	Perception of building parts.	-Appreciation of the building parts.	Memo2: for further research, **what is the character of pattern or rhythm of the building element that people prefer in perceiving the building in the real urban context?**
	I : What do y.. ..... and why did you take this one?				
7 8	Margaret: Ah..I like verandas and balustrades, and I like nice rhythms in the building.	-P1 appreciated in details of what she liked with the building part; verandas and balustrades. -P1 used **the second order** of aesthetic to show her appreciation	Using **the second order** of aesthetic expression, the rhythm	-The second order of aesthetic expression	
9	It got that and the openness to the world.	-Using word of the openness can imply to the connection between inside and outside.	Sense of connection between inside and outside.	-Meaning of the building element -Openness = Connection between inside and outside.	Memo3: the building language might have some sort meanings to the perceiver, such as opening=connection between in-and-out. **(the building language of the modern architecture).**
10 11	And you know..not..close stuff with .. you know..no openness.	-P1 preferred the openness and connection between inside and outside.	Perceiving the whole building form, and P1 used third order of aesthetic	-The perception of the whole building form.	
12	It's quite grateful building.	-P1 used third order of aesthetic in mention her appreciation of the particular building.	Using **the third order** of aesthetic expression word.	-The order of aesthetic expression.	

Figure 6: Excerpts of stage one Coding (1-P1)

EmerGed Theme Table Project1

Participant 1	Participant 2	Participant 3	Participant 4	Participant 5	Participant 6
A distance of perception -Distance of perception in relation with the way people perceive the building, sequence of perception and object comparison in the scene. **Familiarity with the building** -Neglect of perception. Memo1: The familiarity with a particular building might be the obstruction of perception. - Emergent scene from the everyday scene. -Familiarity and neglect of building perception. -Familiarity with the location of the building, but the building. **Objective perception** ***Perceiving the whole form of the building*** ***Perception of the proportion*** -interaction between scale of building environment, place and people. -Interior space height and relation with people. -Perception of scale in the interior space. -Negative appreciation with low ceiling height. -Perception of the scale of outdoor space. ***Separated appreciation parts of the building.*** -Appreciation of building parts; the building parts are determined with its function, but the building elements consider elements without major functions. -Appreciation of architectural language of the building.	A distance of perception ***The relationship between the distance of perception and sequences of perceptual phenomenology*** -Hierarchy of the perception -Mediate distance from the building. -Mediate distance and comparing the building with its surrounding; following with perception of building attributes; materials, textures, and colours. -Far distance and comparing the building with its surrounding. -Close distance and focusing on details of the building. **Personal past experience** -Comparing the scene with personal past experience in hometown country. Education background and the perception **Relationship between the building and its urban context** - The boundary between the building and urban space. **Personal past experience** -Personal background and the perception. -Comparing personal background of the hometown and the perceived scene. **Objective perception** ***Perceiving the whole form of the building*** -Separated perception of the building form. ***Separated appreciation parts of the building.*** -Appreciation of building parts; the building parts are determined with its function, but the building elements consider elements without major functions.	A distance of perception **Familiarity with the building** -Neglect of perception. -Familiarity of the building and its location. **Objective perception** ***Perceiving the whole form of the building*** -Negative feeling of the whole building; old, dirty building. ***Separated appreciation parts of the building*** -Perception of parts of the building. ***Perception of the proportion*** - **The aesthetic expression** ***The order of aesthetic expression*** -The third order of aesthetic expression. ***Metaphoric expression of architectural perception*** -Using metaphor words. **Historical value of the building** -Perception of historical value in style of the building. **Objective perception** ***Perceiving the whole form of the building*** -Contrast among building forms. ***Appreciation the shape of the building*** ***Kinaesthetic of the perception*** -Perception the building from different views. ***Perception of the proportion*** -Negative sense of proportion among two parts of the building. ***Appreciation of the building attributes; texture of the***	A distance of perception -Mediate distance; photo:1 -Distance of perception in relation with the way people perceive the building, sequence of perception and object comparison in the scene. Memo1: How does the distance of perception/taking photo have an effect on the way people perceiving the scene? **Objective perception** ***Perceiving the whole form of the building.*** ***Separated appreciation parts of the building*** -Perception elevations of building. -Perception of the building entrance. -Perception of the building façade. -Perception of the shape of the building; distinguish building shapes. -Perception of the sculpture as part of the building element; visual leading to the building entrance. -Personal interest in particular part of the building. Memo24: Personal interest in a particular part of the building might plays importance role in people perception. -Perception of signage on the building. -The building part expresses its architectural language. -Perception of the pattern of decorative materials. -Perceiving building elements; ***Perception of the building attributes*** -Appreciation of colour of the building. - Perceiving the distinctive of	A distance of perception -Distance of perception in relation with the way people perceive the building, sequence of perception and object comparison in the scene. Memo1: How does the distance of perception/taking photo have an effect on the way people perceiving the scene? **Objective perception** ***Perceiving the whole form of the building.*** ***Separated appreciation parts of the building*** -Perception elevations of building. -Perception of the building entrance. -Perception of the building façade. -Perception of the shape of the building; distinguish building shapes. -Perception of the sculpture as part of the building element; visual leading to the building entrance. -Personal interest in particular part of the building. Memo24: Personal interest in a particular part of the building might plays importance role in people perception. -Perception of signage on the building. -The building part expresses its architectural language. -Perception of the pattern of decorative materials. -Perceiving building elements; ***Perception of the building attributes*** -Appreciation of colour of the building. - Perceiving the distinctive of	A distance of perception -Mediate distance; photo:1 -Distance of perception in relation with the way people perceive the building, sequence of perception and object comparison in the scene. Memo1: How does the distance of perception/taking photo have an effect on the way people perceiving the scene? **Objective perception** ***Perceiving the whole form of the building.*** Out of date style and negative perception. ***Separated appreciation parts of the building*** -Perception elevations of building. -Perception of the building entrance. -Perception of the building façade. -Perception of the shape of the building; distinguish building shapes. -Perception of the sculpture as part of the building element; visual leading to the building entrance. -Personal interest in particular part of the building. Memo24: Personal interest in a particular part of the building might plays importance role in people perception. -Perception of signage on the building. -The building part expresses its architectural language. -Perception of the pattern of decorative materials. -Perceiving building elements; ***Perception of the building attributes*** -Appreciation of colour of the building. - Perceiving the distinctive of	A distance of perception **Familiarity with the building** -Familiarity with the building location. **Objective perception** ***Separated appreciation parts of the building*** -Appreciating building elements. -Appreciating building material colour. -Signage identifies building function. -Appreciation of the rhythm of the building elements. -Harmony of colours tones. -Simplicity of the building form. - Perceiving parts of the building. - Appreciation form of the façade ***Perception of the building attributes*** -Appreciation of colour of the building. ***Photo elicitation*** -Comparing perception from photograph and real scene -Using of metaphor. **The everydayness** -Using the everyday route walking to work. -Everyday architecture and everyday routine.	A distance of perception **Objective perception** ***Separated appreciation parts of the building*** -An appreciation of the building attributes; colour. -An appreciation of the building elements. -An appreciation of the building details. -Architectural elements and expression of architectural value. -Appreciation parts of the building. -Simplicity of the building form. - Non-appreciation of building material. **Natural light effect and reflection** - An appreciation of the reflection of surrounding environment. -Appreciation of reflection on the building. -Too much repetitive pattern; negative feeling. **Psychological meaning of building part or element** -Indirect connect between the building and its surrounding. - Being part of the area. -Bringing natural environment into the built-environment. -Sense of invitation and non-invitation. -Sense of explore. -Meaningless of the building elements. - Building and elements and non-privacy feeling. **Familiarity with the building** - Emergent scene from the everyday scene. -Familiarity with building location. **Historical Value of the building**

Figure 7: Emergent Categories for each participant in stage one

Figure 8: Emergent Categories for each participant in stage one (continue)

Figure 9: Emergent Categories for each participant in stage one (continue)

Figure 10: Emergent Categories for each participant in stage one (continue)

building. - **Historical value of the building** -Cultural design philosophy is reflected on the building. **Curiosity about part of the building** -Questioning about the function of the part of the building **Anticipation of the architectural concept** -Anticipation of design concept. **Anticipation of the interior function by exterior perception** -Curiosity of interior function but ignorance of paying attention. Memo11: What is the relationship between the exterior perception and anticipation of interior function? -The anticipation of interior design. **Condition of perception in urban scene** ***Difficulty in perception in the street*** -Crowded people cause difficulty. -Time in the day and the perception. -Emergent scene walking in the crowded street. -Emergent scene in a particular time of the day. ***Kinaesthetic of the perception*** -Kinaesthetic perception of the interior space -Comparing different views; elevations, of the building. **Identity of the interior space** -The character of the interior architecture is defined by architectural period. -Artistic value of the interior decorative element. -Religion symbol relates to interior details. -Socio-culture value of the interior design. -Typical character of the interior in the particular type of the building. -The distinct interior elements. -Historical values reflected in the interior design. Memo35: How do people defy the				

Figure 11: Emergent Categories for each participant in stage one (continue)

typical interior of each type of the building?					
Natural light and interior space ***Connection between interior space and exterior environment*** -Preference of the natural light in an interior space. -Connection between inside and environment; interior and sky. **Natural light effect and reflection** -Preference of the natural light effect on the building elements. **Natural surrounding environment and the building** -Preference of natural environment around the building. -Natural environment as part of the building. **Interior Way-finding** -Kinaesthetic in the interior space. -Illegibility of interior space and negative feeling; revolt ways, being confuse in space. -Illegibility of interior and safety of interior space. **The everydayness** -Using the everyday route walking to work.					

Figure 12: Emergent Categories for each participant in stage one (continue)

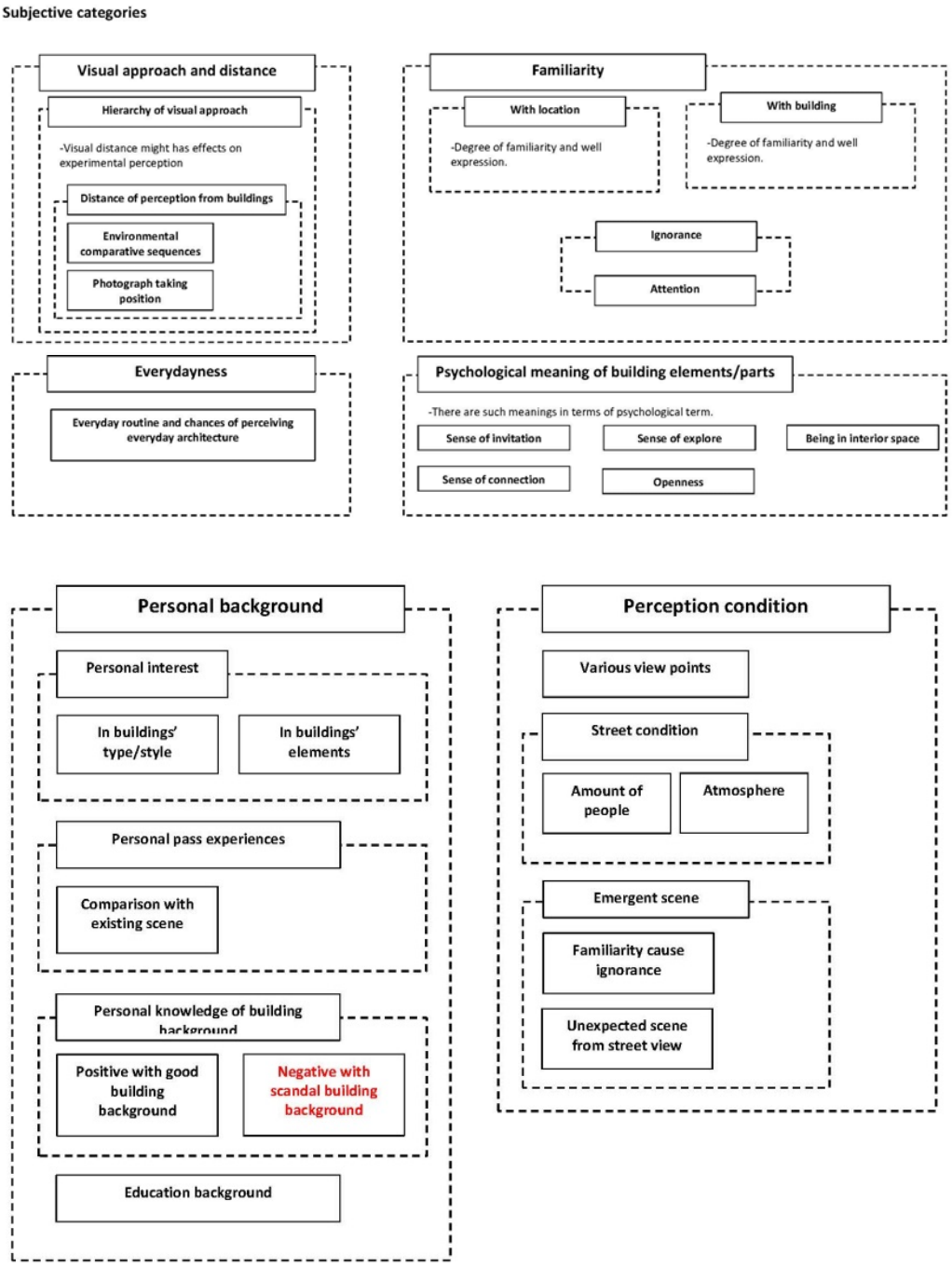


Figure 13: Emergent Categories Cross-participant in stage one

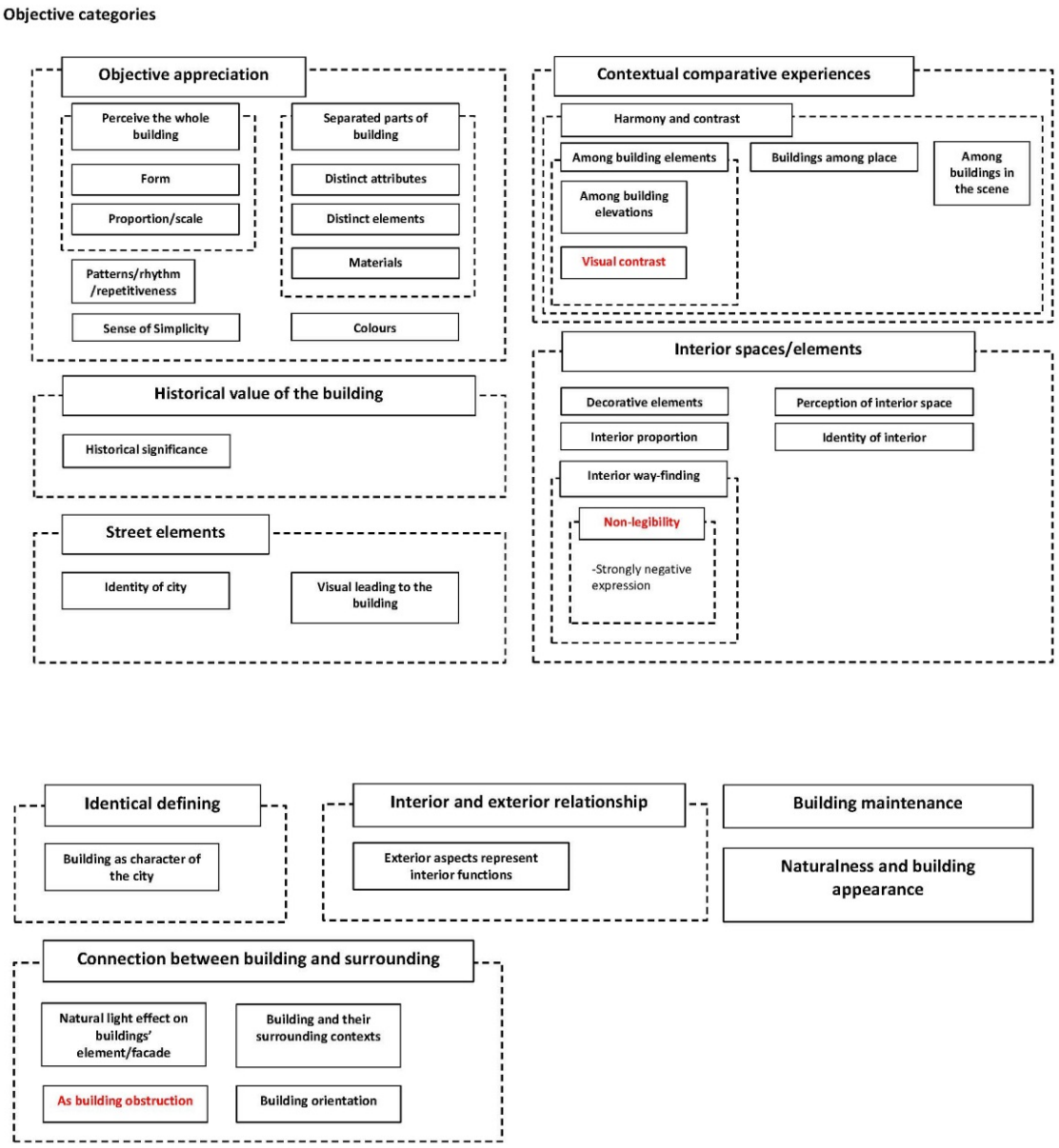


Figure 14: Emergent Categories Cross-participant in stage one (continue)

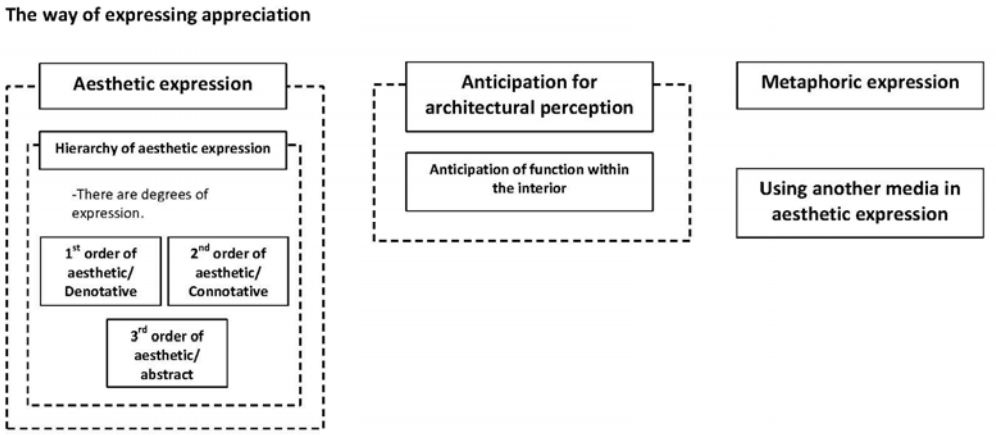


Figure 15: Emergent Categories Cross-participant in stage one (Continue)

Figure 16: Excerpts of stage two coding (2-P1)

Figure 17: Excerpts of Stage two Coding (2-P2)

Figure 18: Excerpts of Stage two Coding (2-P3)

Figure 19: Excerpts of stage two coding (2-P4)

Emergent Categories Study 2nd

1.Formal aesthetic	2.Symbolic aesthetic	3.Schematic aesthetic	4.Schema	5.Perception condition	6.Emotional expression	7.The way to engage the information	8.Other
The perception of the whole building form. 7Neatness and Cleanness. - Separated appreciation/perception of the building parts. 7Paintings. 2Columns. 2Colour. 7Brightness. 2Doom Roof. 2Facade. 7Wooden material. 2Balcony. 2Natural stone. 2Bricks. 2Glass. -Natural light. 2Effect on the building. 7Through interior space. -Interior environment 2Decorative elements in the interior. - Appreciation of 2nd order of aesthetic: 2Asymmetry. 7Pattern. -Live space, gathering space, and sharing area. -Natural environment next to the building	-Historical value of the building. →On degree of perception. -Historical value and socio-culture of the building design. -Building and representation of the time. -Unique character as the icon of the city. -Connection between inside and outside. - Building elements and language of modern architecture.		-Familiarity and the appreciation/depreciation of the place with the everyday architecture. →With location. -Personal interest and the appreciation/depreciation of the building. -Past experience and the attention/appreciation of the building. -History backgrounds and influence of the changes of the character of the city. -Background story of the building and appreciation/depreciation of the building.	-Distance of the perception. →Close distance. →Mediate distance. →Far distance. -Different views angle and different perception. →Necessary to perceive all elevations? -Visual obstruction. →In the real urban scene. -Visual contrast. →Among modern and old buildings within the scene. -The time of the perception. -Kinaesthetic of the building. →Provoke different feeling. →Sequences of movement around the building. -Hierarchy of space and sequences of the perception. →Inner court. →Semi-public court.	-The third order of the aesthetic. (+) →Impressive. →Nice. →Majestic. →Amaze. →Happy. →Luxury. →Beautiful. →Magnificant -Anticipation of interior design.	-Photo elicitation and the enhancing of perception. -Difference between real perception and elicited photographs. →Quality of photographs. -Comparison. →Between scenes of the same kind of architecture. →Comparison between the existing scenes with architecture in hometown.	

Figure 20: Emergent Categories Cross-participant in stage two

	I: What do you think about what architect was trying to communicate through his design?	
-Language of modernism. -Lack on expressive meaning. -Similarity in modern architecture -No specific architectural representative meaning.	P1: For this question, I'm not really sure what architect wants to express something or not, because the architectural style is just same as other modern buildings around the city. There is no natural light in the building. It's dark inside. I: I heard that the architect tried to apply sustainable design concepts to the building.	-It seemed that P1 could not realize what architectural language the architect use in the design. -For P1, the modern architecural style seems to have the similar character. -For P1, the modern buildings lack of natural light in the interior.
-Lack of architectural concept applying.	P1: Yeah, but I think it just the concept. They don't even use solar panel because it's too expensive. I think they tried to save lot of budgets. The only sustainable thing is using rainwater for flushing in toilets. This is really disappointed as sustainable building. I should be like the showcase for this concepts.	-For P1, it seems that the concept of sustainability hasn't been totally applied in the building; the solar panels haven't been installed to the building at all. -P1 did not appreciate the way sustainability concept was applied to the precinct.
-Architectural conceptual design incompleteness.	I: But I heard that this building has been granted lot of awards in terms of design.	
	P1: Yeah, but it's the international award. Actually, there is no plane in the building at all. It's just the dark place. The lighting is in the dim as well.	-It seemed that the sustainability concept did not achieve well.
	I: Can you adjust the light?	
	P1: No, we can't.	
-Architectural planning and user controllability.	I: It's the central control.	
	P1: Yeah. It's the central control. The office is open office, it's dark and you can't adjust the light at all. It likes the prison.	-For P1, the open-office planning might cause a difficulty in adjusting the light for specific desk.
	I: Yeah, maybe they tried to reflect some image of the prison.	
-Reflection of the surrounding context.	P1: Yeah, another thing is the screen, I mean façade. It likes the cell.	-The screen façade seemed to represent the image of the prison cell.
-Preference of connection between the place and exterior surrounding. -favourite -Relaxing place. -favourite place for relax.	The only place I like is the greenhouse on the rooftop. When I'm up there, it likes oh bro's a good place. So, normally, I spend a half of my morning in the lab inside the building, and the other half at my desk, working on document works. Oh, and I have the outdoor seating, lots just over there. I'll show you. I: If you would like to use only one word to describe about this building, what is that word?	-The greenhouse on the rooftop is P1's favourite place. It made him feel connecting to the outside. -P1 preferred to spend most of his time at the greenhouse on the rooftop.
-Gloomy->Unpleased	P1: Oh, gloomy. I: As the everyday architecture, what does the building mean to you?	-It's a negative feeling for P1 with the precinct. -It seemed to make him unpleased being in the precinct.

Figure 21: Excerpts of stage three, Interpretative Phenomenological Analysis (3-P1)

Study 3rd_P2

Photo elicitation	Emergent themes	Original Transcript	Exploratory comments
		I: First of all, I would like to ask you. What is nature of your work here?	
		P2: Administrative	
		I: and how long have you been working here?	
		P2: just a short while at MaP2h.	
		I: Oh. This year right?	
		P2: yes.	
		I: but this building has been operated for one and a half, right?	
		P2: two years.	-P2 has a well familiarity with the place.
		I: and what's the different between your old work place and here?	
	-**Expectative context.**	P2: you mean comparing with where I from? It's just a dream in fact.	-This building is as the dream comes true.
	-**First impression as expectation.**	***I: Wow.***	
	-**Sharing building experience with other people.**	P2: it's nice to share with you on the interview sitting here. It's generating a positive reaction. P2: and I'm saying this particular word to my colleagues that it's anything I enjoin the building, and its environment.	-Sharing view opinion within the interview creates positive feeling.
	-**Unexpected perception between exterior and interior.**	P2: it's quite surprise coming into the building. It's a oasis inside, high of activities, and its atmosphere's so beautiful.	-Emergent scene. -Unexpected perception.
		I: what was the first impression when you come here?	
	-**First impression.** -Difference perception from everyday urban context.	P2: it's not a usual environment. It drives me from the everyday concrete jungle in the city. And it's just another surprise seeing trees greenery and space as such natural light come through. And you wouldn't get the environment of such a formal. You know, it's free within yourself.	-The building is distinguished from normal everyday urban environment.
	-**Freedom for usual environment.**		-The building creates the sense of freedom.
		I: How do you get to work? I mean public transportation or?	
		P2: Yeah, I use public transport.	
		I: Is that work well?	
	-**Route and accessibility of the building.** -Pleasure of journal to the building.	P2: Yes, it's very well arranged, and that's a surprising thing too. I'm living in the northwest, I have to cross the river and it's enjoyable.	-Going to the building make P2 enjoy the journal.
		I: How long do you take from your house to here?	

Figure 22: Excerpts of stage three, Interpretative Phenomenological Analysis (3-P2)

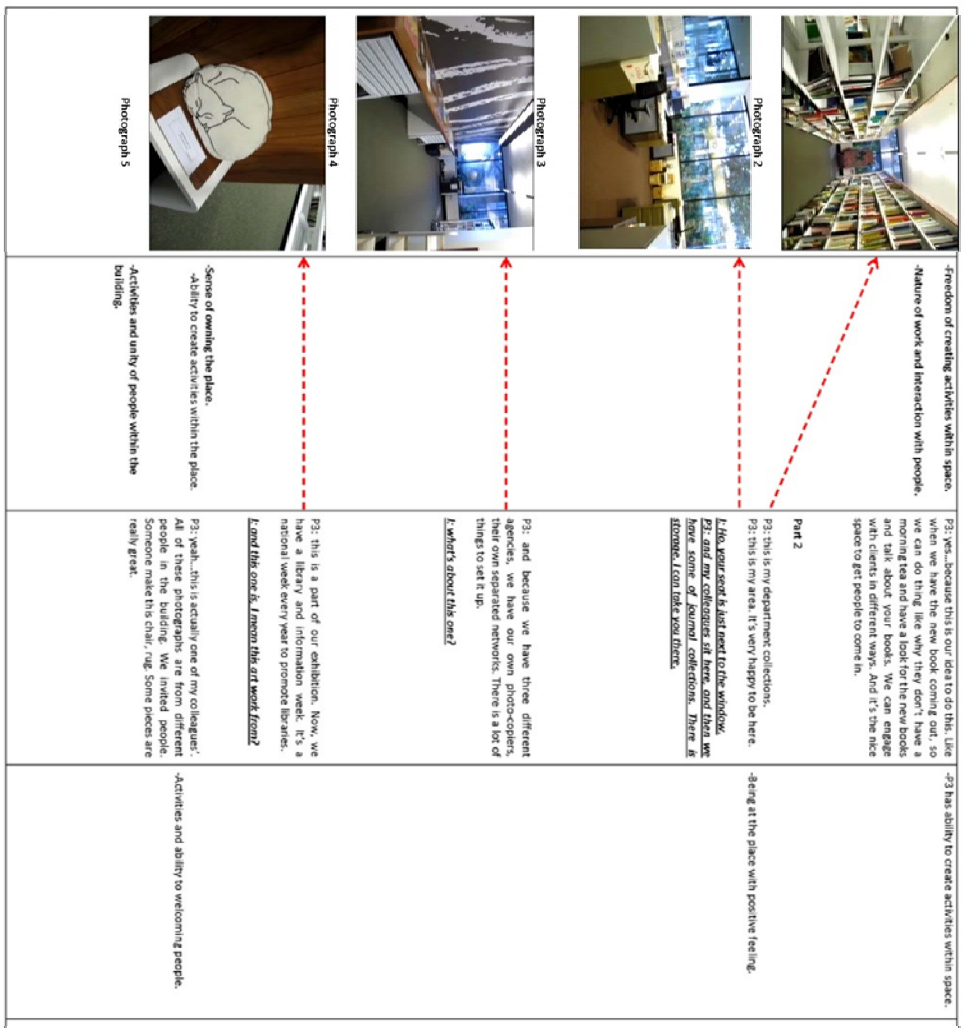


Figure 23: Excerpts of stage three, Interpretative Phenomenological Analysis (3-P3)

Study 3rd_P4

Photo elicitation	Emergent themes	Original Transcript	Exploratory comments
		I: First of all I would like to ask you, what is nature work in this precinct?	
		P4: it's administration work. So, I'm assisting staff to arrange the whole precinct. Because you know we have clients. They ate working in the whole area here, in block A, B, C.	
		I: How many department are there in this precinct?	
	-Architectural concept legibility. -Integrating groups of people.	P4: There are three sections which are in DAFF department for the agriculture, fishery and forest research. They've tried to integrate the whole area because of the collaboration as it work, you know. That's what I do servicing. If they need any kind of help in administration.	-P4 is able to understand architectural concept.
	-Working role and chances of perceiving the place.	***I: How long have you been working here?***	
	-Familiarity with the place and attitude with the place.	P4: Since it open in October, 2010	-P4's well familiar with the building.
		I: Ho, two years.	
		P4: 18th of October, I'm the first one here.	
		I: Comparing with your previous work place, what do you think about this place?	
	-Sense of comparison with the previous work place.	P4: it's very nice, because it's all brand new. It smell new....ah everything...that was really nice. But it doesn't seem to have the character of the old place where we were surrounded by three. Oh now, we are surrounded by threes, but it's different, well it's fine.	-With the new building, P4 had a first impression of the building.
		I: And, how do you get to here?	
		P4: two trains.	
		I: Is that work well?	
	-Accessibility to the work place. --House location and accessibility to the work place in relation to attitude of the place.	P4: Well it works. It takes about an hour and ten or fifteen minutes in the morning and I think it seem in the afternoon. That's alright. It's less stressful. I used to drive to the old place. That's stressful.	-Accessibility to the place.
		P4: with two trains, I stop at the central first, but the time seems very well. That's pretty good.	
		I: What was you impression about this building?	
		P4: Impressive. I very impres, because it take a little to get used to it. Yes, it's impressive.	
		I: What was the impression of that time? I	

Figure 24: Excerpts of stage three, Interpretative Phenomenological Analysis (3-P4)

Study 3rd_P5

Photo elicitation	Emergent themes	Original Transcript	Exploratory comments
		I: Firstly I would like to ask you about the nature of your work on this building in general or details.	
		P5: My duty in the organization is the science leader with in Agriculture, and forest design group. I have team of people are working on vegetables and deseeded fruits in centres around the state. This is like the head office. There are more people out there. So, I'm head that teams from here as my base. I go out visit them from time to time.	
		I: How many departments are in this building and how do they relate to your work or team?	
	-Roles of work in the place interaction among groups.	P5: In our group, I hold the agriculture and forest science group which is primarily looking at plants base products. Also, in this building I also got people from department of environment. They got people who work in native forests and plantation systems. The people from CSIRO which is climate change base. And we get a couple of our team members working on climate-change in remote areas. Another department here probably mean of our organization is work out about animal science group. And I have a lot of interaction with them.	-There is the mixed role of work within the place.
		I: You mean that there are cooperation between departments typically?	
		P5: certainly are cooperation between departments in specific area especially in climate changing. And the example is collaboration and cooperation in agriculture research.	
		I: How long have you been working here, I mean at the beginning of?	
	-Sense of being part of the place. -Familiarity of the place.	P5: I was starting here at February 2011, yeah in the early last year. I think I came here after it's already started around five or six months after it started.	-Well familiarity with the place.
		I: and how do you get to the building?	
	-Residential location and accessibility to the place.	P5: From the north-side, I get the train here. So, 90% transport by train. Occasion by bus depend on where you come from. And sometime by car but it's very occasion depend on where I have to go at that day.	
		I: Is that work well, I mean public transportation?	
		P5: The train is good for me.	

Figure 25: Excerpts of stage three, Interpretative Phenomenological Analysis (3-P5)

Study 3rd_P6

	-Role of works and interaction between people and the place. -Rule and chances of interior perception.	P6: Oh, I think that he try to concentrate with the inter-relationship, with I guess the walk-way. There was another building at St. Lucia. I think probably built by the same architect. I'm not quite sure about that. But that building is not get a lot of interrelationship. One the reason they require the security card before you going in a certain part of the building. If you are the CSIRO staff you cannot access to the other parts. But we haven't done that here. Except the hardware house. You have to swipe your card to get into the lab. And the least of that you can walk anywhere ant talk to anyone. And that's the big plus. I got an impression, they have learn from the past buildings. ***I: Is there any specific part that you like or dislike in this building?*** P6: I like this area and eating area. ***I: the share areas.*** P6: I think the cafe...that's work very well for people...I will take you to get to the rooftop. That's the secure place, no one can to up there. That maybe my favourite area. ***I: what's about dislike?*** P6: It's probably just need a bigger office for the dislike, but I can't complain. Some people haven't got one, you know. Just make it wider, be a lot easy. I haven't a real dislike. ***I: some of my participants said that they don't like the way they arrange the open office. There are noises.*** P6: But, I got a office. I think that gonna be a little bit of issue. But, certainly with my team, most of them have settle down. I think it's more worry about scientists need themselves so quietness. ***I: Yes, maybe they want to focus on their works. I'm sure that other scientists prefer to have the office. But if you want to talk to someone, you have to arrange a meeting. Here, you just can walk up through the corridor, and say...yeah...and then you will set the answer.*** ***I: Ah...like it has good and bad points.*** P6: which is depends on what they want it. Often, you get an answer for something that. ***I: Yeah, in typical office, they have to e-mail to each other to get some answer and it take some times.*** P6: Now, you not only talking to one person.	-P6 can interpret architectural concept of the building.
	-Limitation of space. **-Disturbance with open plan office.**		-More space required.

Figure 26: Excerpts of stage three, Interpretative Phenomenological Analysis (3-P6)

Emergen Themes Table-Study 3rd

Participant 1	Participant 2	Participant 3	Participant 4	Participant 5	Participant 6
-Familiarity with the place. -Comparison between places. -Comparison of the new place with the old one. -Chances using of green space. -Difficulty approaching the building. -Sense of scale at the first impression. -Language of modernism. -Lack on expressive meaning. -Similarity in modern architecture -No specific architectural representative meaning. -Lack of architectural concept applying. -Architectural conceptual design incompleteness. -Architectural planning and user controllability. -Reflection of the surrounding context. -Preference of connection between the place and exterior surrounding. -Favourite -Relaxing place. -Favourite place for relax. -Gloomy→Unpleased -Meaningless. -Only the place for work. -Open planning and disturbance within office space. -Preference of privacy. -Nature of work. -Lack of enough area for share space. -Difficulty of vertical circulation. -Vertical circulation complexity. -Disconnection with the outside. -Visual obstruction. -Building façade VS Visual obstruction. -Connection of inside and outside. -Being free from inside	-Expectative context. -First impression as expectation. -Sharing building experience with other people. -Unexpected perception between exterior and interior. -First impression. -Difference perception from everyday urban context. -Freedom for usual environment. -Route and accessibility of the building. -Pleasure of journal to the building. -Sense of surprise. -Interior unexpected perception. -Representative appearance. -Exterior and interior incongruence. -Emotional impact. -Interaction between people and interior space. -Sense of community within the building. -Metaphorical determining. -The Oasis within. -Life within the building. -Encouraging people interrelationship. -Sense of freedom. -Being in the space and stress release. IN SHARED AREA. -Refreshing. -Breaking from routine. OPEN-OFFICE. -Lack of a sense of intimacy. -Personal role and interior perception. -Personal role in work place and	-Diversity of people in the place. -Sense of community within the building. -Being community. -Passive access to the building. -Sense of comparison. -Chaotic condition and timing. -Precisely comparison between two places. -Interior living quality. -Air-ventilation. -Noise pollution within the place. -Vibration. -Interior lighting controllable. -High rise building in the city. -Lack of natural lighting→Unpleased. -Visual and natural light obstruction. -Additional greenery within. -Preference of working at the building and the greenery concept. -Lack of identical representative appearance. -Ambiguity of exterior appearance. -Requiring building identical representative element. -Reflection of the adjacent building. -Obstruction of connection between inside and outside. -Building façade and visual obstruction. -Opportunity of perception and different appreciation. -Office location and different perception of the building. -Realizable architectural design. -Readability of architectural concept. -Modern language within architectural elements.	-Architectural concept legibility. -Integrating groups of people -Working role and chances of perceiving the place. -Familiarity with the place and attitude with the place. -Sense of comparison with the previous work place. -Accessibility to the work place. -House location and accessibility to the work place in relation to attitude of the place. -Personal attitude and the meaning of place. -Appreciate but no specific meaning. -Personal attitude and the meaning of place. -Appreciate but no specific meaning. -Sense of scale within the interior space. -Integral of naturalness. -Personal interest and attention to the interior environment. -Boredom. -Personal behaviour and appreciation of the place -Personal hobby and attention to the environment. -Attitude of the previous work place and the appreciation of the place. -Personal attitude and perception intention. -Legibility of architectural concept. -Language of modern architecture. -Anticipation of architectural design concept. -Life and Plants. -People and working with nature. -Openness. -Creating community. -Creating sense of informality.	-Roles of work in the place interaction among groups. -Sense of being part of the place. -Familiarity of the place. -Residential location and accessibility to the place. -Applying architectural concepts to people behaviour. -Unexpected appearance at the first impression. -Visual contrast between interior and exterior. -Openness and connection between interior and exterior. -Building identical appearance. -Being the community within the place. -Integral of naturalness. -Nature of work and interaction of people with the place. -Role of work and interaction among people with in the place. -Role of works and interaction between people and the place. -Role and chances of interior perception -Disturbance with open plan office. -Concerning visual obstruction around the building. -Sequences of work and accessibility through the place. -Accessibility to the place. -Difficulty of the accessibility to the place. -Difficulty of living in the place and appreciation of the place. -Difficulty of daily routine in the place. -Resident location and the accessibility to the place. -Accessibility to the place. -Being part of the place. -Proudness of being in the place -Being the community within the place. -Sense of community and activities within the space. -Familiarity with the building through design process. -Accessibility to the place. -Difficulty of the accessibility to the place. -Difficulty of living in the place and appreciation of the place. -Difficulty of daily routine in the place. -Resident location and the accessibility to the place. -Accessibility to the place. -People circulation and work flow. -Sequences of work and accessibility through the place. -Spatial availability and people interaction within the place. -Accessibility of the place from public and appreciation of the place.

Figure 27: Excerpts of stage three, Emergent themes from all participants

Participant 1	Participant 2	Participant 3	Participant 4	Participant 5	Participant 6
-Need of the place of co -Being free routine. **-Openness to** -Being out of the box. -Being out of the office. **-Difficulty of** accessing and **working** within the area. **-Personal preferred approach to the building.**	chances of wider perception. **-Open-office causes a lack of people interaction.** **-Space possession.** **-Defining the group within the place.** -Metaphorical determining of the place. **-Life within the building.** -Green space within the building as the oasis. **-Pleasure of coming to the building.**	**-People and being part of applying architectural design concept.** **-Being part of architectural concept.** **-Connection between interior and outside environment.** -Ability to perceive the exterior environment. -Seeing exterior environment. **-People barrier.** **-Group behaviour and interaction within the space.** **-Security and mechanical issues and freedom of behaviour in the space.** **-Nature of work and chances being in the place.** **-Nature of work and chances of interaction among groups of people.** **-Office planning and circulation flow.** **-Free of moving through space.** **-Uplifting.** -Making life to be better. **-Nature of work and freedom of activities within the space.** **-Freedom of creating activities within space.** **-Nature of work and interaction with people.** **-Sense of owning the place.** -Ability to create activities within the place. **-Activities and unity of people within the building.** **-Sense of owning the area.** -Ability making sense of invitation to the area within the place. **-Administrative policy determining the way of living within the space.** **-Sense of responsibility.** **-Personal responsibility within the shared area.**	-Visual colour contrast within the interior space. -Time spending in the place and stress of living in the place. -Material colour represents the interior appearance. **-Personal attitude and appreciation of the place.** **- Expression of pride of being in the place.** **-Achievement of architectural concept.** -Legibility of understand architectural concept. **-Nature of work and interaction among groups of people.**	**-Office location and chances to experience the place.** -Interior space route/path/circulation. **-Informally create sense of community.** -Connection among groups of people **-Different location of the office and different attribute with the place.** -Location of the office and chances to interact with outside environment. **-Open-office planning and background noise.** **-Legibility in the interior space.** **-Routine and role of job and chances of appreciate the place.** **-Material and modern language representative.** **-Day and night and different architectural appreciation.** **-Openness.** **-Informal community creation.** **-Connection to the communities.** **-Place as part of the adjacent community.**	

Figure 28: Excerpts of stage three, Emergent themes from all participants (continue from Figure 27)

Participant 1	Participant 2	Participant 3	Participant 4	Participant 5	Participant 6
		-Sense of recreation. -Being rest. -Sense of recreation. -Sense of Invitation. -Giving opportunity and freedom of doing activities within the place. -Place and sense of connection to the outside. -Sense of being connected to the outside world. -Virtual connection and being connected to the outside. -The place and daily dependables. -Nature of work and ability to perceive the nesting area.			

Figure 29: Excerpts of stage three, Emergent themes from all participants (continue from Figure 27)