

Curtin University of Technology

Department of Urban and Regional Planning

School of Built Environment

Less is more, the Caravan re-imagined; Examining barriers to tiny houses on wheels as affordable pop-up housing in the 21st Century.

Presented to partially fulfil the requirements of Bachelor of Arts in Urban and Regional Planning

Planning Dissertation 414

Emmet Blackwell 12962681

07/11/2014

Declaration:

I, Emmet Blackwell, declare that this dissertation represents my own research and does not use the work of others except where cited within the text. The ideas, views and opinions expressed are mine personally and do not represent those of my employer or Curtin University of Technology.

Signed:

Date:

Acknowledgements

Firstly I would like to thank my supervisor, Shane Greive; for the support, ideas, expertise and interest which you brought to my dissertation. Your focus, understanding and communication pushed me to explore ideas and research I would not have considered valuable.

Sue and Dave; thank you for your unwavering support, stimulating conversations, valuable input, all the wholesome meals and opening your home up to me with warm hearts. Thank you for proof-reading my work and making relevant, helpful suggestions. Also to Liam Culbertson for his constructive editing, comments and generosity with you're time.

Many thanks to my numerous interviewees for the information, ideas and inspiration which you gave me as I wrote my dissertation. I hope that your passion and dreams are accurately represented in this paper. Thanks also to the many authors of information who made up the factual backbone of my thesis. Particularly Brett Sutherland and Andrew Heben for their inspirational examples.

Table of Contents

Introduction	4
Research Objectives	7
Research Methodology	8
Section One: Theoretical Perspectives	11
1.1 Utilitarianism	11
1.2 The impact of Modern Housing and Consumption on Human Health and Happiness	12
1.3 Regulations applicable to THOW in Western Australia	13
Section Two: The Changing Economics of Housing	14
2.1 Housing Affordability	14
2.2 Housing Diversity	18
2.3 Employment Patterns and Implications for Housing	19
2.4 The shifting priorities and cultural perceptions Generation Y	21
2.5 Housing Careers	21
2.6 Permanent Residents of Caravan Parks in Australia	24
Section Three: The Resource Efficiency of Contemporary Housing and Lifestyles	25
3.1 Sustainable Living	26
3.2 Consumption	28
3.3 Voluntary Simplicity	30
Section Four: Itinerant Living	31
4.1 Tent City Urbanism	31
4.2 Nomadic Urbanism	32
4.3 The Pop-Up City	33
4.4 The Separation Home and Land Ownership	34
Section Five: International Case Studies	35
5.1 Homelessness Village Initiative in the Unites States: Occupy Madison	35
5.2 Tiny House on Wheels in Auckland New Zealand	37
5.3 Austin City Council's Tiny House Planning and Building Regulations Review	38
Section Six: Key Findings	40
6.1 Stigma and Cultural Perception	40
6.2 Regulating THOW in Western Australia	43
Section Seven: Broader Implications	48
7.1 Stigma and Cultural Perception	49
References	50

Introduction

While homeless people often live simplified and more resourceful lives out of necessity, a growing number of housed citizens from developed nations are doing the same by choice. Tiny Houses on Wheels is the housing form of choice currently increasing in popularity, specifically within a number of industrialised nations including Australia, New Zealand and the United States. At this point, you may find yourself asking, what is a tiny house on wheels? Isn't that just a different way of describing caravan? These are both legitimate questions. The 'Tiny Houses on Wheels' (THOW) housing model, is the 20th century tourist caravan design, re-imagined as a new contextually appropriate model of permanent housing, which provides affordability, resource efficiency and flexibility in order to serve the ever changing housing needs of contemporary life in the 21st Century. Andrew Heben (2014), an emerging young urban planner from the United States who is directly engaged in the growing movement, describes that THOW designs are commonly composed of a living space, kitchenette, bathroom, a loft for sleeping, and a front porch. Typically all of these design features are contained within the standard footprint of a conventional tourist caravan, of 8 to 20 square metres, built upon a mobile trailer. Some are connected to one or more standard utility services, whilst others utilise alternative sources of energy and plumbing. An internet search for the term 'Tiny Houses on Wheels' reveals countless examples which make it clear that in contrast to the modern tourist caravan design which prioritises lightweight materials and aerodynamic outline, THOW's are generally built to provide increased comfort and longevity by using timber framed house construction materials and techniques. These key differences reflect the increasing desire of THOW owners to live in their portable dwelling on a full-time basis, moving locations less frequently. Below are a number of images which represent the contemporary THOW.



Source: google.com



Source: google.com

The initial popularisation of THOW as housing concept in a 21st century context, has been observed primarily in the United States, following the Global Financial Crisis (GFC) and subsequent subprime mortgage crisis which resulted in en masse mortgage foreclosures and home loan defaults, occurring from late 2007 onward. However other westernised countries including New Zealand and Australia now appear to have growing interest in THOW, largely attributed to a the existence of housing affordability crisis in all three countries.

Chapter one will begin by defining the research objectives and providing an outline of the research methodologies utilised to inform the study. Chapter two will provide a number of theoretical perspectives relevant to living in a THOW, including an exploration of utilitarianism, which provides a moral lens under which we can examine the intentions and real life impacts of planning regulation (Eban 2011). The effects of contemporary housing and consumption patterns of industrialised nations, is then placed under the microscope, acknowledging the West's depression epidemic, first documented in the 1970's (Farrelly 2008). The chapter then concludes with an overview of the existing legislative and regulatory framework which is relevant to THOW in a local Western Australian Context. Chapter two goes on to explore the shifting economics of housing in Australia, including the housing affordability crisis taking place in Australia (Worthington 2012; Yates 2001; Beer, Kearins & Pieters 2007), the related lack of housing diversity in the domestic housing market (Beer, Faulkner and Gabriel 2006; Clune, Morrissey & Moore 2012) and the shifting nature of 21st century employment patterns, lifestyles priorities and family values, captured by the analysis of Australian housing career's (Beer, Faulkner and Gabriel 2006).

Chapter three then provides an in depth analysis of the resource efficiency issues related to contemporary housing and lifestyle options, depicting the significant impact housing form has on the consumption of resources (Green Building Council 2013), with particular focus on the impact of large housing footprints encapsulated by the suburban dream (Palmeri 2010). Sustainable lifestyle choices such as voluntary simplicity and minimalism (Hawken 2011) are examined in the context of the THOW concept, and contrast against the current consumption patterns of industrialised nations. Chapter four goes on to explore a contemporary urban form, based on the growing shift toward flexible lifestyle and employment. Heben's (2014) tent city urbanism, captures an illegal urban form created by a vast number of homeless populations in Australia and the United States. Whilst the

growing mainstream trends toward pop-up cities and nomadic urbanism, are broken down and analysed in the context of itinerant housing forms and untraditional concepts of land tenure, both of which are increasingly important issues to match society's increasingly flexible lives. Chapter five contains three international case studies, which provide valuable examples of how THOW are being either embraced or regulated against. Chapter six presents the key findings of the research, consisting of an analysis of the most significant barriers to THOW in Australia. Chapter seven, the conclusion then wraps up the dissertation and provides comments on the broader implications of the research findings, as they relate to the field of urban and regional planning.

Research Objectives

The basis of this research is to explore the growing popularity of tiny houses on wheels in developed countries, specifically Australia, New Zealand and the United States. The research seeks to identify and analyse the existing barriers which prevent tiny houses on wheels becoming an acceptable form of housing in both regulatory and cultural contexts.

The research has been framed through the following statement:

“Less is more, the Caravan re-imagined; Examining barriers to tiny houses on wheels as affordable pop-up housing in the 21st Century.”

The exploration of this research question involves investigating:

- Exploring the reasons why certain people in developed countries are choosing to live in tiny houses on wheels;
- Examining the regulatory controls and other barriers that prevent people living in tiny houses on wheels;
- Examining existing examples of affordable housing communities, consisting of people living in tiny houses on wheels;
- Identifying and examining people's perceptions about living permanently in a tiny house on wheels;
- Exploring ecological and social issues that relate to tiny houses on wheels; and
- Analysing the financial opportunities and constraints of living in a tiny house on

wheels.

Through the exploration of secondary data within the literature review, it became evident that relatively little had been researched or written directly about the tiny houses on wheels as a housing form. On this basis, the research is exploratory, conducting investigation and analysis into new areas of research (Thames Valley University 2009). Given the exploratory approach, this body of research is intended to provide a foundation for future investigation, research and analysis (Nueman 2006).

Research Methodology

Quantitative data such as statistics is often useful in the expression of trends and recordable phenomenon, providing “standardised, reliability measures to ascertain the ‘facts’ with which the study is concerned” (Silverman 2005, 8). However more than facts are required in order to adequately examine the Tiny House on Wheels (THOW) movement. The research methods employed for this paper will also seek to analyse hopes, values and perceptions in a qualitative form which is less easily measured in numbers and facts.

Literature Review

Secondary data in the form of a literature review has been used to provide background to the research question. Hart (1998) describes the effective role of literature reviews in building a focused foundation for research being conducted. This literature review has helped identify background information as well as areas which require further exploration and analysis. The forms of secondary data used in this study are as follows:

- Scholarly journals;
- Books;
- Websites; and
- Government documents.

Unobtrusive Research – phone enquires

Phone enquires within the scope of a standard business operation have been used to enable the researcher to accurately assess costs implicated with a distinct housing option in relation to THOW. A mixed sample of caravan parks were contacted over a wide

geographic area to assess industry standard costs and restrictions relating to the potential long term tenancy within a caravan park for a caravan or THOW owner.

International case studies

Case studies enable the researcher to present a specific example in order to provide information and supporting research relevant to the topic. Additionally case studies enable the researcher to analyse an example grounded in reality, opposed to highly theorised perspectives which may be removed from real life experience.

Interviews with local planners, builders, designers and residents of Tiny Houses on Wheels

Bell (1999, 119) says that survey's "are a good way of collecting certain types of information quickly and relatively cheaply", this being an important factor for this research due to time limitations and geographic separation from research subjects. This paper's research questions have been broken down into a set of researchable criteria and subsequently 4 differing sets of questions for the purpose of conducting qualitative in depth interviews conducted via email. Bell (1999, 118) also raises the point that "care has to be taken in selecting question type of survey instruments as all respondents will differ in knowledge and familiarity with any given subject". The interviews have been conducted with a total of ten individuals composing a mix of people in who area either professionals or individuals with experience on the research question.

- Planning Officers from different Western Australian Local Governments (x5 Fremantle, South Perth, Canning, Albany and Margaret River)
- Professional builder or designer of THOW (x2)
- Current Occupant of a THOW (x2)
- Future Occupant of a THOW (x1)

The selected individuals that were interviewed represent maximum variation sampling methodology (Creswell 1998), being selected from a diverse range of differing stakeholder perspectives on the subject matter. Within the largest group of respondents, Local Government Planning Officers, the local governments interviewed were selected in order to represent a spread of urban, suburban and rural localities. In order to choose appropriate interviewee's in the other three categories, various searches on the internet identified groups of people interested and experienced in the THOW movement or design

and building industry.

The participants were chosen based on their ability to contribute to the evolving theory surrounding my research question. Due to the lack of people engaged in the THOW movement or industry within Perth, sampling was not able to take into account a high degree of transparency or random selection. Additionally many of the interviews were conducted with people who live outside of the Perth Metropolitan Region, in other States and Countries. Therefore email interviews were identified as the most effective method to collect qualitative data from a wide geographic area.

The in-depth interview questions were written in the style of a standardised open ended interview's as described by Patton (2002), although to differing degree's dependant on the category of participant and type of information being sought. This approach enabled the respondent's answers to be compared more easily than an informal conversational interview or interview guide approach. However the open ended questions that were included allowed for a high degree of personal expression from the respondent, as opposed to a fixed response interview method such as multiple choices. Hay (2000) acknowledges that a mix of question types within a survey instrument will increase the depth of data collected. Closed and open questions have both been utilised within all of the survey instruments used in this study.

The interview questions all began with a number of background questions to establish basic information about identity, locality and experience. These questions have been put at the start to ease the respondent into the interview as they are easy to answer, not requiring critical thinking (Patton 2002). These background questions also provide contextual information useful to help the interviewer understand the participants background and qualification. The mid section of each set of questions were aimed at gathering a mix of knowledge, opinions and underlying values (Patton 2002). As the interviewee's have been selected based on their expertise or experience relative to the topic, their interpretations and opinions are held in high regard. The final question for every interview undertaken was completely open, asking the respondents if they would like to say anything further on the research topic. This allowed the respondents to add whatever they felt was relevant as a conclusion to the interview. This also allowed the respondents an opportunity to provide opinions and knowledge on related topics which had not directly

been incorporated into the questions, although may still be of vital importance to the research question itself.

Section One: Theoretical Perspectives

1.1 Utilitarianism

Utilitarianism is a theory of normative ethics created by the late John Stuart Mills, a belief that the proper course of action is the one that maximises utility, by facilitating maximum total benefit and reduction of negatives. The theory provides an anthropocentric economic analysis, based on morality (Eban 2011). Utilitarianism is a useful lens to examine the THOW moment, which is a contemporary market driven itinerant post-Fordist housing solution. A conflict appears to exist, between individuals who wish to live permanently in a THOW and modernist building and planning regulations which make this practice prohibitive in most industrialised countries, including Australia. Following the onset of the Financial Crisis which occurred from 2007-2011, declining housing affordability on a global scale has resulted in market conditions and social media popularising the idea of itinerant and affordable housing forms and lifestyle options, in particular the THOW movement. The neo-liberal school of economics generally permits the market to respond freely to shifts in demand for new products and innovative solutions. However the existing building and planning regulations that appear to restrict THOW becoming an acceptable housing form, were created with the intention of protecting people against slums, over-crowding and poor sanitation (Hall 2002), all of which were legitimate concerns when Australia's modernist post-war housing standards were formulated in the mid 1940's (CHC 1944).

Thus a conflict has seemingly arisen between individual freedoms and community safety. The market is not being permitted to respond to the increasing demand for THOW due to the existing modernist building and planning regulation framework, which are prohibitive because of to concern for the protection of the communities well-being. Utilitarianism will therefore be utilised by this study to explore the conflict further. Faludi (1973) advocates for a planning process which:

“openly invites political and social values to be examined and debated. Acceptance of this position means rejection of prescriptions for planning which would have the planner act solely as technician... the planner should do more than explicate the values underlying his (sic) prescriptions for courses of action; he should affirm

them; he should be an advocate for that he deems proper” (Faludi 1973, 277-279).

Furthermore, Booth (2006) suggests that the disadvantage experienced by the disempowered in society, will grow if the planning process cannot represent all socio-economic and cultural groups.

1.2 The impact of Modern Housing and Consumption on Human Health and Happiness

Psychologist Martin Seligman documented during the 1970's the depression epidemic observed to be taking place in developed nations, the trend being attributed to the constant feelings of disappointment in response to increased affluent based expectations (Farrelly 2008). However since Seligman, many academics have observed and documented this phenomenon. Closer to home here in Australia, Clive Hamilton and Richard Denniss (2005) label the same trend as 'affluenza', defined as the epidemic of stress, overwork, waste and indebtedness caused by dogged pursuit of the suburban dream. Farrelly (2008) also observes that in Australia, the combination of urbanism, wealth, hyper consumerism and labour-saving technologies is a way of life that is simply not attuned to our basic biology. Offer (2006, 24) acknowledged the same pattern in the UK: 'since the Second World War, and especially since the 1970s, self-reported "happiness" has languished ... or has even declined'.

Throughout the twentieth century, millions of people fled the cities into suburbs whose design generated its own unique health risks. Sternberg (2009) notes that as per the shift toward sterility in hospitals resulted in an array of health problems, due to inattention to human emotional needs, shifts within the realm of in urban design did so as well.

The isolation and long distances needed to travel to amenities, requiring automobile transportation, are a setup for illnesses such as depression and obesity and their attendant illnesses, such as heart disease, diabetes, and stroke. (Sternberg 2009, 263)

Farrelly (2008) describes this pattern as the paradox of happiness. The things we often choose to make ourselves happy, simply do not. We assume that material things and consumer goods will make us happier than they actually do, for longer than they do in

retrospect. Sternberg (2009) suggests that we have a choice, to either design places that destroy the natural environment and that which in turn destroys us. Or do the opposite - design places that assist us to exist harmoniously with the natural environment and sustain our health.

1.3 Regulations applicable to THOW in Western Australia

This paper seeks to explore the role and practical application of the relevant legislation and regulations within the context of the growing movement of people wanting to construct and live in a THOW. The following list provides an overview of existing regulations and legislation that may affect the design and occupancy of a THOW in Western Australia.

- Caravan Parks and Camping Grounds Act 1995
- Caravan Parks and Camping Grounds Regulations 1997
- Residential Design Codes
- Building Codes of Australia (BCA)
- Local Government Planning Policies and Local Planning Schemes

The Caravan and Camping Grounds Act (1995) and Regulations (1997) were both developed with the intention of serving requirements of the tourist or person whose use of an itinerant dwelling such as a caravan was only short term. Being mobile and for use on a short term basis, caravans were not constructed to meet building codes applicable to permanent dwellings. A trend of long term caravan living appeared to grow during the 1960's and early 1970's (Metropolitan Region Planning Authority 1983).

The historical roots of the Residential Design Codes and BCA are in The Commonwealth Housing Commission (CHC), a body established by the Federal Government in April 1943. The Commission's role was to "conduct a quantitative and qualitative stocktake of housing and report on Australia's post-war housing requirements (CHC 1944, 8; Gawler 1963). In August of 1944 the CHC handed in its final report, dealing with a comprehensive set of factors affecting the provision of housing "including the role of government, national, regional and town planning, residential land, the development of housing programmes, housing administration, the building industry, construction labour, the building materials sector, rural housing, slum clearance, community facilities, housing standards and dwelling

types”, additionally, the CHC called “for higher levels of housing quality, affirming that ‘a dwelling of good standard and equipment is not only the need but the right of every citizen’” (CHC 1944, 8). The next national review of housing provision was not to be undertaken again until the early 1990s (National Housing Strategy 1991, 1).

At this time, a warning was handed to the CHC by the Australian Institute of Political Science forum regarding the “need for strict government control over labour and materials and pointed to the difficulties in maintaining a ‘virtuous’ policy when weighing up the ‘old conflict’ between authority and freedom” (Copland 1944, 138-9). Gans (1962, 300), a critique of urban planners, expressed the view that planners “values are those of the professional upper-middle class”, concerned that planners acted as though lower-class people were simply people with middle-class values who lacked “access to opportunities and services available to the middle class”. Under the further assumption “that cultural change can be induced by providing the improved residential conditions and... educational, health, and other facilities” (Gans 1962, 300). However it must be acknowledged that the real evils of housing existing at the time included slums with poor sanitation, high rates of crime, rampant disease and houses so crowded that often two or more families shared a single room (Hall 2002). A balance with lasting effects was struck by the CHC in 1944, with the virtuous intentions of protecting the community well-being, contrast with the freedom of individual rights.

Chapter Summary

In this chapter, the reviewed literature provided a historical perspective regarding the creation of a modernist regulatory framework which applies to housing within Western Australia. The examination of utilitarianism identifies the potential for conflict between the opposing intentions of regulations - to balance the protection of the community - against the preservation of individual rights.

Section Two: The Changing Economics of Housing

2.1 Housing Affordability

The most common definition of housing affordability within related theory is described by Disney as housing that should cost no greater than 25-30% of a household’s income. Berry (2003) as well as Seelig & Phibbs (2006) also support this definition, describing the experience of housing stress as being those households who pay more than 30% of their

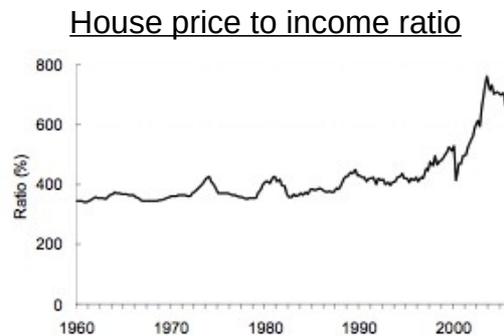
household incomes on housing. However such narrowly defined concepts of housing affordability fail to take into account true housing costs, which is are also affected by additional factors such as location. Disney (2007, 22) defines affordable housing as “housing of an adequate basic standard that provides reasonable access to work opportunities and community services”, being “available at a cost which does not cause substantial hardship to the occupants”. An analysis provided by Newman, Beatley and Boyer (2009, 50) acknowledges this tension:

“traditional accounting of housing costs does not include transportation expenses, so living in the outlying suburbs, when compared to today's higher-priced urban centre, seems like a bargain. But true housing costs (separate from environmental costs) need to consider household expenditures on transportation, especially in the age of diminishing oil supplies.”

Four out of a total five interviewee's who were either tiny house builders or occupants (current or future) cited housing affordability as being a significant factor motivating themselves or their client to live in a THOW. One of the occupants of a THOW commented that people don't have to borrow outrageous amounts of money and be locked into an expensive mortgage simply to put a roof over their head. One of the Tiny House builders interviewed expressed his opinion based on experience that the “most predominant reason for downsizing to a tiny house would be economic. People want to reduce the amount of money they have to spend to secure accommodation, and a tiny house affords them this opportunity”. A Planning Officer working for a Local Government within the Perth Metropolitan Region suggested that THOW could alleviate “some pressure from the housing affordability issues WA is facing”.

A growing body of literature acknowledges there is a growing crisis of housing affordability within Australia, as well as other developed countries including the United States and New Zealand. In the Australian context, the trend of decreasing housing affordability is powerfully captured by figures which demonstrate the growing disparity between the ratio of average housing cost, compared to average incomes, viewed in full context of the last century. Worthington (2012) describes that in the decades leading up to the 1930's, the average cost of a house equalled five times the average annual household income. The ratio then increased to a multiplier of six by the 1970's and currently, in the 21st Century's

second decade, the figure sits at around nine times the annual household income (Worthington 2012).



Source: (Yates 2007)

A broad range of factors have been attributed to the steep decline in housing affordability within both the rental and ownership markets. Yates (2001, 493) raises significant concern about the current state of housing diversity in Australia, stating that “an affordable option is not available when larger, family dwellings dominate the housing stock”. Beer, Kearins & Pieters (2007, 11) postulate that “house prices have risen in response to booming demand and constraints on the supply of dwellings, especially a shortage of land in the capital cities and skill shortages within the housing industry. Many young and low-income households have experienced great difficulty in gaining access to homeownership and in being able to afford private rental housing”. Bourassa, Greig & Patrick (1995, 83) raise concerns that Australia's housing policy ensures home ownership is the dominant tenure, as it provides minimal support for private renters, a marginal public housing sector and substantial tax incentives for home owner. The housing affordability crisis is impacting a wide range demographics and numerous socio-economic groups. Atkinson & Wood identify that “mortgage default rates are rising, household dissolution is causing families to fall out of home ownership and there are high levels of homelessness” (2007, 12).

Homelessness is defined by the Australian Bureau of Statistics (ABS 2012) as occurring when a person lacks suitable accommodation alternatives. More specifically they are considered homeless if their current living arrangement is within an inadequate dwelling, lacks tenure or if their initial tenure is short and not extendable, or does not allow them to have control of, and access to space for social relations. Therefore the ABS (2012) definition of homelessness is informed by the concept of “homelessness as 'home'lessness, not 'roof'lessness”, emphasising the notion of 'home' in Anglo American

and European interpretations. These elements provide a security, stability, privacy, safety, and a controlled living space (Mallett, 2004). Chamberlain & Mackenzie (1992) provide further detail to the understanding of homelessness and its varying classifications, as utilised by the ABS (2012) and the Australian Governments White Paper on Homelessness (2008):

- *“Primary homelessness: People without conventional accommodation. This includes those sleeping rough or living in improvised dwellings.*
- *Secondary homelessness: people staying in or moving between various forms of temporary accommodation. This includes staying with friends or relatives with no other usual address and people staying in Specialist Homelessness Services.*
- *Tertiary homelessness: including people living in boarding houses or caravan parks with no secure lease and no private facilities, both short- and long-term.”*

According to analysis provided by Wood et al. Australia's national “rate of homelessness per 10 000 persons has fluctuated over the decade between 2001 and 2011. In 2001, the rate was 50.8 persons per 10 000, falling to 45.2 in 2006 and then bouncing back to 50 persons per 10 000 in 2011 at the tail end of the global financial crisis” (2014, 2). However, Chamberlain (2012) asserts that it is crucial to consider that figures from the Census regarding rates of homelessness are not a reliable indicator of the number of rough sleepers at the current time, such as homeless people sleeping in public places, derelict buildings, tents, cars, etc. The accuracy of the Census count of rough sleepers depends on Census collectors having good local knowledge and sufficient staff resources. Of course people without conventional housing are very difficult to count as they usually hide away at night for warmth and safety. Additionally it has been documented that some homeless people are particularly opposed to the idea of providing information to the government and refuse to fill out census forms (Chamberlain 2012). Therefore it is clear that significant inaccuracies exist in homelessness statistics due to the invisible nature of much homelessness, particularly in contrast to less distorted housing categories within the census.

Heben's (2014) analysis of the increasing number of homeless people organising informal and unlawful tent cities in the United States is also relevant here in Australia. The existence and increasing frequency of Australia's homeless population forming illegal tent

city communities is observed within the mainstream media, throughout all states. A brief search of Australian online news media reveals a series of headlines within the last five years recognising the current existence of tent cities on a national scale, highlighting their presence by identifying examples in Western Australia, South Australia, Victoria, New South Wales and Queensland ("Geraldton Becoming a Tent City" 2014; "Homelessness: Surviving in a tent city" 2009; "Australia – No home for the homeless" 2014; "Homeless Haven in Sherwood Forest." 2012).

2.2 Housing Diversity

Housing diversity implies a mixture of housing styles, cost, structures and size to meet the different requirements of society. Australian housing design has changed only marginally over the last five years and is largely regarded to be homogenous, dominated by ever expanding McMansion, containing at least three bedrooms, two bathrooms, home theatre and double car garage. An unfortunate irony of Australia's housing stock is that, as the average size of new homes has increased, the average number of people occupying each house has been shrinking (Beer, Faulkner and Gabriel 2006). Clearly the housing industry is failing to meet market demand, specifically in regard to smaller and more affordable dwellings. The average Australian dwelling size increased from 162.4sqm in 1984 to 248sqm in 2009, growth of 52.7% (Clune, Morrissey and Moore 2012). In 2011, Australia had overtaken the United States in average house size, being 10% larger with the average floor area of new houses and apartments at 214.1m² and the average floor area for new single dwellings at 243.6m² (Commsec 2011). A Select Australia Senate Committee report on housing affordability recognised that Australian residential developments "have ignored the need for a diverse mix of housing" (2008, 95).

Larger homes also have a larger ecological footprint, due to expanded greenhouse gas emissions, consumption of natural resources and the production of waste. In addition to the energy consumed and waste produced by large houses, they provide a larger area to fill with consumer goods, which have their separate ecological footprint. Farrelley suggests that "Perhaps big houses - land-hungry, greenhouse-dirty, energy-inefficient - will come to be seen as so ecologically greedy and so physically unhealthy that the trend setters will start to go for leaner, greener dwellings" (2008, 109). It appears that the growing global 'Tiny House' movement may be proving Farrelley's prediction correct.

Heben (2014) argues that the tiny house on wheels provides a game-changing perspective to the complex issue of homelessness, in that it illustrates that the problem is not so much that some people can't maintain housing, but that our contemporary standards of housing have become inaccessible and exclusionary to many. The Western Australian Government Department of Housing (DoH) holds responsibility for the provision of housing in Western Australia, particularly social housing for people who are homeless or disenfranchised. An Urban Designer working internally for the DoH was emailed a summary of this thesis proposal and asked to participate in primary research, this being in the form of an in-depth email interview. The response from the Department of Housing Urban Designer was clearly dismissive of the Tiny House on Wheels concept, in saying that "I take issue with affectively urbanising rural zoned land before the fringe can catch up and be planned for. The department has not really engaged with the mobile home or lifestyle village concept mostly because it is not sustainable as a business model". A number of international case studies examined later contradict the aforementioned DoH urban designer's beliefs suggesting that the contemporary tiny houses on wheels has in fact been proven to function effectively as an affordable and flexible housing form using successful business models, without the urbanisation of rural zoned land.

Additionally, when one searches for precedents of successfully regulated small portable housing structures, the obvious example are the 'transportable accommodation units', also know colloquially as the 'donga'. The donga has successfully been regulated by Federal, State and Local Governments and relevant organisations, largely for use by the resources sector. The donga is the chosen form of housing for the majority of resource projects throughout Western Australia, utilised on a mass scale of thousands of units, often to house people for years at a time. Primarily donga's have been utilised as a housing form for workers in regional areas who live on-site, often working in a fly-in fly-out arrangement, Although they are also used within both regional and urban settings. It is not uncommon for large donga type structures to be used as cheap additional classrooms in Western Australia's public schools. Clearly there is a strong business case in favour of relocatable dwellings, in addition to the other obvious benefits including affordability and flexibility. The donga and THOW both represent market driven housing forms suited to itinerant lifestyles.

2.3 Employment Patterns and Implications for Housing

Employment is a significant contributing factor which guides housing pathways, according

to Newton (2014). Clapham identifies that working practices are in a constant state of flux, adapting to a plethora of shifting variables (2005). The traditional concept of a 'job for life' whereby people work a single 'careers' their entire life has transitioned to temporary contracts, combined with periods of non-employment, as well as a significant increase in mobility between occupational groups and types. (Beer, Faulkner, and Gabriel 2006). Beekmans and de Boer (2014) describe how previously, work location was one of the most significant factors which determined where to live, reducing the need for a lengthy daily commute consuming hours out of each day. However they argue technology and globalisation have changed the goalposts. "Work has turned fluid and spreads everywhere and nowhere. Never before have we had access to more international contacts in order to make ends meet" (Beekmans and de Boer 2014, 19).

At the last turn of the century, Bradley et al. (2000) advocated that work was increasingly central to most people's lives as the culture of working long hours became endemic. With many people working two or more jobs in order to make ends meet. Subsequently, overwork was becoming pathological. This notion is supported by Hamilton and Denniss (2005) in their description of 'influenza', primary symptoms of which include overwork, debt and related stress. Such trends significantly impact the family unit, resulting in less quality time spent between parents and their children, as well vital time between partners, with both Mum and Dad often both working full time.

The tiny house on wheels design offers a solution to multiple facets of modern employment. Firstly they provide a transportable and therefore flexible housing option which can be relocated to suit the increasingly short term and transient nature of the contemporary job market. Secondly, tiny houses on wheels are exceedingly more affordable than the average home, as they allow the separation of land ownership and home ownership. The reduced housing cost reduces debt and related financial stress, thereby allowing individuals to choose to work fewer hours in order to prioritise time spent with family members and the community. Finally the flexible and affordable benefits of tiny houses on wheels permits the emerging generations of transient entrepreneurs to store their dwelling within a small space with little or nil rental costs, permitting extended periods of time spent away from home. All without wasting money on un-used housing, whilst retaining home ownership and security of tenure, ready for their eventual return (Beekmans and de Boer 2014).

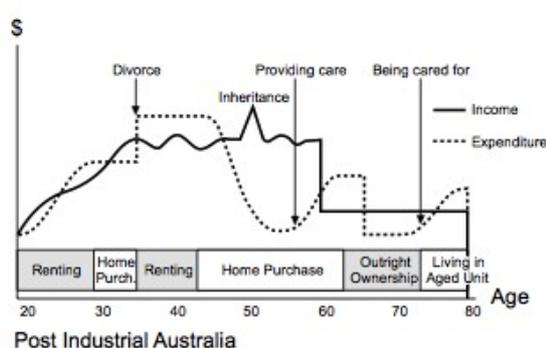
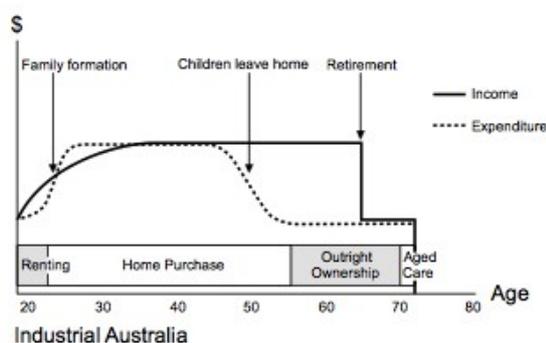
2.4 The shifting priorities and cultural perceptions Generation Y

For the purpose of this dissertation 'Generation Y' includes people born between 1976 and 1991, as defined in AMP-NATSEM (2007). Within the context of housing market, it appears that Generation Y is displaying clear shifts in their behaviour and attitudes compared to their predecessors Generation X and the Baby Boomers. However Deal (2007) describes a close match in generational values such as 'family', 'love', 'spirituality' and 'integrity', which appear to correlate within all generations, though behaviours prove to differ through qualitative and quantitative references. Shifting behaviour trends include changes in financial behaviour (Sheahan 2005; Goldgehn 2004; AMP-NATSEM 2007), an increase of individualism (Sheahan 2005; Salt 2006; Beck 1992) and differing expectations of family formulation (AMP-NATSEM 2007). Partly in response to the worsening of housing affordability, Generation Y housing trends demonstrate the increase of rental tenure and a decline in home ownership (AMP-NATSEM 2007; Badcock and Beer 2000). Also noted in the literature is a tendency to stay living with parents longer and increasing reluctance to marry and have children (Salt 2006; AMP-NATSEM 2007; Beer, Faulkner, and Gabriel 2006).

2.5 Housing Careers

The term 'housing career' is used in Australia to explain the "strong correlation between the type of dwelling a household occupies and its stage in the life cycle" (Beer, Faulkner and Gabriel 2006, 9). Structural changes in Australia's economy and social expectations have significantly contributed to a major shift in the life course of individuals and the details of housing careers, when compared with those of two or more decades ago (Winter and Stone 1998). Holling, McKenzie & Affleck discovered that "declining rates of marriage, delayed marriage and family formation, increasing divorce levels, desire for baby boomers to maintain independent living, structural changes to employment and changing household structure including more single households is affecting the demand for housing and how individuals afford housing" (2007, 17).

Changed Life Histories and Changing Housing Careers



Source: (Beer, Faulkner and Gabriel 2006)

As the above figures suggest, the increasing complexity of Generation Y's contemporary life styles have resulted in significantly more variability of housing careers compared to 30 years ago (Beer, Faulkner and Gabriel 2006). Publications from Winter and Stone (1998) and Stone (1998) show a number of households are now not entering into home ownership by the traditional threshold of 34 years of age, and may consider never do so. Contrary to this, research from Baxter and McDonald (2004) indicates that younger households and younger generations are simply delaying their entry into home ownership. However at this stage, the analyses within these bodies of research are currently suggestive and not at all conclusive given the pre-mature status of Generation Y's lifecycle (Beer, Faulkner and Gabriel 2006). Beer, Faulkner and Gabriel go on to explain that

“contemporary Australians tend to delay entry into the labour force as they complete higher education; they partner later in life; many of them re-partner; partnering may or may not involve marriage; and entry into homeownership may be delayed – or cancelled altogether – because of an insecure relationship, the high cost of housing or as a consequence of part time, casual or contract employment.” (2006, 3)

Contemporary western families are becoming increasingly “culturally and situationally diverse” (Newton 2014, 129). Shifting values in regard to the notion of the traditional ‘family unit’, also appear to be having a significant impact on the housing career's of contemporary generations. A decreasing number of households have children and single parent households are becoming more common, with the figures of single parent households recently predicted to rise from 25 per cent, up to as high as 50 per cent. Fertility is also falling, a reflection of a shrinking average family size in Australia and most industrialised countries (Beer, Faulkner and Gabriel 2006). Despite these shifts, family households remain as the most common household form. Although increasing housing diversity is required by the significant portion of the population with changing housing needs (Shaw 2010).

In the context of the THOW movement, a builder who was interviewed for this research expressed the following view, based on his experience and iterations with the THOW movement

The most common demographic interested in them are bright young couples in their twenties either just starting their family or just the two of them who want a lifestyle without a big mortgage..... Also solo Mum's looking for their own affordable space.

Additionally, a number of the interviewee's who were current THOW occupants, or in the process of becoming occupants were members of the 'Baby Boomer' generation. Their comments indicated a desire for downsizing into a more affordable housing form, supporting research conducted by the Australian Housing and Urban Research Institute (AHURI 2004) which suggested that difficulties for older tenants in accessing affordable and stable housing will continue and may worsen. Cheal (2002) writes that many people like to keep things in the family, commonly due to issues of trust. Subsequently, THOW may provide a flexible housing option for families to use in much the same way as the traditional granny flat has been used to provide separate housing for young and older members of the family, whilst maintaining required family contact and support. The added bonus being that the financial outlay required in order to build a THOW will not be lost, in the case that the family home is sold, as the structure can be relocated or sold, as opposed to a fixed ancillary dwelling.

2.6 Permanent Residents of Caravan Parks in Australia

Following changes to Australian governments public housing policy, the 1960's and 1970's saw permanent residency within caravan parks became an increasingly significant element of Australia's housing landscape (ABS 1367.2 2007, Gleeson 1997, Wensing, Wood and Holloway 2003). Similarly to the stigmatised trailer parks of the United States, permanent living within caravan parks has become reality for a minority of Australians priced out of the conventional housing market as well as those in search of crisis accommodation (Bostock 2001; Bunce 2007, Gilbert 2005; Proudley and Wylie 2001). However, the regulations, business model and designs of caravans and caravan parks were intended for the short term use of caravans for holidays (Metropolitan Region Planning Authority 1983).

In Janice Newtons book on permanent caravan park residents in Rural Victoria titled *Park-Land*, she analyses the various factors she encounters during her case study, as to why people have moved to the caravan park as a permanent resident. Most of the reasons are push factors, including changes in the economy, individual work contexts, the death or divorce of a partner, desires to keep family intact, losing homes, insecure renting, "neighbours from hell", injury and illness. The vast majority of the push factors having strong ties to financial issues (Newton 2014). Newton also encountered a significant number of pull factors directly influencing the initial decision to live permanently in a caravan park, such as grey nomads stalled, emptying nest, downsizing, releasing cash, fresh and clean environment, sense of community and social capital (Newton 2014).

Market research into Perth's caravan park sector was conducted in August 2014, in the form of a standard phone enquiry, in order to gauge the potential of permanent residency within West Australian caravan Parks to provide an affordable location for a tiny house on wheels on a permanent or semi-permanent basis. Out of the seven caravan parks contacted within a variety of locations throughout of the Perth Metropolitan Region, only three accepted long term residents (the locations being Peel, Fremantle and Waneroo). The remaining caravan parks had time limits on caravan sites of either 28 or 89 days, which appears to reflect an industry standard for many caravan parks reliant on the tourist market. In particular 'Big4' caravan parks, which are all owned by the Aspen Group, have an 89 day maximum stay policy. I was informed during one phone call with a Big 4 caravan park employee that it is not uncommon for caravan owners wishing to stay longer than 89

days at their park, to leave for one night and then return the following day. The price for a permanent caravan site to house a single person at one of the three operators who allowed it, was between \$160 per week (plus electricity) and \$260 (including utilities), the price generally reflecting the parks proximity from the City and other favourable characteristics such as the coast. The sites which were only available for temporary tenure were marginally more expensive, ranging from \$238 to \$288 per week (including utilities). From the perspective of housing affordability, paying weekly rent in a caravan park for a site to park a caravan or tiny house on wheel is comparable to, or even more expensive than the bottom end of Perth's conventional housing rental market, to either rent a room in a shared house or one bedroom flat, unit or ancillary dwelling. Other negative aspects of permanent residency in a caravan park include compromised privacy and lack of an exclusive outdoor yard area, the typical allocation being a dimension of 3 by 3 metres. Also noted by Mowbray is that the minimal exclusive land allocations within caravan parks "limit scope for alternative, on- site based, approaches to water, waste, and sewerage management, which may well become more environmentally critical in the future" (1994, 99).

Chapter Summary

As demonstrated by the literature, housing affordability and housing diversity are interlinked concepts. Both of these factors have significant roles in the facilitation of flexible work patterns, including migration to employment rich towns, such as mining centres, where often infrastructure and housing is very limited.

Section Three: The Resource Efficiency of Contemporary Housing and Lifestyles

Buildings consume significant amounts of energy and materials, as well as producing vast quantities of waste. Global statistics indicate that buildings impact on the environment is significant. In total buildings consume 32% of global resources, including 12% of its water and 40% of its energy. Buildings also produce up to 40% of waste ending up in landfill and 40% of air emissions (Green Building Council 2013). Within Australia, the building sector's greenhouse gas emissions comprised 27% of energy related emissions (ABCB, 2010), with residential homes in Australia contributing 20% of greenhouse gas emissions in 1999 (Commonwealth of Australia 1999). The literature clearly depicts the significant impact buildings have on the consumption of resources.

Scientists predict that if current consumption patterns continue, the affect of rising global temperatures will be profound, resulting in rising sea levels, frequent floods and droughts, and increased spread of infectious diseases. Therefore greenhouse gas emissions must be slowed, stopped, and reversed on a global scale (U.S. Green Building Council 2014). Kempf (2007, 15) advocates that the numerous environmental disturbances currently affecting the planet are all aspects of a single crisis. Climate change is simply the most visible element of the same crisis, that the rapid destruction of biodiversity and the widespread pollution of ecosystems also demonstrate.

The Oregon Department of Environmental Quality recently demonstrated in a study how the existing certification systems used to assess buildings significantly undervalue the importance of size (Palmeri 2010). Following the evaluation of 25 separate green building methods over a homes lifecycle, it was concluded that the single most effective measure for reducing a homes impact on the environment is in fact its size. Finding that a medium sized home (210 square metres) built to the green energy standards, including efficient windows, doors, insulation, and air tightness, negated emissions by 15 percent, in comparison to the same sized house built to standard code. In contrast it was calculated that simply reducing the area of the standard built home to 152 square metres achieved greater savings. This can be attributed to the fact that size reduction is the only method that reduces both energy usage and material demand. Use of less materials within a design also reduces the energy used in making and transporting those necessary materials. Palmeri (2010) who was involved in the study comments that although the significance of a buildings size may appear intuitive, it is often lost in the hype around sexier aesthetic based green building practices, such as roof gardens and green walls.

We must acknowledge that not only does common sense tell us we don't really need the quantity of space currently occupied by average home, the natural environment is telling us that we can't have that much space (US Green Building Council 2014). Mowbray (1994, 98) highlights the relevance of transportable homes to the situation, in stating that "the smaller average size of the relocatable dwellings and their land economise on land use, as well as materials, issues which bear on both affordability and ecological sustainability".

3.1 Sustainable Living

"sustainable living focuses on individual and community responsibilities for

sustainability and focuses on choices, values, ethics, and the way in which human beings interact with the natural world. Sustainable living is a lifestyle choice that considers a person's relationship within the community and the natural environment and seeks harmony with both." (Hawken 2007, 282)

Paul Hawken (2007) makes a strong case for the argument that living within the biological constraints of the earth is the most civilised action a person can undertake, because it enables future generations to do the same. As the combined crises of climate change, peak oil, and economic instability continue to manifest themselves on a global scale, the status quo must be continually challenged. According to Heben, "even if alternative energy sources emerge, so far scientists and researchers have found that none would come close to supporting our current standard of living and development now supported by oil" (2014, 55). Therefore our response will require a drastic evolution in the forms of human settlement and lifestyles.

Newman, Beatley and Boyer (2009) argue that cities and regions will need to transform from linear to circular closed-loop systems, providing substantial amounts of their energy and material needs from waste streams. They describe the shift away from cities being viewed as linear resource-extracting machines, re-imagine as "complex metabolic systems where, ideally, the things that have traditionally been viewed as negative outputs (e.g., solid waste, wastewater) are re-envisioned as productive inputs to satisfy other urban needs, including energy" (Newman, Beatley and Boyer 2009, 80). Systematic analysis of the global challenges humans currently face reveals the intelligence behind the implementation of permaculture, micro-lending, green taxes, ecological foot-printing, and fair trade, according to Hawken (2007). The advocacy of a shift toward sustainable living has been adopted by the United Nations and the World Business Council on Sustainable Development, setting ambitious targets for industrialised countries to reduce consumption of resources tenfold by 2040 (Newman, Beatley and Boyer 2009).

Several of the comments made by interviewee's specific to this paper expressed a clear desire to live a more sustainable lifestyle, utilising the THOW design to achieve this. One response from a respondent looking to become a THOW occupant, said that they wanted to "be in touch with our local environment more, and down-size to a more sustainable and creative lifestyle", features of which would include "garden areas, vegetable patches and

animals". A professional builder of THOW's made the comment in his response that his clients are commonly looking for a greener and simpler lifestyle.

3.2 Consumption

Paul Hawken defines the term 'consumption' as "the rate and way that humans use both material and energy (natural resources)", adding that "many economists extend consumption to mean all material goods and services for the gratification of human desires" (2007, 248). The examined literature consistently describes that a significant number of homes in Australia and other developed nations have become containers of luxury consumption, rather than places for the satisfaction of basic needs such as shelter and warmth (Beer, Faulkner and Gabriel 2006; Castells 1977; White 1981; Gunn 1991; Alastair 1995). Connell (1977, 216) claimed that these manifestations of affluence bound the working class to the prevailing economic system. The purchase of a suburban house surrounded by a garden, the need to fill the dwelling with appliances and the requirement of a car all burden most families with debt for the duration of their working life. Hawken observes that throughout history material goods appear to have become more important, and are repeatedly treated better than people (2007).

Gunn (1991) notes that it was from the post WWII period onwards that houses became 'functional containers' for the new consumer items which quickly filled the kitchens and living rooms of suburbia. Following WWII, post war confidence resulted in the rapid growth of the credit industry, enabling individuals and households to loans finance on an unprecedented scale, which had been inconceivable during the 1930s . The unprecedented rates of post-war suburban development accelerated and further commodified patterns of consumption. Until this post war transformation, Australia's urban peasant community was organised in a way that facilitated the household production of goods and services, a cultural practice embraced and promoted by authorities during WWII under the catch-cry of 'Victory Gardens'. The backyard vegetable garden, fruit trees, chickens and rabbits capture the productive systems of self reliance common among the urban peasantry (Alastair 1995). Modernist concerns relating to hygiene and health contributed to the reduction of these productive households, as well as the growth of monopoly capitalism (Mullins 1981; Reiger 1986). The commodification of the previously productive domestic economy was by the post-war suburban community, making way for serially produced consumer durables (Alastair 1995).

The familiar picture of suburban family life, with its focus on home and garden, and on a catalogue of family possessions- such as refrigerators, washing machines, radiograms, television sets and, of course, the family car-was the basis of affluence and the vast new consumer economy which the manufacturers and governments encouraged. (White 1981, 5)

White indicates that from a historical perspective, the suburban family home became a 'the perfect design for maximising capitalist consumption' (Castells 1977, 388). Alastair adds, the "housing and home-based private consumption complex, were both key forces behind early efforts to create a bureaucratically controlled mass consumer market" (1995, 15). Harvey makes the point that the wave of post-war fordism was not simply a system of mass production, it was sold to the nation as 'a total way of life' (1989, 135). A clear link had been forged between expansive urban form or suburbia, the 'residential container' for holding mass-produced consumer items and the large scale demand for commodities in primary industrial Fordist sectors. Alastair (1995) believes these relationships illustrate the high importance of housing in the maintenance and reproduction of the Fordist regime of accumulation. Thus, the modernist suburban dream had been born, symbolised by mass consumption and suburban owner occupation.

As analysed earlier in this paper, the human tendency to continually fill perceived gaps in ones life by purchasing consumer goods is proven to reduce our overall levels of happiness in life. In his book 'Emotional Intelligence', Daniel Goleman (1996, 240) highlights a worrying worldwide trend "for the present generations of children to be more troubled emotionally than the last: more lonely and depressed, more angry and unruly, more nervous and prone to worry, more impulsive and aggressive". Hoagland writes "Humans exhibit addictive tendencies when trying to maximise such values as wealth, pleasure, security, and power. Too much of a good thing is not a good thing" (1998, 26). Within developed and developing nations, proportionally large quantities of consumption answers an inner desire for ostentation and distinction. Kempf (2007) recognises that people aspire to lift themselves up the social ladder and class system, which occurs by imitation of the superior class's consumption habits. Subsequently, imitation results in mass waste, the source of which is situated at the top of the human mountain. "The leisure class", says Veblen (1994, 109). Goleman (1996) explains that International data

demonstrates a modern epidemic of depression which is spreading side by side globally with the adoption of modern ways. Whilst living in a smaller space is effective for many people worldwide, if it is to be popularised in developed nations, people will be required to drastically downsize material expectations (Heben 2014).

3.3 Voluntary Simplicity

Civilisation, in the real sense of the term, consists not in the multiplication, but in the deliberate and voluntary reduction of wants. This alone promotes real happiness and contentment, and increases the capacity for services. (Mahatma Gandhi 1935)

Voluntary simplicity can be defined as an oppositional living strategy against the status-quo of high-consumption, materialistic lifestyles of consumer cultures. It is often described or captured by other terms including 'minimalism', 'the simple life' and 'downshifting'. More concisely, Shi (2007) defines voluntary simplicity as enlightened material restraint. Practitioners of Voluntary Simplicity are not coordinated by any government agency or formal organisation (Leonard-Barton 1981). Monopolis (2010) described voluntary simplicity as both a lifestyle choice and a cultural movement by deliberately and mindfully reducing one's consumption of goods and services, living with fewer possessions, cultivating nonmaterialistic sources of satisfaction and meaning, and developing deeper connections with one's social and ecological community. Those engaged in the concept report a lifestyle that is more fulfilling for the individual, assisting in the creation of stronger community and reduced ecological footprints. Prominent historian on the subject of voluntary simplicity David Shi summarises the primary attributes of voluntary simplicity as follows (2007, 29).

- *“thoughtful frugality;*
- *a suspicion of luxuries;*
- *a reverence and respect for nature;*
- *a desire for self-sufficiency;*
- *a commitment to conscientious rather than conspicuous consumption;*
- *a privileging of creativity and contemplation over possessions;*
- *an aesthetic preference for minimalism and functionality; and*
- *a sense of responsibility for the just uses of the world's resources.”*

Newton identifies the concept of home is an important source of personal identity, as it is “central to the distinctive mode of living in a lifestyle” (2014, 11). Marcus builds on this theme by describing the home as a mirror of the self and that to “appropriate space, to order it and mould it into a form that pleases us and affirms who we are, is a universal need” (1997, 35). Tiny houses on wheels are one example of a housing form symbolising the notion of voluntary simplicity. Many people living in Tiny houses on wheels have chosen a small spatial and ecological footprint on purpose, in part due to environmental concerns, financial concerns and seeking more time and freedom. Many participants of the tiny house on wheels movement question the lifestyle of mass-consumerism, believing that real freedom begins when our material burden is minimised (Beekmans and de Boer 2014). A growth in popularity of voluntary simplicity would significantly reduce consumption patterns, with potential to bring about the absolute reduction of all consumption. The spread of voluntary simplicity reflects a growing desire by the populations of some developed nations for control over the quality of their own lives, with less regard for the trappings of socioeconomic status (Leonard-Barton 1981, 250).

Chapter Summary

The philosophy that underpins the THOW movement differs greatly from conventional housing at this current time. THOW promote the practice of housing and infrastructure minimalism. Many occupants of THOW choose to live a simpler life, therefore becoming participants of voluntary simplicity. The itinerant aspect of the THOW design and inherent resource efficiency significantly reduces the housing form's ecological-footprint.

Section Four: Itinerant Living

4.1 Tent City Urbanism

'Tent City Urbanism' is a term coined by Andrew Heben (2014) to described the urban form created when populations of grouped homeless people form tent cities. In his book, Heben (2014) documents and analyses the explosion of tent cities across the Unites States. His own research included personally spending months at a time living within a number of different tent city communities following the initial onset of the Global Financial Crisis (GFC). A common scenario he encountered among the individuals he met living in tent cities was recently the recent loss of a job due to the recession, followed by losing his or her home to foreclosure.

A report by the United States National Coalition for the Homeless (2010, 4) defines tent cities as “a variety of temporary housing facilities that often use tents... Encampments range in structure, size and formality”. The report acknowledges that, the larger more formal tent cities are often named and better known, but in reality they don't represent the majority of tent city structures or residents, found with smaller populations and dimensions. The term “urbanism” commonly describes the interaction between city dwellers and the built environment. Therefore tent city urbanism, focuses on the character of tent cities, specifically the interaction between its members and the internal and external surrounding urban environment (Heben, 2014). Tent city urbanism takes a bottom-up approach in providing the provision of shelter, informed by the positive inter-relationships and dynamics found in tent cities, that are coordinated informally by those experiencing homelessness. Heben acknowledges that the concept greatly differs from the currently narrow definition of “home”, as typically defined by middle-class values within developed nations.

These ad-hoc urban forms manifest themselves within the cracks of the formal planning process. While often being portrayed as a chaotic state of emergency, Heben (2014) notes that the self-organised tent city clearly addresses many of the shortfalls of more traditional responses to poverty and homelessness. Often exemplifying self-management, direct democracy, tolerance, mutual aid, and resourceful strategies for living with less. A result of necessity, they demonstrate people negotiating the sharing of space and resources, whilst unintentionally benefitting from living in community.

Heben also makes the connection between tent city urbanism tiny homes on wheels, the latter seen as a community-based housing alternative “that may appeal to various sectors of the population - including the chronically homeless, the recently homeless, the very low-income, and even those who are not constrained by income” (Heben 2014, 167).

4.2 Nomadic Urbanism

The concept of nomadic urbanism is somewhat of a paradox, depicting the often temporary urban form, created by the practices of people who either choose, or are forced to move the place in which they call home on a regular basis. The concept can therefore encapsulate a wide range of lifestyles, including people who live in tiny homes on wheels, tents, vans, camper-vans, caravans, the homeless and the backpacker. Beekmans and de

Boer also add that “in extreme cases of lifetime renting, people become urban nomads” (2014, 20). The emerging phenomenon of individuals choosing to become urban nomads is certainly encapsulated by the growing popularity of living in a tiny house on wheels.

In the context of contemporary employment patterns, Beekmans and de Boer (2014) describe an emergent tribe or urban nomads, largely consisting of young professionals roaming the world's cities, looking for a table to work at, outlets to recharge laptop and smartphone batteries, and social places to connect with other professionals. This new approach to work, has created a highly flexible work style, having a far-reaching effect on many aspects of contemporary urban life. In essence, to live the lifestyle of an urban nomad, provides an enhanced sense of freedom and flexibility in our fast paced world of social, economic and environmental flux. A significant number of the responses received from interviewee's of this study directly described the flexibility of a THOW as a positive attribute, providing the freedom to move around. In particular, a professional builder and resident of THOW's explained that she was “going to travel the country and teach, and built my house accordingly”.

4.3 The Pop-Up City

The presence of pop-up projects within both urban and suburban contexts is growing at a rapid pace. The concept is fast becoming a mainstreamed and commonly acknowledged as part of the contemporary urban and regional planning buzzword lexicon. Whilst a vacant commercial building, filled with a temporary retail or gallery space, may be the first thought that comes to mind when the term pop-up city is spoken. An increasing diversity of projects are being realised within the pop-up realm, including the re-popularisation of food vans, urban agriculture, offices, markets and of course most pertinent to this thesis, tiny homes on wheels. According to Beekmans and de Boer, authors of the recently published book *Pop-Up City: City-Making in a Fluid World*, the growing phenomenon of pop-up city making “is proof of a paradigm shift in how city-making happens, leading to changes in how cities are conceived, designed, and built” (2014, 1). Do it yourself (DIY) approaches within the design community and among urban social activists have seen a significant growth in popularity in the last five years or so, matching a recent re-imagining of socially conscious and self-help approaches to design (Bell 2004; Architecture for Humanity 2006; Bell and Wakeford 2008).

“Why does a society in which people become exponentially more flexible and mobile by the minute fail to make cities more adaptable to change? Cities are intense sites of activity and innovation, and yet most urban planning departments appear to be stuck in a postwar mode that fails to address the needs of new activities and new users” (Beekmans and de Boer 2014, 16).

By its very nature, the concept of the pop up city challenges traditional paradigms of top-down planning and governance. Beemans and de Boer (2014) propose that the recent manifestation of the pop-up DIY ethos within Cities could be seen as a response to the fact that on a global scale, cities are currently growing and evolving faster and more dramatically when compared to any other point in human history. In order to cope with the fluidity of such fast paced change, cities are now required to become adaptable to unexpected needs, a state that the majority of cities have yet to achieve. Governments have increasingly begun to be identified as being obstacles to progress, opposed to their traditionally touted role as forces that facilitate positive change. As a result, citizens have increasingly started thinking and acting in new and innovative ways, taking inspiration from bottom-up governance strategies and precedents. Such shifts have culminated in the growing implementation of new re-imagined structures for decision-making, financing, governing, managing, and production. The pop-up city movement has contributed a reformed model of urbanism that recognises the need for adaptation and flexible multifunctional places through the efforts of creative individuals with limited resources (Beekmans and de Boer 2014).

4.4 The Separation Home and Land Ownership

The concepts of home ownership and land ownership are not mutually exclusive, despite the common social construct, symbolised by the 'Suburban Dream'. The recent reinvention of the humble caravan has created the contemporary and more permanent option of a tiny house on wheel's. Instead of being a temporary space used only for holidays, the tiny house on wheels is more permanent version, being viewed favourably by an increasing number of people as a long term tenure option. The growing trend is slowly shedding the cultural and economic stigma's traditionally associated with living in a house on wheels. The traditional model of home ownership and occupation was viewed by Rostow (1960, 78) as part of an affluent 'age of high consumption'.

From a marxist perspective, Kemeny (1983) provides a critique of traditional home-ownership, as symbolising an ideological commitment to the ownership of property and the capitalist system, which has a controlling effect on ones ability to prioritise any task such as striking or volunteering above the maintenance of mortgage repayments.

The word mortgage literally means death pledge. Often requiring a contractual obligation of thirty years, it demands steady, long-term employment. Many people purchasing a home therefore become unwittingly tied to an environment that no longer suits their needs or increasingly flexible lifestyles (Beekmans and de Boer 2014). Given the worsening state of housing affordability, as reflected by the increasing gap between the average price of conventional housing and average incomes in Australia, the tiny house on wheels movement offers people a model of home ownership without crippling debt, described by Heben as “a new paradigm for transitional and affordable housing that is more economically accessible and sustainable” (2014, xii).

Chapter Summary

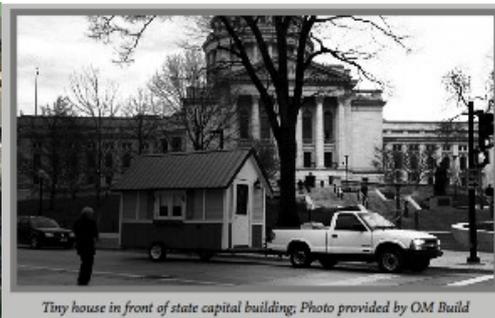
The traditional paradigms of land tenure, ownership and renting, are being questioned and ignored by a growing trend toward flexible and temporary land uses. The popularisation of pop-up land uses, as well as an increasing trend toward nomadic employment patterns and lifestyle, symbolise a significant shift in the 21st Century city toward increased flexibility and freedom.

Section Five: International Case Studies

5.1 Homelessness Village Initiative in the Unites States: Occupy Madison

Following the dismantling of the Occupy Madison (OM) camp, the localised version of the Occupy Wall Street Movement in 2011, OM Build was formed as an initiative to construct tiny houses for those experiencing homelessness. The structures are 10 square metres and cost around \$5,000 each to build with volunteer labor. Recipients of the tiny houses are expected to contribute a certain number of hours toward the construction of their house. At under 1,400 kilograms in total weight and mounted on a trailer, the structures are street legal without registration - though local regulations require they move every 48 hours. Inspired by similar projects in Portland and Eugene, OM Village was conceived as a

permanent place to park nine of these tiny houses and build a community. Madison's OM Village provides an alternative that utilizes a composting toilet in the unit supported by a common restroom facility with flush toilets and showers (2014). The plan was approved - after a lengthy public process, as a planned unit development (PUD) for a former petrol station and smash-repair shop. The existing structure will be adaptively reused as a building workshop and will also host common facilities to support the tiny houses around it (Heben 2014). Local news reported that although city staff advised the Plan Commission not to consider the socioeconomic aspects of the proposal, it did seem to weigh into commissioners' leniency with the zoning code. "My head might say that this doesn't meet all the standards and we're not quite there. My heart says it's worth a shot," commissioner Michael Heifetz said (Mosiman 2014). The U.S. Department of Housing and Urban Development (HUD) has even endorsed the model as a viable solution stating: "It's certainly something that we would encourage other communities to take a look at when it comes to creating solutions for housing the chronically homeless... It's a very important step in terms of the kinds of services we should be providing to people that need assistance" (Lundahl 2014, quoted by Heben 2014).



Tiny house in front of state capital building. Photo provided by OM Build



Source: www.occupymadisoninc.com

5.2 Tiny House on Wheels in Auckland New Zealand

After living overseas for many years, Brett Sutherland recently returned to his home Country of New Zealand. Upon his return, he was shocked by the high cost of housing. His solution to New Zealand's housing affordability crisis was to construct a THOW himself in parents driveway. Although he is not a qualified or registered builder, he was able to construct his THOW for a total cost of \$22,000 (New Zealand Dollars). The house sits on a trailer and has a total footprint of 15 square metres and has been built so it can be lived in off the grid, without any connections to services.

To enable this level of mobility and independence from services, Brett's house has solar panels to provide electricity, a composting toilet, inbuilt wood heating, a grey-water disposal system, and it captures and stores its own rainwater from the roof (feasible in New Zealand's wet climate). Once the THOW was completed, a number of videos and articles about the house were put on the internet and became very popular, due to the effectiveness of Brett's design and off the grid features, when compared to other examples of THOW. Brett decided to locate his THOW at a friends 7 acre property not far from Auckland, which meant he had no housing cost, as his friend was prepared to let Brett occupy the land at no cost. A bone carver by trade, Brett is able to live and work in his THOW, without feeling much in the way of financial stress thanks to the absence of any significant ongoing housing costs following the houses construction.

Brett had not asked for permission from Auckland City Council to park his THOW on his friends private 7 acre property. In October 2014, the Council became aware of the location that Brett's THOW has been parked. The Council told Brett to move his dwelling, as it's presence on the property was not permitted under the Council regulations. Specifically, it was not permitted despite its size and transportability, because the 7 acre property already contained two other permanent dwellings, a major and minor a dwelling. The breach in regulation was regarding a landscape protection measure limiting the total number of dwellings in the area, despite the 7 acre size and subsequent abundance of useable space.

The facts and images of this case study were provided by video footage of a New Zealand television stations interview with Brett Sutherland, following the Council recent demands in

October 2014 for Brett to remove his THOW from the property (Chris Sutherland 2014).



5.3 Austin City Council's Tiny House Planning and Building Regulations Review

On the 7th August 2014, the Austin City Council in Texas, The United States, passed Resolution No. 20140807-101, directing the City Manager to identify obstacles to building, parking, and living in single-family detached homes that are less than 500 square feet in size and are often on wheels (tiny houses). The resolution required a report back to Council that included solutions for making tiny houses legal and viable. It also included an assessment of the potential impact of any proposed code changes on neighbourhoods and a recommendation regarding whether any of the proposed code changes should be considered in the next code revision process (Guernsey 2014).

The Memorandum issued in response to the Council's resolution by the City manager Greg Guernsey contains several issue-based sections. Following are a series of excerpts that provide a summary of issues relevant to THOW (Guernsey 2014). Discussion about tiny houses in fixed locations has not been included as it is not deemed necessary or directly applicable to the THOW-based topic.

“Tiny houses in other cities: what they are and why they are being built.”

Tiny houses typically range from 100 to 400 square feet in size, and often come mounted on a wheeled trailer chassis so that they can be towed behind a vehicle. Similar to a micro-unit, the space in a tiny house usually has convertible or modular furniture that plays different roles, depending on what activity is taking place. Tiny houses on wheels typically have recreational vehicle-style utility hookups – powered with electricity, external holding tanks; those that venture off the grid can rely on solar or even no electricity at all. Tiny houses should not be confused with mobile homes, which are generally more than 600

square feet in size, and are transported via semi-trailer truck to a destination where they are placed permanently or semi-permanently.

The tiny house movement that exists today has several drivers, one of which is a desire to downsize. For most people this means a smaller space in which to live, a smaller mortgage (or up front purchase cost), and fewer possessions. Prices for tiny homes on wheels can range from \$10,000 for basic construction, up to \$60,000 or more for boutique-style custom construction.

The per-square-foot cost of a tiny house is typically higher than that of a traditional home, but the lower fixed monthly cost of living appeals to the bottom line. In Austin the median rental rate has increased 49% since 2003, the median sales price of a home has increased 47% since 2004, and median incomes have barely improved.

Shifting demographics are also driving interest in micro-units. Single individuals are the most likely occupants of tiny houses, although two people could also share such a space. In the US today, singles make up more than 50% the population, up from 37% in 1976.

“Barriers to building tiny houses in Austin: zoning code and building code”

The zoning code does constrain what can be done with a tiny house on wheels. The current code treats a tiny house on wheels like an RV, which means a person could only inhabit a tiny house on wheels if it were located on property zoned CS, CS-1, CH, or LI, with a Campground use. Recreational vehicles, if stored on a residentially-zoned property, may not be inhabited or hooked up to utilities. This means that a tiny house on wheels, located on residentially-zoned property, can be stored but not inhabited.

“Possible ways to remove constraints”

The challenge lies with where tiny houses on wheels are allowed – currently only at sites that have been designated as Campground use, with commercial or industrial zoning. If Council’s intent is to allow tiny houses on wheels to function as secondary dwelling units or even primary dwelling units on residentially-zoned property, a significant change would need to be made to residential base zoning districts to make it legal – in effect, to allow parking and living in an RV on residentially-zoned property. This activity is illegal in most cities in the US.

Section 6: Key Findings

This part of the dissertation aims to provide a synthesis of the many themes, interview's and examples analysed within previous sections of the text. Firstly, the the key barriers that appear to be preventing THOW from becoming a more common housing form will be explored in detail. The barriers which have been identified will be explored under two main themes, firstly the stigma and cultural perceptions will be analysed, followed by an in depth examination of the framework of existing regulations and legislation having a prohibitive impact on the THOW movement. A final analysis will then conclude the research, exploring the broader implications of the papers findings as it relates to the planning profession, and the numerous other actors and stakeholders engaged in the THOW movement.

6.1 Stigma and Cultural Perception

Four out of a total of five Local Government Planning Officers interviewed as part of the primary research identified directly identified 'stigma' as being a major barrier to the growth of the THOW movement. One Local Government Planning Officer based at a rural Shire in WA stated that a THOW “will be perceived as a caravan; it may affect the amenity, streetscape quality of many residential areas and may therefore not be accepted by communities”. Additionally, the WA Department of Housing Urban Designer's response which stated that, “the department has not really engaged with the mobile home or lifestyle village concept mostly because it is not sustainable as a business model”, may also reflect an undertone of stigma perceived to be attached with any permanent housing form which sits on wheels. It would seem that such comments and attitudes are commonplace throughout the planning sector, as the existing paradigm of urban and regional planning traditionally implies a permanent physical solution, opposed to solutions which are imbedded in mobility and flexibility.

It may be useful at this point to explore the differing cultural perceptions attached to the concept of living in a THOW. On this basis, the historical perspectives of living in a house on wheels will be analysed in the context of three industrialised nations; the United Kingdom, United States and Australia. Each providing a unique and rich cultural context in relation to houses on wheels.

For centuries, groups of nomadic people with ethnic roots from predominantly Central and

Eastern Europe, including a significant cohort originating from Romania, have travelled Europe, crossing in and out of many countries including the United Kingdom (UK), whilst permanently residing in mobile homes on wheels. Only one or two generations ago, gypsy caravan homes were predominantly traditionally hand crafted wooden structures, literally pulled along by horse power. In the United Kingdom now days, many contemporary generations of gypsy people continue to practice the nomadic lifestyle, however the traditional hand crafted wooden dwellings have for the most part been replaced by the modern caravan constructed in a factory and made of steel, fibreglass and plastic. The choice of dwelling made by the majority of the contemporary Gypsy population in the United Kingdom, is the same design popularised for the purpose of short and medium term holidaying in Australia.

Gypsy's in the UK have long carried a significant burden of stigma, a result of their nomadic life, higher rates of crime, poverty and lower socio-economic status in the context of the UK's class system. The European Court of Human Rights (1991) acknowledged that Acts of Parliament and a series of other institutional developments in the UK since 1948, have made life progressively more difficult for Gypsies. Within this context, Bancroft describes that gypsy's "have been subject to periodic attempts to legislate their lifestyle out of existence", explaining further that they "have been perceived as violating the social and moral order of feudalism, of early capitalism, of industrial society and of post-modernity" (2000, 42).

Similarly to gypsy-travellers in the UK, the practice of permanently residing in a house on wheels in the United States (US) carries a negative stigma of lower socio-economic class, namely the label 'trailer trash'. A stereotype symbolising North America's underclass, the term trailer trash represents the individuals for whom the American Dream has failed, resulting in a lifestyle perceived to be plagued with poverty and crime. However the practice is far more commonplace in the US than the UK. The US Census conducted between 2011-2013 estimated that 20 million US citizens permanently reside in mobile homes (Geoghegan 2013), a figure which represents in excess of 6% of the United States total population. Experts from the US describe that a shift occurred during the Great Depression of the 1930s, whereby severe economic pressures resulted in people living in trailers out of necessity, which were originally designed for travelling and vacationing (Geoghegan 2013). In light of the correlation between economic upheaval during the

1930's depression and the popularisation of caravan living, it comes as no surprise that in correlation with the 2007-2011 global financial crisis and subsequent mortgage crisis, that the US became the initial incubator for the birthplace and surge in popularity of the Contemporary THOW movement.

In the context of Australia, the notion of houses on wheels is most commonly associated with the nations booming tourism industry. In particular, the term 'Grey-Nomad' helps to define Australia's most common stereotype of people who use homes on wheels. The grey-nomad label commonly typically depicts a retired couple in their 50's, 60's, 70's or 80's, travelling around Australia in pursuit of perpetual comfort, in the form of warm weather. Generally grey-nomads congregate in tourist based caravan parks within Australia's coastal regions, migrating annually to create an endless summer. Many grey-nomads also own a conventional house in their city of origin, in which they reside when they are not on their road living in their caravan. Although a smaller proportion of grey-nomads sell their house and downsize in order to be able to purchase a caravan and fund the lifestyle, which includes the regular payment of caravan park fees comparable to the cost of rent. The Australian grey-nomad construct is considered socially acceptable, given the apparent high proportion of wealthy people perusing the lifestyle, therefore escapes the socio-economic stigma associated with caravan living in the UK and US. However it should also be acknowledged that a large cohort of grey-nomads also in the US, in addition to the high rate of permanent caravan home living. However the US based grey-nomad population is proportionally less significant, compared to the Australian context.

In contrast, living permanently in a caravan park in Australia due to financial reasons does break taboos and become a practice plagued by social and economic stigma. A long term caravan park resident gave the following response to an interview with journalist Greg Bearup:

"Whatever you do, don't call this a caravan park. There's a stigma attached to caravan parks. It's classier than that, mate - call it a relocatable village or something." (Bearup 200, 43)

As discussed in detail in previous sections, the 1960's and 1970's saw permanent residency within caravan parks become an increasingly significant element of Australia's

housing landscape Following changes to Australian governments public housing policy (ABS 1367.2 2007, Gleeson 1997, Wensing, Wood and Holloway 2003). Dovey (1992, 187) found that "the image of the detached house is a powerful symbol of status and identity in Australia. It is used by conservative political forces to signify 'family' and 'stability', conceptually opposed to a 'flat' or 'unit' where only the young, the elderly and the lower classes live". During a survey conducted in 1979 by Guise, many long term residents living in Caravans within approved Caravan Parks complained about the stigma attached to caravanner's simply because they live in caravans. This often bordered on discrimination, such as a common inability of residents to be allowed television hire, or membership of Local Authority libraries; and the widely held view of employers that caravanner's are unreliable (1979).

6.2 Regulating THOW in Western Australia

The interviews conducted as part of this dissertation provide valuable insight regarding the interpretation and perceptions by the participants of the regulations and legislation under which apply to the THOW housing form. All respondents directly acknowledged in their responses that a mix of Planning, Building and Caravan regulations are the single largest barrier restricting the growth of THOW as an acceptable housing form in Australia, the United States and New Zealand. The table below provides a summary of the responses received from five Senior Level Planning Officers, all employed by different Local Governments in Western Australia. The table captures the regulatory mine field that exists in the assessment of a THOW in Western Australia, given the design of THOW existence within what a professional THOW designer described as a 'regulatory grey-area'.

Name of Act or Regulation	Key Concerns
Residential Design Codes	Requirements for relatively large minimum lot sizes; Would require a comprehensive planning approval to place a THOW on Residential land, or to move or relocate its position
Building Codes of Australia (BCA)	Requirement for connection to services where available (power, water, sewer); Compliance with structural requirements designed for larger conventional housing
Health Act 1911	Required separation of laundry and kitchen and

	other restrictions designed for larger conventional housing
Local Government Planning Policies and Schemes	Potential for perceived conflict with street-scape and amenity provisions; Differing definitions of land uses and forms of development, e.g. "Caravan Park"
Caravan Parks and Camping Grounds Act 1995	Contain a definition for Caravan which is applicable to THOW
Caravan Parks and Camping Grounds Regulations 1997	Restricts living in a THOW anywhere other than a caravan or camping ground for more than three days

In the interview's, planning officers were asked whether or not a THOW registered as a caravan, could be issued planning approval from they're respective Local Government, as either 'ancillary accommodation' or 'single house', as defined by the Residential Design Codes (2010):

Ancillary dwelling:

Self-contained dwelling on the same lot as a single house which may be attached to, integrated with or detached from the single house.

Dwelling:

A building or portion of a building being used, adapted, or designed or intended to be used for the purpose of human habitation on a permanent basis by a single person, a single family, or no more than six persons who do not comprise a single family.

Building:

Any structure whether fixed or moveable, temporary or permanent, placed or erected on land, and the term includes dwellings and structures appurtenant to dwellings such as carports, garages, verandahs, patios, outbuildings and retaining walls, but excludes boundary fences, pergolas and swimming pools.

Four out of five responses indicated that it may be possible to successfully get such an approval, subject to compliance with the Building Codes of Australia (BCA) and connection to services, including water, sewer and power where they are available. However given that the question pertains to a THOW that is road registered and readily portable, connection to all major serves would severely prohibit the ability to move it. Additionally the costs involved in connection services would be cost prohibitive for many people, as the overall cost would jump significantly. The average Tiny House available from building companies who specialise in the design and construction of THOW On Wheels, costing somewhere between \$20,000 - \$40,000 (USD). A number of the responses to this question acknowledged the conflict between the portable design of a THOW and the permanency of connections to services, two of them adding the disclaimer that the THOW would not be permitted to be relocated without a further planning approval. The philosophy that underpins the THOW movement is quite different to the standard form of permanent housing. It is housing and infrastructure minimalism, it is also itinerant in that homes are designed to move, not be permanent, as well as an emphasis on resource efficiency. There was one significant exception in response to the same question, one planning officer from a rural Shire stated that:

“Although a ‘building’ is defined in the R-Codes as a permanent or moveable structure. I think the fact that ‘caravan’ is defined in the CPCG Regulations means that it would supersede the R-Codes. For this reason, I do not think we would consider this form of development in any zone in the Shire except for where caravans are permitted.”

In contrast, one of the planning officers from a suburban Council stated that:

“The definition of ancillary dwelling in the Codes is silent on whether the dwelling can be moved. On this basis, such a building could be assessed in the same way as any other ancillary dwelling.”

The inconsistent approach reflects the perceived legislative grey area. Another planning officer responded to the uncertainty of how to interpret a THOW in saying that given the unusual nature of the proposal the officer may decide to grant only temporary approval or refer it to Council for determination. Another proclaiming that

“ultimately the current planning provisions do not provide clear guidance on such dwellings and leave their classification open to interpretation resulting in the

dwellings potentially being considered as a form of house/ancillary accommodation or a 'use not listed' under the Scheme”.

An additional major barrier related to land tenure raised in the interviews, also in respect to the Residential Design Codes, is the mismatch between current minimum lot sizes required, contrasted against the minimal amount of area upon which a THOW can function. The planning officer suggests that

“The provision of lots for larger houses results in considerable space on a lot not being utilised by a ‘tiny house on wheels’. There may need to be consideration at a state level on whether small lots are provided for these types of dwellings.”

The Building Codes of Australia (BCA) was also noted in the interviews as a major regulatory barrier to THOW, as reflected in comments from four out of the five planners. Being mobile and for use on a short term basis, caravans were not constructed to meet building codes applicable to permanent dwellings. One planner commented that “in terms of the BCA it would be hard to prove that it complies with the structural requirements (Part 2.1)”. Other responses brought up further conflicts a THOW would face when assessed by the standardised technical specifications of the relevant sections throughout the BCA. Including the requirement to have two separate sinks for both the kitchen and hand washing, as well as separation between laundry and kitchen. Each of these conflicts would require extra justification, provided by an accredited builder or building surveyor, adding further significant cost. Compliance with the BCA also requires that the THOW “be built by a registered builder thus eliminating the freedom of building our own unit, employing a builder will easily double the cost”, as described an occupant of a THOW, which he built himself without any formal qualification in building. A further barrier raised by the professional THOW designer, which arises if relevant planning and building approvals are not gained, is the inability of the owner to mortgage, insure, or get finance for their houses. The lack of clarity surrounding how the regulatory framework can, or should be applied to a THOW, is also commented on all occupants, builders and tiny house designer.

The WA State Government's Caravan and Camping Grounds Act (1995) and Regulations (1997) were developed with the intention of serving the short term requirements of tourists. They restrict the ability for a person to permanently reside in a caravan to no more than 3 nights within any period of 28 consecutive days, outside of an appropriately zoned and

Local Government approved Caravan Park. Because the design of a THOW is generally within the scope of the Caravan and Camping Grounds Act 's definition of 'caravan', a THOW is not permitted to be parked and occupied on a permanent basis behind a primary dwelling on either residential or rural zoned property. This interpretation of the regulations in respect to THOW was consistently stated by all five planning officers.

In response to the prohibitive nature of the regulatory framework described above, all three existing or future occupants of a THOW expressed the intention to live in they're THOW illegally in one form or another. The common practice of people in the THOW movement to break the law on purpose by living in their THOW in a situation of unregulated land tenure, is comparable to the trend for people in Western Australia to rent out their backyard 'granny flats' (ancillary accommodation) to private tenants, despite a requirement in the former Residential Design Codes, restricting the occupancy to family members. In this sense, living in a THOW illegally is an intentional act of Civil disobedience. For some, a form of housing activism, seeking to eventually change a law that is perceived as being unjust. Below is a number of comments from the THOW occupants which describe their view on the issue of compliance with the regulations.

"[I will be] staying on someone else's land perhaps for a small rental fee, either officially or unofficially. Ideally we will do everything 'by the book' if the regulations are reasonable, however we may not necessarily make ourselves known to authorities officially either."

"I am currently living in a caravan on a friends property while I search for my land, and we haven't told the council".

"No, [I am] trying to avoid the necessity due to complicated bureaucracy's tendency to prevent all options. Planning and consent rules will eventually strangle the movement in NZ and Australia due to a culture requiring extreme levels of process for design, manufacture, and use parameters of all things, the primary difficulty with these processes is cost, the next is imposed limitations cancelling the benefits. (in NZ) If this goes too far we will be forced to build them on floats because boats and floating vessels are not included in the definition of "Building" in the Building Act while vehicles are."

Section Seven: Conclusion

The growing tiny house on wheels movement is challenging existing notions of housing security. While many recent developments in housing type are providing useful and much needed challenges to existing town planning regulatory frameworks, the THOW movement as a whole has largely been ignored by Local, State and Federal Governments and regulatory bodies and the planning profession at large. This dissertation has drawn together various case studies of interactions between regulators and THOW residents, in an attempt to demonstrate how the convergence of different regulations, issues and concerns combine to undermine the prospect of THOWs as a versatile solution to housing affordability, small households, shifting employment, and the principle of resource efficiency. The simplified lifestyle embodied by the THOW movement will certainly not appeal to everyone, but it is clear there is growing support, particularly from those seeking alternatives to conventional housing options. "Housing forms that reduce human impact on our natural environment and focus on building communities rather than commodities" says Heben (2014, xiii). The THOW housing alternative may appeal to a wide variety of demographics within the population, including the chronically homeless, the recently homeless, the very low-income, singles and couples of all ages, and even those who are not constrained by income.

Under the existing planning framework, State and Local Governments are responsible for facilitating the availability of a range of housing choices to accommodate the diversity of their populations, and their current and future housing needs. However in respect to the THOW housing form; assessing something that is very different through the same regulation lens is problematic. Birch and Silver (2009, 116) describe that, "the dynamic interplay of new ideas, ongoing societal trends, and the evolving authority to manage urban growth shaped the planning profession". Implying that planning should evolve along with the ever changing needs of society. This dissertation's research indicates that regulators are unlikely to consider changes to relevant restrictions until a sufficient critical mass is achieved of people who construct and reside in a THOW's outside of the existing regulations. These individuals will likely be motivated by the range of lifestyle, ecological and financial opportunities THOW's have come to offer. Only once this critical mass has been realised, does it appear likely that sufficient public and political attention will be gained in order to challenge existing prohibitive regulations, as observed in the case study of the Austin City Council's Tiny House Planning and Building Regulations Review. An

additional example being the recent changes in the Western Australian Residential Design Codes to permit non-family members to occupy Ancillary Accommodation, colloquially known as 'granny flats'.

While I have been able to identify many challenges facing THOW residents, it is difficult to draw widespread conclusions due to the significant limitations of this study: the small sample size and limited detail of regulatory frameworks being restricted to Western Australia. If further research was to be undertaken by the Urban and Regional Planning field within Australia in relation to THOW, it would be favourable to explore the relevant regulatory frameworks within all States and Territories. Such a study would provide a clearer overview of the context in Australia regarding THOW regulation, which is likely to be of significant value to THOW users, regulators and researchers.

7.1 Broader Implications

This dissertation has attempted to contribute to wider academia on the subject of housing, while also seeking to challenge existing planning and building regulations within Western Australia. The dissertation has sought to highlight the areas in which both Western Australia's Local and State Governments could revise their regulatory frameworks in order to accommodate societies changing housing demand, namely the emerging tiny house on wheels movement.

References

- ABS (Australian Bureau of Statistics). 2007. *ABS 4102.0 Larger dwellings, smaller households, Australian Social Trends*. Canberra, A.C.T.: ABS
- ABS (Australian Bureau of Statistics). 2012. *Information Paper - A Statistical Definition of Homelessness*. Canberra, A.C.T.: ABS.
<http://www.abs.gov.au/AUSSTATS/abs@.nsf/mf/4922.0>
- Alexander, Christopher. 1979. *A Timeless Way of Building*. New York: Oxford University Press.
- AMP-NA TSEM. 2007. Generation whY? (17),
<http://www.amp.com.au/group/3column/0,2449,CH5273%5FSI3,00.html>.
 (accessed 12 August 2014)
- Architecture for Humanity: Design like You Give a Damn*. 2006. New York: Metropolis Books.
- Atkinson, Rowland and Wood, Gavin. 2007. "Affordable housing and planning in Australia." *Australian Planner*, 44 (4): 12-13.
- Austin City Council. 2014. "City Council Meeting: Resolution No. 20140807-101". August 7.
- Australian Building Codes Board (ABCB). 2010. "Information Handbook: Energy Efficiency Provisions for BCA 2010 Volume One" Canberra, ACT.: ABCB.
- Australian Government. 2008. "The Road Home. A National Approach to Reducing Homelessness, the Homelessness White Paper." Canberra: Department of Families, Housing, Community Services and Indigenous Affairs.
- Australian Greenhouse Office. 1999. Australian Residential Building Sector Greenhouse Gas Emissions 1990–2010. http://www.energyrating.gov.au/wp-content/uploads/Energy_Rating_Documents/Library/General/Residential/resbuilding-1999.pdf
- Australian Housing and Urban Research Institute (AHURI). 2004. Housing Futures in an Ageing Australia, *Research and Policy Bulletin*, Issue 43, May. Melbourne: AHURI.
- "Australia – No home for the homeless". 2014. *Australian Independent*, May 23. <http://www.independentaustralia.net/life/life-display/australia---no-home-for-the-homeless.6501>
- Badcock, B. A., and A. P. Beer. 2000. *Home Truths: Property Ownership and Housing Wealth in Australia*. Carlton, Vic: Melbourne University Press.

- Bancroft, Angus. 2000. "No Interest in Land: Legal and Spatial Enclosure of Gypsy-Travellers in Britain," *Space and Policy* 4 (1): 41-56.
- Baxter, Jennifer and McDonald, Peter. 2004. *Trends in Homeownership Rates in Australia: The Relative Importance of Affordability Trends and Changes in Population Composition, Final Report*. Melbourne: AHURI.
- Bearup, Greg. 2000. "Parkland." *Good Weekend*, Nov 25: 42-46.
- Beck, U. 1992. *Risk Society: Towards a New Modernity, Theory, Culture & Society*. London: Sage.
- Beekmans, Jeroen and de Boer, Joop. 2014. *Pop-Up City: City-Making in a Fluid World*. Amsterdam: BIS Publishers.
- Beer, A., B. Kearins, and H. Pieters. (2007). "Housing Affordability and Planning in Australia: The Challenge of Policy Under Neo-liberalism." *Housing Studies* 22(1): 11- 24. <http://www.informaworld.com.dbgw.Jis.curtin.edu.au/> (accessed August 24, 2014).
- Beer, A., D. Faulkner, and M. Gabriel. 2006. 21st Century Housing Careers and Australia's Housing Future: *Australian Housing and Urban Research Institute*. http://www.ahuri.edu.au/publications/download/NRV2_Research_Paper_I (accessed 12 August 2014)
- Bell, Bryan and Wakeford. 2008. *Expanding Architecture: Design as Activism*. New York: Metropolis Books.
- Bell, Bryan. 2004. *Good Deeds, Good Design: Community Service through Architecture*. New York: Princeton Architectural Press.
- Bell, Judith. 1999. *Doing Your Research Project: A Guide for First-time Researchers in Education and Social Science*. 3rd ed. Buckingham (England): Philadelphia: Open University Press.
- Berry, Mike. 2003. "Why is it important to boost the supply of affordable housing in Australia - and how can we do it?" *Urban Policy and Research*, 21 (4): 413-435.
- Booth, C. 2006. Managing Diversity and Mainstreaming Equality: Reflections on Initiatives in the Planning Inspectorate. *Planning Theory & Practice* 7 (1): 47 - 62. <http://www.informaworld.com/10.1080/14649350500497422> (accessed 24 October 2014)
- Bourassa, S., A. Greig, and P. Troy. (1995). "The Limits of Housing Policy: Home Ownership in Australia." *Housing Studies* 10(1): 83-104.
- Bradley, H, Erickson, M, Stephenson, C, and Williams, S. 2000. *Myths at Work*.

Cambridge: Polity Press.

- Cain, Maureen. 1974. "The main themes of Marx' and Engels' sociology of law," *British Journal of Law and Society*, 1: 136-148.
- Castells, Manuel. 1977. *The Urban Question: A Marxist Approach*. London: Edward Arnold.
- Chamberlain, Chris and Mackenzie, David. 1992. "Understanding Contemporary Homelessness: Issues of Definition and Meaning" *Australian Journal of Social Issues*, 27(4): 274-97.
- Chamberlain, Chris. 2012. "People in improvised dwellings and sleepers out" Melbourne: RMIT University: Centre for Applied Social Research
- Chea, Terrance. 2010. "Tiny house movement thrives after real estate bust." *USA Today*, November 29.
- Cheal, David. 2002. *Sociology of Family Life*. New York: Palgrave
- Chris Sutherland. 2014. *Brett Sutherland's Tiny House interview on Campbell Live, TV3 New Zealand*. YouTube video, 6.07. <https://www.youtube.com/watch?v=MxofHQMdraM>.
- Clapham, David. 2005. *The Meaning of Housing: a Pathways Approach*. Bristol: Policy Press.
- Clune, Stephen, John Morrissey, & Trivess Moore. (2012). "Size Matters: House size and thermal efficiency as policy strategies to reduce net emissions of new developments" *Energy Policy*, 48: 657- 667.
- Collins, Hugh. 1982. *Marxism and Law*. Oxford: Clarendon Press.
- Commsec. 2011. Australian Homes are the Biggest in the World: But Signs that Home Size has Peaked. <http://www.abc.net.au/news/2011-08-22/australian-homes-still-biggest/2849430>
- Connell, Raewyn. 1977, *Ruling Class, Ruling Culture: Studies of Conflict, Power and Hegemony in Australian Life*, Cambridge. Cambridge University Press.
- Creswell, John. 1998. *Qualitative Inquiry and Research Design*. Thousand Oaks, Calif: SAGE Publications.
- Creswell, William, and Plano Clark, Vicki. 2007. *Designing and Conducting Mixed Methods Research*. Thousand Oaks, Calif: SAGE Publications.
- Dator, Mariel. 2010. "Green Building Regulations: Extending Mandates to the Residential Sector" *Boston College Environmental Affairs Law Review*, 37 (2): 393-424. <http://search.proquest.com.dbgw.lis.curtin.edu.au/docview/862078774/13E2>

[787E9F73FABF945/1?accountid=10382.](https://doi.org/10.1080/07349031.2014.945103)

- Davidoff, Paul. 1965. "Advocacy and Pluralism in Planning," *Journal of the American Institute of Planners*, November: 331-338.
- Denzin, Norman, and Yvonna Lincoln. 1994. *Handbook of qualitative research*. London: Sage Publications.
- Denzin, Norman, and Yvonna Lincoln. 2005. *The SAGE handbook of qualitative research*. London: Sage Publications.
- Disney, Julian. 2007. "Affordable housing for all." *IMPACT summer*: 22-23.
- Donovan, Finn. 2014. "DIY urbanism: implications for cities." *Journal of Urbanism: International Research on Placemaking and Urban Sustainability*, 7 (4): 381-398.
- Douglas, Gordon. 2011. "DIY Urban Design, from Guerrilla Gardening to Yarn Bombing." *GOOD Magazine*. <http://www.good.is/post/diy-urban-design-from-guerrilla-gardening-to-yarn-bombing/>
- Dovey, K. (1992). "Model houses and housing ideology in Australia". *Housing Studies* 7(3):177 -188. <http://www.informaworld.com.dbgw.lis.curtin.edu.au/> (accessed October 20, 2014).
- Easterlow, D, Smith, S and Mallinson, S. (2000). "Housing for Health: The Role of Owner Occupation." *Housing Studies* 15(3): 367-386. <http://www.informaworld.com.dbgw.lis.curtin.edu.au/> (accessed October 1, 2014).
- Edgar, D. 2001. *The Patchwork Nation : Re-thinking Government - Re-building Community*. Pymble, N.S.W.: HarperCollins.
- Faludi, Andreas. 1973. *A Reader in Planning Theory*. Oxford: Pergamon Press.
- Farrelly, Elizabeth. 2008. *Blubberland: The dangers of happiness*. Cambridge: MIT Press.
- Florida, R. L. 2002. *The Rise of the Creative Class : and How it's Transforming Work, Leisure, Community and Everyday Life*. New York: Basic Books.
- Flyvbjerg, Bent. 2003 *Rationality and Power: Readings in Planning Theory*. Oxford: Blackwell.
- Gans, Herbert. 1962. *The urban villagers*. New York: Glencoe.
- Geoghegan, Tom. 2013. "Why do so many Americans live in mobile homes?" *BBC News Magazine*. September 23. <http://www.bbc.com/news/magazine-24135022>
- "Geraldton Becoming a Tent City." 2014. *The West Australian*, May 14. <https://au.news.yahoo.com/thewest/regional/gascoyne/a/23501436/geraldton-becoming-a-tent-city/>
- Gleeson, Brendan. 1997. "Australia's changing cities-disintegration or postmodern revival?" *Welt Trends* 17: 71-91.

- Goldgehn, L. 2004. Generation Who, What, Y? What You Need to Know About Generation Y. *International Journal of Educational Advancement* 5 (1): 24- 35.
- Goleman, Daniel. 1996. *Emotional Intelligence*. London: Bloomsbury.
- Goodstein, Eban. 2011. *Economics and the Environment*. New Jearsey: Wiley.
- Graham, Sand P, Healey. (1999). "Relational Concepts of Space and Place: Issues for Planning Theory and Practice." *European Planning Studies* 7(1):623-646.
<http://www.informaworld.com.dbgw.lis.curtin.edu.au/> (accessed October 9, 2014).
- Green Building Council of Australia. 2013. Green Star. <http://www.gbca.org.au/>.
- Greig, Alastair. 1995. *The Stuff Dreams Are Made Of Housing Provision in Australia 1945-1960*. Carlton, Victoria: Melbourne University Press.
- Guernsey, Greg. 2014. "Memorandum: Tiny Houses (Council Resolution No. 20140807-101)". October 13.
- Guise, Larry. 1979. "Long Term Caravanning: Planning a Mobile Future in Perth." Planning Report, Western Australian Institute of Technology.
- Gunn, Philip. 1991. 'Frank Lloyd Wright and the Passage to Fordism.' *Capital and Class*, 44, Summer.
- Gurran, Nicole. 2010. "International Practice in planning for affordable housing" *Australian Planner*, 44 (4). www.tandfonline.com
- Hall, Peter. 2002. *Cities of Tomorrow: An Intellectual History of Urban Planning and Design in the Twentieth Century*. Cambridge: Blackwell.
- Hamilton, C and Denniss, R. 2005. *Affluenza*. Crows Nest: Allen & Unwin.
- Hart, Chris. 1998. *Doing a Literature Review*. Thousand Oaks, Calif: SAGE Publications.
- Harvey, David. 1989. *The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change*. Oxford: Basil Blackwell.
- Hawken, Paul. 2007. *Blessed Unrest*. New York: Viking Penguin.
- Hay, Iain. 2000. *Qualitative Research Methods in Human Geography, Meridian series in geography*. Melbourne, Vic: Oxford University Press.
- Heben, Andrew. 2014. *Tent City Urbanism*. Eugene Oregon: Village Collaborative.
- Hoagland, Mahlon and Bert Dodson. 1998. *The Way Life Works*. New York: Three Rivers Press.
- Holling, C., F.McKenzie, and F.Affleck. (2007). "Housing in Railway Station Precincts: Some empirical evidence of consumer demand for transit orientated housing in Perth, Western Australia." Perth: HURIWA.
- "Homeless Haven in Sherwood Forest." 2012. *Sunday Mail*, July 7.
<http://www.adelaidenow.com.au/news/homeless-haven-in-sherwood-forest/story->

[e6frea6u-1226419950561 nk=5567fba8f63d719aec00e8d463ae2716](http://www.abc.net.au/news/2009-06-12/homeless-surviving-in-tent-city/1712070)

"Homelessness: Surviving in a tent city". 2009. *ABC News*, June

12. <http://www.abc.net.au/news/2009-06-12/homeless-surviving-in-tent-city/1712070>

Jacobs, Jane. 1961. *The Death and Life of Great American Cities*. New York: Random House.

Jessop, Bob. 1990. *State Theory: Putting Capitalist States in their Place*. Cambridge: Polity Press.

Jordan Palmeri. 2010. "Small Homes: Benefits, Trends and Policies," Oregon Department of Environmental Quality, 2010, available at:

<http://www.deq.state.or.us/lq/sw/wasteprevention/presentations.htm>

Kemeny, J. 1983. *The Great Australian Nightmare: A Critique of the Homeownership Ideology*. Melbourne: Georgian House.

Kempf, Herve. 2008. *How the rich are destroying the earth*. Vermont: Chelsea Green Publishing.

Kern, Ken, Ted Kogon and Rob Thallon. 1976. *The Owner-Builder and The Code: Politics of building your home*. California: Owner-Builder Publications.

Kurutz, Steven. 2008. "The next little thing?" *The New York Times*, September 11.

Leonard-Barton, Dorothy. 1981. "Voluntary Simplicity Lifestyles and Energy Conservation" *The Journal of Consumer Research*, 8 (3): 243-252.

Lundahl, Erika. 2014. "Tiny Houses for the Homeless: An Affordable Solution Catches On." *Yes!*, February 20.

Marcus, Claire. 1997. *House as a Mirror of Self Exploring the Deeper Meaning of Home*. Berkeley: Conari Press.

Mazziotti, D. (1974). "The Underlying Assumptions of Advocacy Planning: Pluralism and Reform." *Journal of the American Planning Association* 40(1):38-47.

McLaughlin, Jim. 1999. "Nation-building, social closure and anti-Traveller racism in Ireland" *Sociology: The Journal of the British Sociological Association*, 33(1): 129-151.

Monopolis, Alexios. 2010. "Voluntary Simplicity, Authentic Happiness, and Ecological Sustainability." PhD diss, University of California.

Mosiman, Dean. 2014. "Madison Plan Commission approves 'tiny houses'." *Wisconsin State Journal*, April 29.

Mowbray, M. (1994), "Wealth, Welfare and the City: Developments in Australian Urban

- Policy." *Urban Policy and Research* 12(2):91-103.
<http://www.informaworld.com.dbgw.lis.curtin.edu.au/> (accessed September 21, 2014).
- Mullins, Patrick. 1981, 'Theoretical Perspectives on Australian Urbanisation: Social Components in the Reproduction of Australian Labour Power'. *Australian and New Zealand Journal of Sociology*, vol. 17, no. 3, November.
- Neuman, Lawrence. 2003. *Social Research Methods : Qualitative and Quantitative Approaches*. 5th ed, *Relevance of social research*. Boston: Allyn and Bacon.
- Neuman, Lawrence. 2006. *Social Research Methods: Qualitative and Quantitative Approaches*. Boston: Pearson Education.
- Newman, Peter, Timothy Beatley, and Heather Boyer. 2009. *Resilient Cities: Responding to Peak Oil and Climate Change*. Washington: Island Press.
- Newton, Janice. 2014. *Park-Land: when caravan is home*. North Melbourne: Australian Scholarly Publishing.
- Offer, Avner. 2006. *The Challenge Affluence: self-control and well-being in the United States and Britain since 1950*. Oxford: Oxford University Press.
- Patton, Michael. 2002. *Qualitative Evaluation and Research Methods*. Thousand Oaks, Calif: SAGE Publications.
- Playford, T. 2001. Australian Governments and Sustainable Housing.
<http://www.socsci.flinders.edu.au/geog/geos/PDF%20Papers/Playford.pdf>
- Quinney, Richard. 1978. "The production of a Marxist criminology," *Contemporary Crises*, 2: 277-292.
- Reiger, Kerreen. 1986. *The Disenchantment of the Home: Modernising the Australian Family 1880-1940*. Melbourne: Oxford University Press.
- Rostow, Walt. 1960. *The Stages of Economic Growth: A Non- Communist Manifesto*. Cambridge: Cambridge University Press.
- Salt, B. 2006. *The Big Picture: Life, Work and Relationships in the 21st century*. Prahran, Vic.: Hardie Grant Books.
- Seelig, Tim and Phibbs, Peter. 2006. "Beyond the normative: low income private renters' perspectives of housing affordability and need for housing assistance" *Urban Policy and Research*, 24 (1) 53-66.
- Shaw, Donna. 2010. "Ancillary Accommodation as an alternative housing model." Planning Dissertation, Curtin University.
- Sheahan, P. 2005. *Generation Y: Thriving and Surviving with Generation Y at Work*.

- Prahran, Vic.: Hardie Grant Books.
- Shi, David. 2007. *The Simple Life: Plain Living and High Thinking in American Culture*. Georgia: University of Georgia Press.
- Silverman, David. 2005. *Doing qualitative research: A practical handbook*. Thousand Oaks, Calif: SAGE Publications.
- Sternberg, Esther. 2009. *Healing Spaces: The science of place and well-being*. Cambridge: Harvard University Press.
- Stone, Wendy. 1998. "Young people's access to homeownership: chasing the great Australian dream" *Family Matters*, 49: 38-43.
- Taylor, N. 1998. *Urban Planning Theory since 1945*. 1st ed. London: Sage.
- Tent cities in America: pacific coast report. 2010. National Coalition for the homeless.
- The Metropolitan Region Planning Authority. 1983. *Caravan Living: A Planning Viewpoint*. Perth, WA.: The Metropolitan Region Planning Authority.
- The Select Committee on Housing Affordability in Australia. (2008) *A Good House Is Hard to Find: Housing Affordability in Australia*. Canberra: Senate Printing Unit.
- The Senate Select Committee on Housing Affordability in Australia. 2008. *A good house is hard to find. Housing affordability in Australia*. Canberra, ACT.: Senate Printing Unit.
- U.S. Green Building Council. "Buildings and Climate Change". U.S, Green Building Council. Accessed October 16, 2014, <http://www.documents.dgs.ca.gov/dgs/pio/facts/LA%20workshop/climate.pdf>
- Veblen, Thorstein. 1994. *Theory of the Leisure Class*. New York: Penguin Classics.
- Wensing, E, Wood, M and Holloway, D. 2003. *On the Margins? Housing Risk among Caravan Park Residents*. Sydney: Australian Housing and Urban Research Institute, UNSW-UWS Research Centre.
- White, Richrd. 1981, *Inventing Australia: Images and Identity 1688- 1980*. Sydney: Allen & Unwin.
- Winter, Ian and Stone, Wendy. 1998. "Social Polarisation and Housing Careers: Exploring the Interrelationship of Labour and Housing Markets in Australia," Working Paper No.13. Melbourne: Australian Institute of Family Studies,.
- Winter, Ian and Stone, Wendy. 1998. "Social Polarisation and Housing Careers: Exploring the Interrelationship of Labour and Housing Markets in Australia." Working Paper No.13, Melbourne, Australian Institute of Family Studies.
- Wood, Gavin, Deb Batterham, Melek Cigdem and Shelley Mallett. 2014. "The spatial

dynamics of homelessness in Australia 2001–2011” Final Report No. 227.
Melbourne: AHURI

- Worthington, Andrew. 2012. “The quarter century record on housing affordability, affordability drivers, and government policy responses in Australia” *International Journal of Housing Markets and Analysis*. ProQuest.
- Yates, Judith. 2007. “Affordability and access to home ownership: past, present and future?” Sydney: Australian Housing and Urban Research Institute.
- Yates, Judy. 2001. “The rhetoric and reality of housing choice: the role of urban consolidation” *Urban Policy and Research*, 19 (4): 491-527
- Yates, Judy. 2011. Explaining Australia’s trends in home ownership. Housing Finance International. Accessed April 3, 2014, www.housingfinance.org