GLOBAL AND LOCAL (GLO-CAL) VISIONS OF HUMAN HABITATION FOR 2100 AND THEIR DEFINING CULTURAL PARADIGMS

by

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Declaration of Originality

The work contained in this thesis has not been previously submitted, in whole or part, for a degree or diploma at any other higher education institution. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made. Some of this work has been previously reported in articles and chapters. These are listed below as Supplementary Materials.

The self completion surveys were designed and conducted by the author, with the financial support of Maroochy Shire Council. The visioning workshops were facilitated by the author with the support of Mr Kelvin Spiller, the former CEO of Maroochy Shire Council. All survey data was entered by the author, excepting the phone survey. The phone survey was conducted by Market Facts (Qld) Pty. Ltd. and the data was collated by that organisation.

Signed:_____

Date: August, 2006

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Abstract

There is a gap between contemporary urban planning theory and practice. Not only does this schism exist within the urban planning and design field, but also in regard to the social purpose and cultural meaning of the city. This problem persists in an era of increasing global urbanisation where, for the first time in human history, the majority of people will live in cities. The purpose of this research is to recover the key urban question from the milieu of urban literature and discourse, namely, what is the purpose of the city and its cultural meaning in the 21st century? New solutions require new thinking. To answer the above question the current research methodology formulates a futures-orientated, holistic teleology for the city. This teleology integrates multiple levels of reality to bridge the schism between revolutionary urban theory and practice. Consequently, both contemporary urban theory and practice of creating better city futures is examined, challenged, and re-formulated to provide greater clarity of purpose and social action when resolving current and emerging urban challenges.

The research combines empirical, interpretative, critical and anticipatory action learning methods and integrates frameworks from three disciplines: (1) City Theory and Urban Planning and Design; (2) Models of Cultural Change including macrohistory; and (3) the field of Futures Studies. This process seeks to reframe the siloed intra-disciplinary urban discourses into an integrated, trans-disciplinary urban model with holistic meta-criteria for city development. In Chapter One, the inquiry begins with mapping the urban problem and its challenges using a futures studies method – the *futures triangle* of dialectic forces. The application of this method allows mapping of the forces affecting urban futures as drivers of change, resistors to change, and images that attract change. This futures-orientated dialectic establishes the context for the subsequent investigations.

Chapter Two proceeds from the established premise that cities are the cultural products of civilisations, and examines particular models of cultural change (including macrohistory) to speculate on the change dynamics between civilisations and their cities. A multi-level cultural change framework is created using Sorokin's ([1957], 1970) super-rhythm of cultural paradigms, Thompson, Ellis and Wildavsky's (1990) social groups and ways of life approach, and Lynch's ([1981], 1988) socio-spatial city archetypes. These cultural

change theories are synthesised into a City Change Model (CCM) in order to consider the self-replicating behaviour patterns (ways of life and their myths) responsible for the fabrication of the city and its environment. The key change agents proposed are: (1) Individualists with their active or cynical *sensate* cultural paradigms; (2) Egalitarians with their active *ideational* cultural paradigm; (3) Hierarchists with their *idealistic*/integrated cultural paradigm; (4) Fatalists with their passive *sensate* or *pseudo-ideational* cultural paradigms; and (5) Hermits with their ascetic *ideationalism*.

In Chapter Four, a genealogical analysis of the Western evolution of the city throughout history reveals the recursive pattern and development of city visions/images in cultures' collective consciousness. The historical power of city visions are examined using the *integral* city meta-framework, to clarify which images dominate the present urban discourse to privilege urban futures. The genealogy of city visions, in conjunction with the CCM, illuminates trajectories for the probable, plausible and possible futures of the city.

Chapter Five develops these alternative city futures into glo-cal scenarios, using a Futures Studies method. What follows is an hypothesis for cultural paradigms responsible for the replication and reproducibility of the identified urban visions (aspirations) for human habitation. The current proposal argues that the five identifiable future scenarios for the city are: (1) the probable future - *Collapse Scenario*, (2) and (3) the bipolar plausible futures of the *Techno City* versus *Smart City*; (4) the preferred future of the *Eco City*; and (5) the possible future of the Spiritual or *Gaian City*. Further, the thesis specifically proposes that Fatalists and Individualists enable the *Collapse Scenario*, Individualists enable the *Techno City*, and Hierarchists and Egalitarians enable the *Smart City*. In addition, Hierarchists in partnership with Egalitarians and Individualists enable the *Eco City*, and Egalitarians and Hermits enable the *Gaian City*.

Chapter Five then critically investigates the possibility of empirically testing the qualitative relations proposed by the City Change Model (CCM) using two surveys. The first survey was conducted within a local community sample on the Sunshine Coast. The second survey was conducted globally to examine the relationships between the urban/city visions articulated by the glo-cal city scenarios and their defining cultural paradigms.

Further to the empirical surveys, Chapter Six's Causal Layered Analysis of the glo-cal city scenarios reveals the ways in which the city is a tangible cultural product of consciousness, and how the city can be positively used as a catalyst for the development of a planetary human civilisation. The urban system's driving forces are deconstructed across multiple levels of reality to postulate cities' multi-layered cultural dynamics. This process results in the emergence of a 21st century City Policy Agenda to clarify the transformation process.

Chapter Seven shows how the current research innovates a holistic city theory (meta-framework) which posits that the city is defined as a multi-dimensional habitat (*physis, bios, nous and theos*) for human and non-human exchange that allows civilisation to realise its potential. It is conceived as a holon within the cosmos. This thesis produced three key conclusions.

First, the transformation of the current urban condition is possible by transforming the current socio-cultural condition of *sensate/individualism* to a planetary culture of *Integrated/Egalitarianism.* This suggests an immediate developmental goal in order to avoid ecological overshoot and collapse. Note that egalitarianism is not, however, the endpoint of the evolutionary development of human culture. Second, this thesis proposes that the 'ideal' city has aspects of multiple city futures scenarios/archetypes. To allow this diversity and tolerance of multiple perspectives such a city has to be what cultural theorists term a 'clumsy institution'[1] or chaordic — expressing the nature of different levels of reality — whilst promoting people through these phases of human consciousness. Third, most Western cities are trending towards mass civilisation, urban sprawl and megalopolis, and the above *integral* city model and policy agenda identifies where the cultural impetus for transformation will need to focus in order to swing the present towards an alternative future.

> The final mission of the city is to further [hu]man's conscious participation in the cosmic and the historic process [...] so that at every phase of the drama it stages shall have, to the highest degree possible, the illumination of consciousness, the stamp of purpose, the colour of love (Mumford, [1961] 1989:576).

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[1]Thompson, Michael. 2000. "Understanding Environmental Values: A Cultural Theory Approach", Seminar Paper to Carnegie Council on Ethics and International Affairs.

Statement of Ethics Approval

Margaret Ellis
Secretary, Human Research Ethics Committee

University of the
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November 26, 2002

Office of the Deputy
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Dear Mr Daffara

ETHICS APPROVAL OF MODIFICATIONS TO RESEARCH PROJECT: *Global and Local (GLO-CAL) Visions of Human Habitation for 2100 and their Defining Cultural Paradigms (Project No. S/02/14)*

On 19 November 2002, the Human Research Ethics Committee of the University of the Sunshine Coast granted approval for minor modifications to the research project, *What is the preferred Habitat scenario of the Sunshine Coast and how is it influenced by global city futures* (Project No. S/02/14) as detailed in your Progress Report, dated 1 November 2002, including a change of title for the project to *Global and Local (GLO-CAL) Visions of Human Habitation for 2100 and their Defining Cultural Paradigms.*

The Committee also approved the Progress Report as satisfactory.

The Annual Report on completion of the research project will be due by 30 June 2003 and you should use the proforma "Annual Report on Approved Research Project Involving Humans" for that report.

An electronic version of the proforma may be accessed via the Staff or Student Drive or Intranet in the HREC forms folder within the Research folder.

If you have any queries or if you need any further information please contact me by e-mail at MEllis@usc.edu.au or by telephone on (07) 5430 1144.

Yours sincerely

Margaret Ellis
Secretary
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Cc: Dr Sohail Inayatullah

Margaret Ellis
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Dear Mr Daffara

ANNUAL REPORT ON RESEARCH PROJECT: *Global and Local (GLO-CAL) Visions of Human Habitation for 2100 and their Defining Cultural Paradigms (Project No. S/02/14)*

On 12 July 2005, the Human Research Ethics Committee of the University of the Sunshine Coast approved as satisfactory your Annual Report on Project No. S/02/14, *Global and Local (GLO-CAL) Visions of Human Habitation for 2100 and their Defining Cultural Paradigms,* and noted that the Report advised that the project had been completed.

If you have any queries on this matter or if you need any further information please contact me by e-mail at MEllis@usc.edu.au or by telephone on (07) 5430 1144.

Yours sincerely

Margaret Ellis
Secretary
Human Research Ethics Committee

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Thank you to the countless faceless minds on the planet that with their thoughts and feelings, act to shape our cities through the common bond of hope and vision. You were always in my psyche there to support me in my times of self doubt.

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Finally, thank you Dad for dreaming a different world for me where I could pursue my own dreams, rather than work the family farm. It is a tragedy for me that you passed away during my last phase of editing this work; and that your physical being did not share in our family joy in celebrating the fulfilment of this dream.

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List of Abbreviations

AAM	Archives d'Architecture Moderne
CLA	Causal Layered Analysis
CIAM	Congrès International d'Architecture Moderne
CCM	City Change Model
ESD	Ecological Sustainable Design
FS	Futures Studies
HRH	His Royal Highness
MOST	Management of Social Transformations
MSC	Maroochy Shire Council
ISP	Internet Service Provider
RPAA	Regional Planning Association of America
SCCS	Socio-cultural change studies
TBL	Triple Bottom Line
TNS	The Natural Step
TNSEIA	The Natural Step Environmental Institute of Australia
U.K.	United Kingdom
UNCHS	United Nations Centre for Human Settlements
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNPD	United Nations Population Division
UP/DS	Urban Planning/Design studies
U.S.A.	United States of America
WHO	World Health Organisation
WWII	World War Two

Supplementary Materials:

List of Publications related to this Thesis

Book Chapters

Daffara, P. (2004b). "Sustainable City Futures" in *The Causal Layered Analysis (CLA) Reader Theory and case studies of an Integrative and Transformative Methodology*. S. Inayatullah, Eds., Taipei, Tamkang University Press**: 424-438.

Referred Journals

Daffara, P. (2003). "City of the Aged versus City of all Ages," *Foresight - Journal of futures studies, strategic thinking and policy* **Vol. 5**(No. 6): 43-52.

Daffara, P. (2004a). "Macrohistory and City Futures," *Journal of Futures Studies: Epistemology, Methods, Applied and Alternative Futures* **9**(1): 13-30.

Conference Papers

Daffara, P. (2002). "Global City Futures and the Civilisational Archetypes of the Ideal City", UIA XXI World Congress of Architecture. In the Forum: Urban Models in Dialogue. Berlin, 25 July.

Daffara, P. (2002). "Futures of the City", Conference of the Future – Griffith University, Faculty of Arts & Communications, Gold Coast, 2-3 November.

Daffara, P. (2003). "City/Urban Design – Vessel for the Human Spirit", Creating a Spiritual Future – Ananda Mela, Stanthorpe, January 9.

Daffara, P. (2005). "Maroochy 2025 Community Visioning – a partnership towards a preferred future", 6th International Cities, Town Centres & Communities Conference, Australia, 1-3 June.

Daffara, P. (2005). "Global City futures and global consciousness", Global Soul, Global Mind, Global Action: Futuring from Survival to Thrival. Tamkang University, Tamsui Campus, Taiwan, November 5-7.

Reports

Daffara, P. (2002). *Discussion Paper No. 1 Sunshine Coast Habitat Futures*, Maroochy Shire Council.

1 The Research Framework
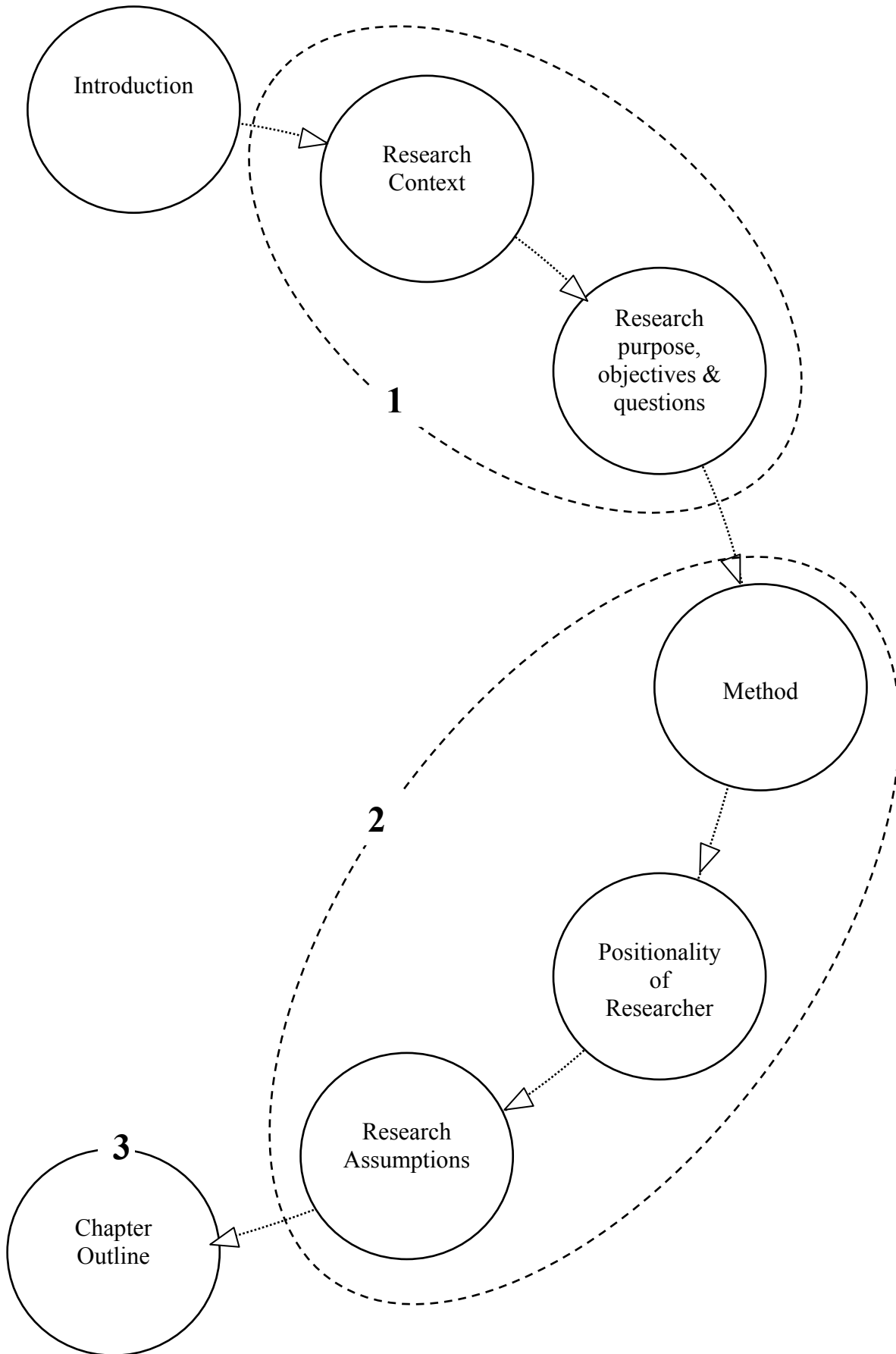
Figure (1.1): Chapter One Roadmap

1.1   Introduction

Chapter One describes the research in three parts (Figure 1.1). First the purpose of the research and key research questions are stated within the current conceptual and practical contexts of urbanism. This context outlines the global forces of change influencing Western city futures, which allows the urban problem to be reframed and identification of the significance of the current research. Second, an overview of the research process and its rationale; identifying the research scope, limits, positions and assumptions is presented. The intent of this overview is to provide the foundation for Chapter Two's discussion about the research methodology (investigation of methods for the current inquiry). Finally a chapter outline of the thesis provides the reader with a roadmap of the entire work.

1.2   Contextualising the inquiry

1.2.1   Research context and significance

The world's urban population reached 2.9 billion in 2000, and is expected to rise to 5 billion by 2030. Only 30% of the total population lived in urban areas in 1950, this rose to 47% by 2000 and is projected to reach 60% by 2030. At current rates of change, the world-wide number of urban dwellers will equal the number of rural dwellers in 2007 (UNPD, 2001). How this demographic shift from agrarian to urban ways of life is managed may be the most significant factor in determining whether global living conditions remain sustainable. High-income countries will account for only 28 million out of the expected increase of 2.1 billion (UN-HABITAT, 2004: 24). The projected rate of change of urban populations is greatest in non-Western cities (Figure 1.2 and 1.3) but this change is being modelled on Western city development. Considering postcolonial critiques of the city of modernity, challenging the socio-cultural production of Western cities will provide space for non-Western cities to develop their own ways of accommodating anticipated urban migration during the 21st century.
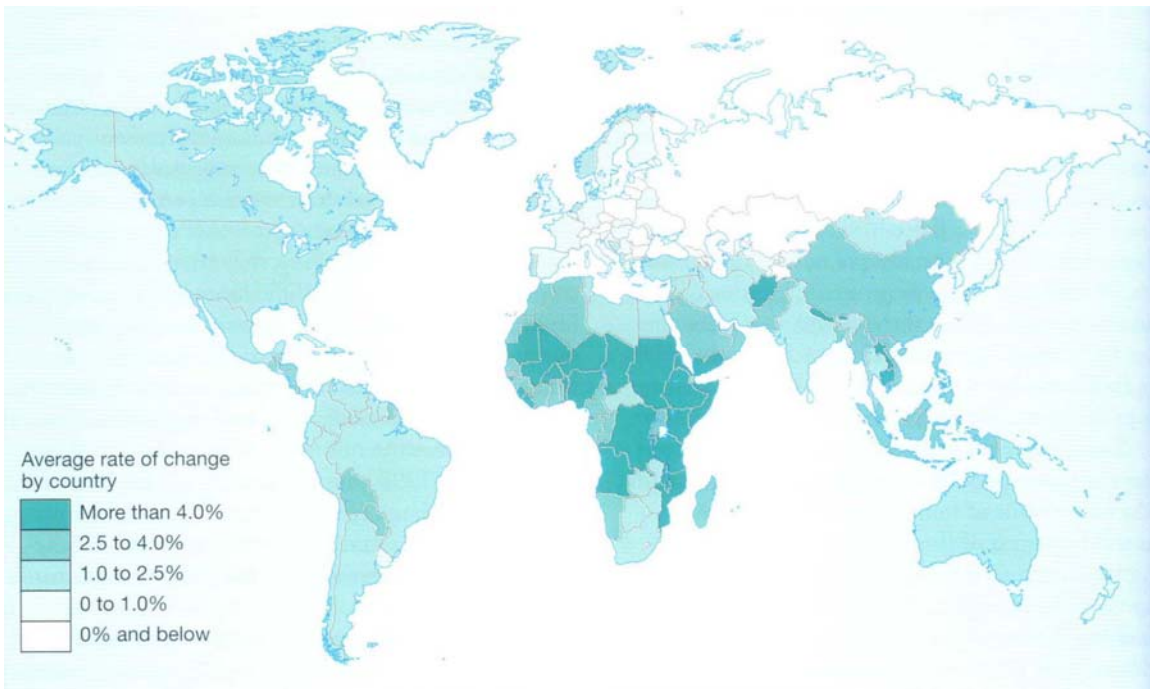
Figure (1.2): Rates of change in urbanisation, 2000-2005 (UN-HABITAT, 2004: 24)
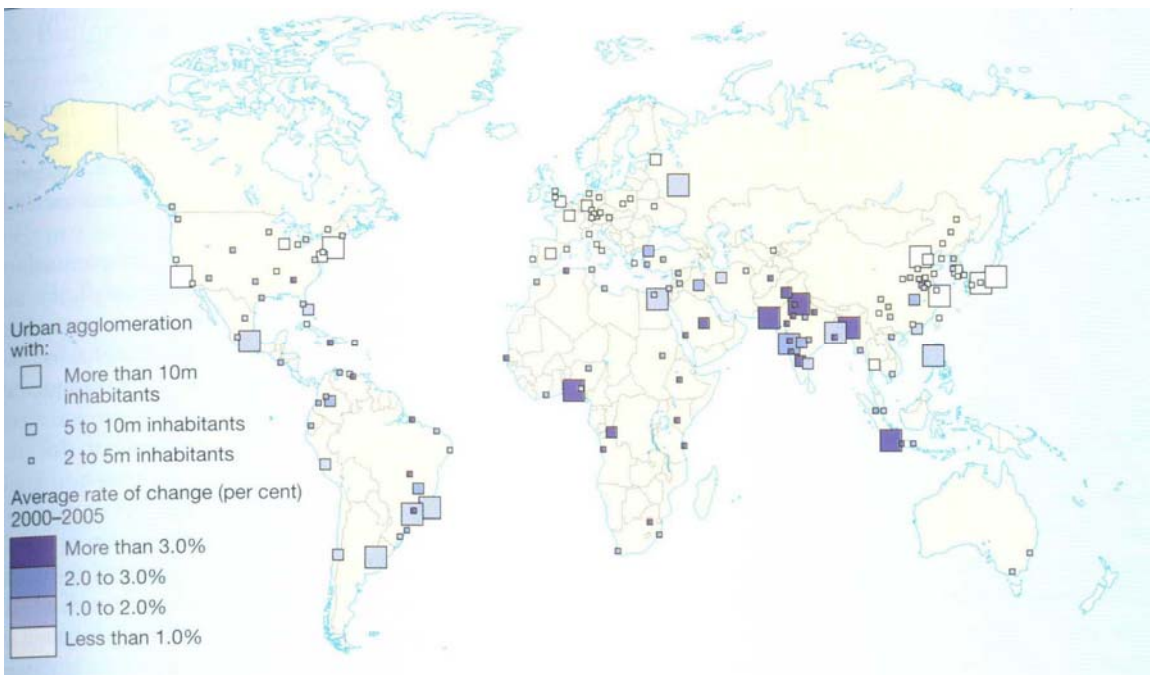
Figure (1.3): The World's Largest Cities, 2003 (UN-HABITAT, 2004: 25)

The dialectical forces of change influencing city futures are complex and multi-dimensional. They are multi-dimensional in the sense that urban phenomena recursively impact the material (biological/ecological, psychosocial and metaphysical dimensions of reality) and are also shaped by them. Research that seeks to anticipate urban futures needs

to contextualise the current dialectical interplay of forces. The forces of urban change can be categorised as weights, drivers and visions.

The global urban weights, drivers and visions interact to create a field of potentiality for the future of the city. Each city, due to its historical context, has its own unique set of dialectic forces. There are however, forces that operate globally and locally that influence the majority of the world's cities. The next three sub-sections discuss each of these global urban forces of change within the above categories and their implication for city futures. The fourth sub-section provides the discursive context for the reframing of the urban problem, as urban contradictions and tensions within the city as a multi-dimensional system. This discussion sets the stage for the subsequent presentation of the research questions.

1.2.1.1   Weights

The 'weight' of the future can be described as the resistance to change. These forces are difficult to change and provide barriers to the realisation of desired futures. They can also lead to the likelihood of one future being realised over others. For example, cultural attitudes and values may resist change and create a barrier against alternative city futures. Therefore, the weight of city futures is a combination of the confining episteme (ways of knowing), cultural paradigms and power structures that define individual's actions when creating a place of habitation. The following urban phenomena are categorised as weights against change in the current research.

1. Urbanisation
2. Consumerism, overshoot and collapse
3. Free market economics (Capitalism, globalisation, Westernisation)
4. Urban sprawl and car based infrastructure systems
5. Urban apartheid, social and cultural polarisation and marginalisation
6. Schism between urban theory and practice

One. Urbanisation (the spatial concentration) of the world's population is a recognised and undisputed global trend (UNCHS, 1996b; Clark, 1996; Hall and Pfeiffer, 2000; UNEP, 2001). As such not only is urbanisation a driver of continued social change, but

also a weight against alternative urban futures, as it is an entrenched techno-economic system which impacts on social forms (Castells, [1999], Susser, 2002: 367).

Two. The individual and collective consumption behaviour of urban populations is deeply programmed as part of the human experience. Consumerism is considered both an urban weight and driver for two reasons: (1) its behavioural mechanisms are both difficult to modify and resist external change; and (2) there is a correlation between consumption rates (as resource use) and the forecast urbanisation rates and population growth. Cities are recognised as the 'engines of economic growth' (Hall and Pfeiffer, 2000: 51; Sassen, 1991, in Fainstein and Campbell, 1996: 63-4; Logan and Molotch, 1987 in Fainstein and Campbell, 1996: 291-338) and as such it is also recognised that: (1) cities are the major producers of entropy (disorder and pollution) on the planet, and thus threaten its ecological viability; and (2) cities increasingly require ecological footprints that extend beyond the immediate carrying capacity of the region in which they are located. This is the major urban problem that challenges human and interspecies survival, as argued by authors such as Donella and Dennis Meadows (1974; 1992), Spirn (1984), David Clark (1996), Bernd Hamm and Pandurang K. Muttagi (1998), Alan AtKisson (1999), Hawken et al, (1999) and the *UNCHS* (1996b: 143, 149-50). Here the argument for sustainability takes primacy in urban futures. Without a living planet, human civilisation has no home. Consumerism and the sustainability/environmental social movement are significant counter posing drivers of urban futures.

Three. The social perception that cities offer greater economic and lifestyle opportunities than rural areas (Hall and Pfeiffer, 2000) motivates further urbanisation, which in turn increases the demand for liveable, affordable housing. Housing for all is a key development goal for cities (*The Habitat Agenda* (1996a); Wheeler, 1999; Hall and Pfeiffer, 2000; *The Earth Charter*, 2000; Mayor and Binde, 2001). The means of producing such housing relates directly to other significant urban weights: (1) the free market economy; (2) suburbanisation and urban sprawl; and (3) infrastructure lag. Each of these is discussed briefly.

First, the informational mode of development – a socio-technic condition of the network society (Castells, 1989, 2002) – is restructuring the economic role of cities. Castells' key

argument is that the virtual space of informational flows (as facilitated by communication infrastructure networks) is reifying the spatial polarisation of cities. The network of flows in the virtual world is reinforcing a global network of cities serving as information hubs. The impact of this polarisation is that some few places within the world's cities become more important within the global economy at the expense of others, whilst traditional employment/industrial centres are decentralised (Castells, 1989, 1996, 2002; Fainstein, [1990], 1996; Sassen, 1991, 1994, 2002; Hall, 1996). As a result, capital is effectively concentrated in strategically positioned 'technopoles' or an 'urban milieux of innovation' within the global informational network (Castells and Hall, 1994 in UNCHS, 1996b: 10). Castells (1989) demonstrates how spatial polarisation is widening the social gap between the economically advantaged and disadvantaged. This issue will be discussed later in the context of urban apartheid and social marginalisation.

Second, the debate over the advantages and disadvantages of decentralised suburban sprawl, versus more compact spatial forms of urban development (polycentric urban regional networks), has raged since the emergence in the 1920s of the separate yet similar proposals of Frank Lloyd Wright's *Broadacre City* and the *Soviet Deurbanists* (Moisei Ginsburg and Moisei Okhitovich). The counter-attack came from Mumford (1938), who railed against the loss of the city "as an embodiment of collective art and technics" (Mumford, 1938 in Hall, 1996: 297), due to suburbanisation. Car-based freeway suburbanisation became the dominant spatial form under production in the U.S.A. during the post-World War II industrial and demographic boom, subsidised by the 1956 Federal-Aid Highway Act (Hall, 1996: 291). Thus, although the debate continues, the early 20th century vision of decentralisation is now the suburban habitat for 50% of the population of the U.S.A. (*US Census Bureau*, July, 1999) and 58% of the Australian population (*June 2001 ABS Census* data in Salt, 2003: 52). The physical infrastructure servicing this spatial form is an urban weight (which is difficult to change) against alternative urban futures. Life in the suburbs is expected to perpetuate and be reproduced, with its associated detrimental effects on health, social capital and mobility (Mayor and Binde, 2001; Ewing et al, 2003; Leyden, 2003; Putman, 2000). Some researchers continue to argue that there is no empirical case justifying the benefit and promotion of compact cities as a planning goal instead of suburban sprawl (Gordon, P. and Richardson, H.W., 1997). Regardless of this debate, empirical studies continue to document the impacts of life in the suburbs and exurbs.

Third, the infrastructure costs servicing suburbanisation as a spatial form, and its technical inertia to long-term change, is considered another urban weight. Leyden, citing others (including practitioners) within the *New Urbanism Movement*, argues that:

> "suburban sprawl is costly to state and county governments – and tax-payers -- who find it increasingly difficult to subsidise the costs or roads, schools, utilities and other services associated with low density development [Barker, 2002; *USA Today*, 2002; Fogelson, 2001; Leyden, 2001; Duany, et al, 2000, Katz and Bradley, 1999; Hylton and Seitz, 1995, Moe and Wilke, 1997; Langdon, 1994; McKenzie, 1994; Calthorpe, 1993; Kunstler, 1993 and 1996]" (Leyden, 2003).

That infrastructure typically has more than a 50 year lifecycle and latent time lag that resists responsive change (Mayor and Binde, 2001: 104).

Four. Most Western cities are dependent on a car-based system of mobility that has revolutionised urban form (Hall, 1996). Whilst some authors argue for car-free cities in light of the evidence for the negative impacts of the car (Crawford, 2000), current metropolitan regions and their futures are now dependent on the private mobility of the car (Hall and Pfeiffer, 2000: 28-31). Increased private mobility demand will continue to drive urban change, leading to more investment in road infrastructure. Globally, car ownership and use is expected to rise dramatically as the residents of the mega-cities of the middle-income developing world (China, Latin America) can afford to buy cars. Morrison and Tsipis (1999) forecast that based on current trends, there will be one billion private cars on the world's roads by 2050. Urban planners hope for the 'smart car' (Hawken, P., Lovins, A. B. and Lovins, L. H., 1999), a zero-emission, renewable energy-powered, recyclable vehicle with intelligent guidance systems. Such a 'smart car' would help to avoid the probable dilemma of ecological collapse caused by the explosive growth of uncontrolled suburban sprawl coupled with the use of fossil-fuel powered, polluting cars (Hall and Pfeiffer, 2000: 30). Others authors argue for transformative change, challenging the paradigms that reify the car-based system, and describing alternative mobility systems that embrace differing gender and social needs (Inayatullah, 2003: 40-1).

Five. Urban sociologists throughout the 20th century have studied the phenomenon of the permanent underclass within cities (Hall 1996). During this period urban conditions in developed regions have improved, but the existence of marginalised groups in both developed and developing regions persists and does not seem to be dissipating in the short-term (Hall and Pfeiffer, 2000: 85; UNCHS, 1996b: 108-9). This state of social/urban segregation creates a substantial urban weight that needs to be overcome in order to develop alternative urban futures. Urban segregation comes in various forms, depending on both cause and effect. The forms discussed here include: (1) Urban apartheid in the most extreme sense, which correlates with Castells' *Dual City* concept; (2) social polarisation of labour and work opportunity (by income); and (3) cultural polarisation of space by ethnicity.

First, urban apartheid is expressed where socio-economic classes spatially and culturally separate themselves from others in privatised domains, funded and maintained autonomously through their wealth. The extreme example of this is the Western gated residential compound, isolated from a developing city's endemic slums. Urban apartheid is a growing reality within cities, most notably expressed by their gated communities in which the world's elite take refuge from the surrounding social tensions and glo-cal uncertainties (Castells, [1996], 2002: 349 cites Blakely and Synder, 1997). Mayor and Binde (2001: 89) cite Blakely and Synder, (1997) when arguing that, "according to an OECD report published in 1996, there are 35 million Americans living in 150,000 communities managed by private associations". These microcosms within the city offer their residents all the advantages of urban life, while segregating them from others. Some such communities even claim secession from the wider community (Graham, and Marvin, 2001: 4, 267-303).

Class segregation by real estate value is not new. Fishman (1987) proposed that suburbia has been the manifestation of values-based segregation between classes since early industrialisation began in England and the U.S.A. in the 1840s. The suburb embodies the ideal space within which Anglo-American values of familial solidarity, domesticity and morality can be expressed and lived. Here the 'elite of the middle class' retreat in isolation from the 'evils' of the city centre into their 'bourgeois/evangelical utopia' (Fishman, [1987], 1996: 30). Hall (1996) also revealed that a permanent underclass – whether European immigrants, African-Americans or Hispanics – existed in some form in

'ghettos' of major Western cities from the late 19th Century to the time when Castells (1989, 1996) hypothesised the rise of the *Informational-Network Society* and its manifestation of the *Dual City*. According to Castells the rise of the *Dual City* is characterised by two movements, the inclusion into trans-territorial (informational) networks, and exclusion by the spatial separation of places (e.g., technological apartheid in the era of the Internet such that some areas are *switched off* from the networks). "The fundamental contemporary meaning of the dual city refers to the process of spatial restructuring through which distinct segments of labour are included in and excluded from the making of new history" (Castells 1989: 228).

Second, Castells (1989) also argues that the social polarisation by income (of labour and work opportunity) is a manifestation of the *Dual City*, and transcends the traditional split between cities and suburbs. Hall (1996, 2000) explains that deindustrialisation (due to the rise of the network society and globalisation) within cities has been accompanied by growing unemployment, especially among young men. The informational city delivers a skill premium for the highly educated whilst its service economy becomes more female (Hall and Pfeiffer, 2000: 84). Income inequality is deepening the wealth divide in most OECD countries, as the oversupply of low-skilled labour hinders the growth of income. Graham and Marvin (2001: 330-1), citing Zukin (1982) and Dolgon (1999), demonstrate that these processes lead to the gentrification of inner city precincts and their urban conversion to cyber-live-work-districts. The investment takeover increases rent and land values that then exclude lower-income groups. As a result, homelessness rates rise, creating social tensions and resentment. Ghetto riots have been a feature of the 20th century city in the U.K. and U.S.A., for a range of specific historical forces. Investigations into these riots have repeatedly identified the expression of profound alienation by the rioting individuals, a hatred for society that reflects self-detestation (Hall, 1996: 398), or simply a collective opportunity to go on a 'free' shopping spree to indulge in consumerism, which ordinarily is beyond their means. Castells (1989: 214) also warns that the crime economy booms in the *Dual City* scenario and should not be ignored during the overall social restructuring process. Young unskilled, unemployed men disenfranchised by the restructuring process are easy recruits for organised crime, whether in developed, developing or post-communist cities. Recall also that at the beginning of the 21st century over 1.3 billion people currently live in absolute poverty across the world (*United Nations*, Res. A/51/178 in Mayor and Binde, 2001: 58).

> "In the industrialised nations over 100 million people live in financial poverty in the
> OECD countries alone, which also have 37 million unemployed [the same number who
> live in gated communities in America alone] and over 100 million homeless, a
> scandalously high figure for rich countries.[…] UNICEF's latest estimates, also presented
> by the WHO, indicate the existence of 100 million street children, of whom 40 million
> live in Latin America, 25 to 30 million live in Asia and 10 million live in Africa" (UNDP,
> Human Development Report 1998, and WHO, 1993; in Mayor and Binde, 2001: 60).

Third, the cultural segregation of space according to ethnicity (e.g., Hispanic) or cultural identity (e.g., the gay community) continues within the city, as urban migrations intensify cultural diversity (Sandercock, 1998). The cultural conflicts contesting public space that arise from the increasing diversity of cultures is also examined in the next section (as an urban driver). For now, the focus remains on the weight that binds cities in their respective journeys into alternative futures.

The most shocking proposition that emerges from the analysis of urban polarisation, segregation and secession comes from the work of Castells (1999). He cities research by Douglas Massey (1996) and Goldsmith and Blakely (1992) in regard to these issues, before concluding that there is a real probability that the social/urban contract that has bound cities for millennia will come to an end.

> "It seems that broader sources of fear spread in the metropolitan region, as its growing
> multiculturalism and social diversity, traditionally a feature of the urban world, are
> resisted and rejected by those groups who have the means to do so: by exiting the city and
> retrenching in their communities. […] The development of this increasingly
> individualised world, atomised in individual homes, and/or grouped in segregated,
> homogenous communities, both at the top and bottom of the social ladder, is tantamount
> to the breaking of the urban contract: an urban contract by which citizens from different
> cultures, and with different resources, agreed as citizens; that is part of a shared culture,
> and institutions, where conflicts were part of life, but where a common ground could be
> found. By fragmenting the city, the accelerating process of spatial segregation may be
> undermining our capacity to live together. The end of the urban contract may signal the
> end of the social contract" (Castells, 1999 in Susser, 2002: 377).

The decline and ultimate demise of the urban contract is a psychosocial phenomenon of the city that is a heavy urban weight to shift, but is necessary for the purpose of creating

better urban futures. It reveals a deep dilemma between the desire for agency and the resistance of social structures against transformation. More explicitly, the contradiction is that cities are manifesting social segregation which is contrary to their ideal of being expressions of the urban/social contract. The resolution of this challenge may lie in the formulation of new visions of the city that motivate the necessary transformation towards holism. Underlying this hope and possible resolution is the pre-condition of reconciling the schism between urban planning theory and practice.

Six. There is a gap between contemporary urban planning theory and practice (Hall, 1996: 340-1). Not only does this schism exist within the urban planning and design field between academics and practitioners, but also in terms of the social purpose and cultural meaning of the city. This is due in part to modernity's reductionism and particularism in urban research. The schism between urban theory and practice is an urban weight that colours the very way urban problems are interpreted, and in turn influences the planning and implementation of solutions. Established structures of knowledge (epistemes) and systems of ideas (ideologies) which describe the relations between the city and social dynamics are effective obstacles against developing holistic, humane urban futures. Furthermore, the dichotomy inherent in Castells' *Dual City* (1989, 1996) may well be related to the schism between urban theory and practice. Consider Castells' (1989, 1996) proposition that the informational mode of development creates a new urban contradiction between the networked space of information flows and the historic space of places. The manifestation of this new urban contradiction can also be appreciated as a reification of the knowledge-practice schism. Here urban theory is focussed on informational processes and concepts, whilst urban planning/design practice is focussed on the creation or conservation of places. The common bridge that needs to be built between the two is the meaning of cities and their cultures (Castells, [1999], 2002: 382, 386).

1.2.1.2   Drivers

The 'drivers' towards the future can be summarised as the often-external forces of change. These drivers are systemic and as such often seem unstoppable to people within society. These drivers can be identified empirically through the study of trends. Urban phenomena which are categorised as drivers of change include the following.

1. Global population growth, migration and urbanisation
2. Consumerism and global resource consumption
3. Sustainability revolution to counter ecological overshoot, collapse and climate change
4. Mobility demand
5. Cultural identity, fabrication and desertification
6. Ageing citizens and cities
7. Local governance, agency and community participation – more democratisation and community visioning/action planning
8. Gender equity
9. Technological revolutions within and of the city

One-Two. As previously discussed, global population growth and migrations continue to drive urbanisation and exponentially affect the ecological impacts of cities' resource flows (urban metabolism). The objective of creating sustainable cities has entered the international mainstream and is a significant driving force (i.e., urban driver) for alternative urban futures countering the twin threats of climate change and ecological collapse (refer to the UN *Earth Summit*, 1991, the World Bank's *Global Urban Partnership and Cities Alliance Program*, the UN *Habitat II Agenda*, 1996, and the Australian Parliamentary Commission's *Inquiry into Sustainable Cities 2025*, 2004).

Three. Human habitats must now be designed to integrate with the wider web of relationships of the planet, creating one holistic system. Urban designers need to develop new ways of linking urbanity with nature and must 'rethink our current concepts of cities' (Johnson, 2000: 70) in order to create a symbiosis between the built and nature.

Various models of sustainable development have been formulated in response to the concept of sustainability as defined by the Brundtland Commission (1987). These include *The Natural Step Program* (Robert, 2002) and *Natural Capitalism* (Hawken, Lovins, B. and Lovins, L. H. 1999). *The Natural Step* and *Natural Capitalism* provide frameworks for the design and operation of sustainable societies and cities as a system of organisation. Their continued application will thus be at the forefront of the sustainability revolution and be in place to act as drivers of urban change. Urban policy makers and critics are also expounding the multi-factorial qualities and indicators to monitor progress towards the

goal of sustainable cities (The Earth Summit 1992, Agenda 21; Rogers, 1997; Tegart and Jewell, 2001; Wheeler, [1998], 2000; Hall and Pfeiffer, 2000: 16; Dekay and O'Brien, 2001).

Four. The increasing demand for mobility amongst the growing urban population is another driving force of change within the urban system and in turn influences urban futures. Mobility and its relationship to settlement form is recognised by city designers in the urban planning discourse as a key facet of creating the sustainable city (Rogers, 1997: 169; Wheeler, [1998], 2000: 440; Dekay and O'Brien, 2001: 24). Transport affects environmental pollution, social cohesion versus fragmentation and access to work opportunities. Energy efficient mobility choices reduce fossil-fuel use and greenhouse gas emissions; whilst renewable powered mobility can result in zero-emission technology, thereby reducing the cost/load on ecosystem services. Public mass transit options that are more affordable than private car use (and subsequent road infrastructure) provide social and economic benefits for citizens and municipalities alike. In other words, using *The Natural Step* system conditions of sustainability, the way individuals move around within and between cities influences what is obtained from ecosystem services, what is generated from these resources, the maintenance of these systems, and the fairness by which these resources are distributed. The following data from Mayor and Binde (2001) can help appreciate the significance of these current and future impacts.

> "Whatever the size of the towns, the total number of cars increases two or three times faster in urban areas than the rate of population growth, and automobile use grows even more rapidly in those areas. […] According to the World Bank, more than half a million people die every year in road accidents and even more are injured. Two-thirds of victims are pedestrians, of whom one-third are children. […] According to a recent OECD report [Urban Travel and Sustainable Development, 1995] on urban transport, the economic, environmental and social costs of commuting may be currently estimated at approximately 5% of the GDP of the industrialised countries. We should therefore do away with the simplistic notion that 'more cars' equals 'more economic growth'. […] Car exhaust emissions account for one-half of urban pollution and over one-quarter of greenhouse effect emissions" (Mayor and Binde, 2001: 101-3).

Key advances for future mobility include: (1) the hydrogen fuel cell car; (2) electronic traffic management and road pricing; (3) physical priority for public transport and high

occupancy vehicles; (4) full vehicle automation (Hall and Pfeiffer, 2000: 271-2, 275-6); and (5) a paradigm shift from male-macro to female-micro transportation systems (Java, V. 2002 in Inayatullah, 2003: 40-1). Whilst authors Hall and Pfeiffer (2000) remain positive about technological advances as they address current mobility issues, Mayor and Binde (2001) acknowledge the considerable technical inertia of transportation systems in terms of their long-range consequences and infrastructure lifecycles (over 50 years). They cite an OECD report, *Motor Vehicle Pollution: Reduction Strategies beyond 2010* (1995) as follows, "In the U.S.A., even if one million electric or hydrogen-powered cars were put on the road between now [1995] and 2010, the total reduction of carbon dioxide pollution would still be less than one per cent lower than the present rate" (Mayor and Binde, 2001: 106). In 2004, nine years after this report, the prototype hydrogen fuel cell car is still undergoing trials and is not expected to be mass-produced until 2015 or 2020. This is due mainly to the costs of retooling and hydrogen refuelling stations (*The Bulletin*, October 2004). This example demonstrates the required paradigm shift from male-macro transport systems characterised by large distances, expensive individual use and ownership, compared to a female-micro systems approach. These alternative systems would emphasise short distances and affordable, community based solutions such as walkable neighbourhoods with mixed housing, recreation and work opportunities, connected by public transport networks for longer trips. Mayor and Binde (2001) cite surveys by the International Association of Public Transport (1996) in the major cities of Canada, U.S.A. and the U.K. that demonstrate that the doubling of population or settlement density within urban nodes translated into a 20% to 30% reduction in the annual number of kilometres travelled by car per person. Prioritising public transport and cycle (non-motorised) networks and car-share schemes are also 'softer' female-micro options emphasising the use of community resources (e.g., Curitiba's transport approach, (Hall and Pfeiffer, 2000: 270)).

The way people travel within and around cities is both an urban weight and a driver for alternative urban futures. The significant eco-socio-economic impacts of mobility on societies and cities increase the amount of change needed for transportation systems to overcome their inherent technical inertia and create sustainable cities. This imperative provides another driving force for transformation.

Five. The rising clash of cultures within cities, due to increasing multi-cultural societies and hybridisation of culture, is another driving force for change within cities' psychosocial reality. The resultant growth of a transcending 'politics of difference' (Sandercock, 1998: 185) is in response to the growing tension between the cultural/group identity of the marginalised subgroups of society and the cultural imperialism or conformism by the dominant culture. The increasing trend of cultural imperialism is supported by the global revolution in information and communications technology in three ways.

The first means by which cultural imperialism is supported is by the rise of the *Dual City*, where the space of information flows is separate from the space of places. As a result the phenomenon of social polarisation and spatial differentiation is increasing within the network society, where the information elite code their processes in the space of flows – the space of power – spatially segregating themselves within gated communities and denying access and communicability to those disconnected from the network (Castells, [1999], 2002: 382).

Second, concomitant cultural desertification and individualism influences cultural imperialism. This desertification is due to the growth in global cultural industries and expansion of a standardised culture that is nothing more than a commodity within the global networked society. The likely future based on this single driver is cultural desertification characterised by uniformity of messages, and loss of languages[2] and cultural diversity (Mayor and Binde, 2001: 302). Simultaneously, the power of digitalisation and globalisation means that most cultures, in spite of their differences, now live in the same de-localised global time (Mayor and Binde, 2001: 302). The impact of this on networked cities may well be profound. Autonomous citizens who are privileged to access its supply consume culture as a commodity, and this reifies a serviced society. The (rapidly diminishing) alternative is the participation of diverse citizens in multi-cultural civil society.

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[2] Approximately six thousand languages are still spoken in the world, but only about twenty have a global audience. A few die each year. English is the principal language of the Internet, such that in 1997, 70% of Internet sites were in English (Mayor and Binde, 2001: 303-4).

The third manifestation of cultural imperialism is the privatisation and commodification of public space and place – often enabled by the importation of Western and/or American urban development models. Westernisation and Americanisation of urban models within non-Western cities as a consequence of globalisation has been criticised by Malik (2001). The by-product is this process is the introduction of the Western gated community or corporative, privatised city enclaves within (but not of) the wider city. This point demonstrates a dominant trend in all cities – the privatisation of public space (Zukin, [1995], 2000) driven in part by the politics of everyday fear. Privatisation of public space occurs everywhere in the typological form of the enclosed private shopping centre and reinforces socio-spatial separatism (Castells, 1999 in Susser: 2002: 383). These controlled spaces exclude vagrants, provide programmed cultural events and are patrolled by security guards. Another trend cited by Zukin is the revitalisation and redesign of public places within the city centre using what she terms 'a model of pacification by cappuccino' (Zukin, [1995], 2000: 137). Landscape design features a purposeful vision of urban leisure where the public values public space as an object of visual consumption. In this consumed public space, security and casual surveillance are important criteria to displace undesirables such as the homeless and drug dealers (control diversity or fear of the other) and to re-create a consumable vision of civility (2000: 138). This trend marks the erosion of public space in terms of its two basic principles, public stewardship and open access.

Six. The ageing[3] of the world's urban population is a driver of change for alternative urban futures. How this demographic driver will influence spatial form and city relations is an issue city authorities are coming to terms with. Basically, cities' ageing populations affect cities' spatial attributes of mobility, housing and settlement patterns at the physical (material) level, in addition to the psychosocial impacts on cities' social justice criteria.

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[3] Globally the number of older persons (60 years or over) will nearly triple in the next 50 years, increasing from 606 million in 2000 to nearly 1.9 billion by 2050. Eight of every ten of those older persons will live in less developed regions. In more developed regions the population aged 60 or over currently constitutes 19% of the population; by 2050 it will account for 32% of the population. In developed regions there will be two elderly persons for every child (persons aged under 15 years) (UNPD, 2002: viii-ix). In 2000, 69 million persons in the world were aged 80 or over (known as the 'oldest old') and they were the fastest growing segment of the population. By 2050, they are projected to reach 377 million, increasing more than 5.5 times. Although the proportion of the oldest old is still low (1.1% of the world population), it will rise to 4.2% in 2050 (UNPD, 2002: 16). Seven of every ten oldest of the old will live in less developed countries.

Research from the urban planning field indicates that if neighbourhoods are physically planned for older people they work for everyone. For example, the construction of Adaptable [Universal] Housing within our neighbourhoods suits the needs of all stages of the life cycle. Communities planned with older people in mind are also more ecologically sustainable. They rely less on car transport, focus more on the creation of walkable mixed-use village type living and recognise the social importance of neighbourhoods. Communities planned in recognition of the needs of older people emphasise intergenerational social contact and capital and are as a result more socially sustainable (Daffara, 2003: 51).

Another demographic shift noted in many developed cities is the shrinking size of households, with many incorporating only one or two persons (Hall and Pfeiffer, 2000: 50). The consequences for urban society are difficult to forecast, yet the impacts will broadly be felt in: (1) human capital, lifelong learning and innovative potential; (2) the flexibility and accessibility of urban systems; (3) aged care and services provision; (4) the financial cost of dependency (in 2030, public spending on old age security in OECD countries will be 16.5% of GDP) (2000: 47); and (5) future international migration (Mayor and Binde, 2001: 42).

Seven. The welfare of future cities is dependent on good local governance and the engagement of citizens and communities in policy formulation and action planning. This is recognised globally (*The Habitat Agenda*, 1996a: Objectives 44-5), (UNCHS, 1996b: 295-302, 322-8), (*The Earth Charter*: 2000). As a result, local governance and agency, in concert with greater community participation, is a driver of urban change. Democratisation and community visioning as strategic planning tools are increasingly being used by city actors to manage urban transformation and social change. Researchers also agree that local government needs to be more responsive to civil society (Castells, 1989: 20; Castells, [1999], 2002: 380; Wheeler, 1998 in LeGates and Stout, 2000: 442; Mayor and Binde, 2001: 96, 444). Hall and Pfeiffer capture the message powerfully in the following quote.

More assertive protest movements, more self-help and direct action, more self-assured entrepreneurship by more assertive consumers – all these reflect a change in the behaviour of citizens who are dissatisfied with low service delivery and want a greater say in the way [urban] administration is affecting their lives. Without necessarily changing

existing urban institutions, attitudes and values towards local governance need changing to achieve greater people empowerment. Local administrations need to come to terms with community action and respond proactively to collective and individual lifestyles based on changing values and behaviour. Urban lifestyles and aspirations will influence […] urban ways of life, just as much as information technology or globalisation, and shape the future of cities (Hall and Pfeiffer, 2000: 102).

The implication for city futures is that local governments seem to be as powerless as national governments in terms of dealing with global trends. However, local governments are much more responsive to the changing social, economic and functional environment of cities. Castells argues that local governments could in fact be the most adequate means of city management – working in the world economy and living in local cultures. But he argues that local governments can only exercise such management potential if they engage in at least three fundamental policies:

[1] Citizen participation […]; [2] Interconnection and cooperation between Local Governments, making it difficult for global economic forces to play one government against another. […]; [3] Managing the new urban contradictions at the local level by acting on the social trends that underlie such contradictions requires a vision of the new City and new society we have entered into (Castells [1993], 2000: 567).

Eight. Gender equality remains a significant international goal within the context of cities and human settlements for the 21st century and as such emerges as a driver of urban change and alternative urban futures. Issues women continue to face include discrimination, economic vulnerability and access to income, credit, resources and services, homelessness and exclusion from official housing ownership programmes, domestic violence, access to transport; access to education, and participation in urban governance (UNCHS, 1996b). *The Habitat Agenda* (1996a) seeks the integration of gender perspectives within human settlements-related legislation, policies, programmes and projects through the application of gender-sensitive analysis to address these issues. The UNCHS (Habitat) argues that this integration will make urban development more effective and is not an additional consideration for practitioners but rather one component of good practice (UN-Habitat, 1996b: 349).

Castells (1999) argues that women are instrumental in reconstructing the city as civil society, "Women manage the daily urban system by their work. And they change it, by their mobilisations, as women are the predominant actors in community organisations and urban social movements (Borja and Castells, 1997; Castells, [1999], 2002: 378-9). Castells (2002) cites others (Hayden, 1981; Sandercock and Forsyth, 1992) to reiterate that a feminist consciousness also argues for a new kind of urban design, in which personal safety issues are factored and the needs of women are addressed. However Castells (2002) posits the possibility that the city of women might then develop around networks of women and their children, increasingly distinct from rather isolated men. He then poses the question, "can the city of women be also the city of men? Or are we witnessing another fundamental crack in the social fabric of the city?" (2002: 379). Regardless of this argument, the current discrimination faced by women within cities and the international mobilisation to address this condition constitutes a driver of urban and social transformation. Roberts (1998) argues that debates about the nature of masculinity and femininity have not critiqued mainstream urban design thought beyond issues of safety and security, the gender biases implicit in the design of the built environment, and binary modes of spatial analysis. She likewise argues that further research is needed to elucidate the connections between cultural aspirations, gender relations and urban form (Roberts, 1998: 135). Such research would not only need to investigate binary male and female design relations to settlement pattern, home, work, culture and society, but also to consider the marginalised within society, in terms of urban form.

Nine. The projected impact of advanced technologies on cities reaffirms Dator's (1978: 324) "conviction that the truth of the relationship between humans and their technologies is found in McLuhan's dictum: "We shape our tools, and thereafter our tools shape us" [McLuhan, 1967]". This leads to the question of how might technology recursively shape social/organisational forms.

Informationalism is the impact of social/organisational restructuring caused by the 'informational mode of development'. Castells (1989) formulates three major organisational characteristics of informationalism: (1) growing concentration of knowledge-generation and decision-making processes in high-level organisations; (2) flexibility of the system and of the relationships among its units as a powerful facilitator of the restructuring process; and (3) the shift from centralised larger corporations to

decentralised networks made up of a plurality of sizes and forms of organisational units (Castells 1989 in Susser 2002: 279-281). If, as Castells argues, the city is the expression of society, it follows that it is also under pressure to these same organising conditions of informationalism. The future city will thus tend to concentrate knowledge-generation and decision-making processes within the context of increasing expectations for community participation. Flexible service delivery to its citizens within a restructuring global environment will be crucial, and mobilisation and empowerment of civil society through networks to decentralise action and agency will be an efficient means to achieve local urban improvements. Molitor (2003: 35) proposes that technological advances will decrease the demand for labour whilst provide for greater quality of life. As a result he argues that the 'Leisure, Hospitality, Entertainment and Recreation' industries will commence its dominance of global economics in 2015. The 'Life Sciences' sector he proposes will dominate by 2100.

Whilst some (Hall and Pfeiffer, 2000: 10-11) advocate that urban planners must be bold in trend analyses of technological advances and their application to solve current problems within cities, others urge caution and greater emphasis for ethical futures-orientated policy. Mayor and Binde (2001) point out that the world's responsibility to future generations requires a global agreement to curb the power of technology and economy by ethics and wisdom. They cite the example of UNESCO's *Declaration on the Human Genome*, which was adopted by the UN's General Assembly. This universal declaration applies to science and lays down ethical principles in the field of genomics that curbs the power that technology gives to humans over humans (Mayor and Binde, 2001: 471). Foresight into alternative urban futures should thus not be driven by technological progress alone, but by ethical visions of the future.

1.2.1.3 Visions

Visionary images of the future city are effective instruments of change, but whether that change makes the city more ecologically efficient, humane, equitable or even more beautiful is highly questionable. Visions of the city that have influenced urban development in the 20th century include: (1) *Garden/Social Cities* (Howard, [1898], 1902) that promoted the planning idea of the metropolitan, polycentric region; (2)

Contemporary/Radiant City (Le Corbusier, 1929) that simplistically emphasised urban monumentality; (3) *Broadacre City* (Wright, 1935) that unintentionally spurred urban decentralisation to the new frontier of Fishman's ([1987], 2000) 'technoburbs'; (4) *Ecological/Spiritual City (Biopolis)* (Geddes, 1915) that laid the foundations of the current unrealised vision of the *Eco-city* (Register, 1987); (5) *Cosmopolis (Intercultural City)* (Sandercock, 1998) to radicalise city planning to be more inclusive and diverse; and (6) *Ecumenopolis (Inevitable City)* (Doxiadis, 1974) that pre-empted the notion of Castells' (1996) *Global City* − one networked city across the face of planet Earth. A genealogy of city visions is discussed in Chapter Four to explore the interplay between these and other instruments of social change.

1.2.1.4   Multi-dimensional forces informing city futures

This sub-section, reframes the urban problem by positing the global forces of change (Table 1.1) across different dimensions of reality. The current research approach is significant because it seeks to shift the focus of the urban planning discourse from urban conditions to the way urban problems are seen using a multi-dimensional frame of reference. An example of the limitations inherent in the practice of urban futures work is found in Hall and Pfeiffer's *Urban Future 21, a global agenda for 21st century cities*.

Hall and Pfeiffer argue that the diversity of urban contexts and futures of the 21st century are reducible to three distinctive types of city, which "represent three typical constellations of demo-socio-economic evolution" (2000:138-9). These three city templates are: (1) the city coping with informal hypergrowth (e.g., Sub-Saharan Africa); (2) the city coping with dynamic growth (e.g., middle-income rapidly-developing world); and (3) the weakening mature city coping with ageing (e.g., advanced Western cities). Hall and Pfeiffer then generate six scenarios (two for each template) by applying a set of trends and drivers in a *business as usual* context and *bend the trends* context. Their method is based on an empirical, scenario-planning approach within the futures studies field, akin to forecasting based on drivers. From the preferred scenarios a vision of principles is articulated to guide cities towards creating better futures. The crux of this vision is based on sustainability and good governance (2000: 163). What is wrong with their method is that it 'locks' investigation of urban futures into three monological city

templates based on drivers. What is missing from Hall and Pfeiffer's process (which was conducted on behalf of the World Commission - Urban Future 21 for the Global

Table 1.1: Dialectic forces of the future of the City		
Urban Weights	Drivers of Urban Change	Visions of human Habitation
a) Urbanisation	1. Population growth, migrations and urbanisation	**Garden/Social Cities** (E. Howard, [1898] 1902) ↓ metropolitan polycentric region
b) Free Market Economics c) (Capitalism, globalisation, Westernisation)	2. Consumerism, overshoot and collapse (continued growth advocates)	
d) Urban Sprawl and car based infrastructure systems	3. Sustainability revolution to counter opposite and climate change (conserver advocates)	**Contemporary Radiant City** (Le Corbusier, 1929) ↓ urban monumentality
	4. Mobility demand	**Broadacre City** (F.L. Wright, 1935) ↓ technoburbs (edge cities)
e) Urban Apartheid, Social and cultural polarisation and the marginalised	5. Cultural Identity, Fabrication and Desertification (politics of difference versus cultural imperialism)	**Ecological City (Biopolis)** (P. Geddes, 1915) ↓ Green City – Eco City [not yet realised]
	6. Ageing Citizens and Cities	
f) Consumerism, overshoot and collapse (South versus North Hemisphere)	7. Local Governance, Agency and Community Participation – democratisation and community visioning/action planning	**Cosmopolis (multicultural city)** (Sandercock, 1998)
g) Schism between urban theory and practice (Cartesian worldview/reductionism versus ecological worldview and holism/synthesis)	8. Gender Equity 9. Technological Revolutions within and of the City (molecular economy of nano, bio/genomics and artificial intelligence)	**Ecumenopolis (inevitable city)** (Doxiadis, 1974) ↓ Global City (Castells, 1996)

Conference on the Urban Future, Urban 21) is the mapping of the urban weights and visions that also interact with the urban drivers to create different futures. To *bend the trends* effectively, the weights and visions also have to be re-engineered, but Hall and Pfeiffer do not address this. Likewise, the *Oregon Model* of community visioning used in the UP/DS field focuses on the drivers of change that shape the probable future; and the

aspirations that shape the preferred future, but does not conceptually consider the weights of change. In contrast, the the FS field recognises that the historical context is different for every city, and as such every city's system of weights, drivers and visions provide a unique field of potentiality that creates its future. Hall and Pfeiffer's analysis is also clearly dominated by the economic sphere, most likely due to the Western worldview that a prosperous economy holds the key to a bright future for cities and their citizens because of the 'trickle-down effect' (2000: 37-9). Trickle-down theory advocates economic development policies that allow corporations and wealthy individuals to optimise their profits as these will gradually benefit the economy and the living standards of lower-income individuals.

An overview of the global forces of change which influence the majority of the world's cities has been presented in the last three subsections, allowing the urban problem to be now reframed. The reframing involves positing the urban weights, drivers and visions within the multi-dimensional levels of reality (material, ecological, psychosocial and metaphysical) to conceptualise the focus of the discourse, and what may be missing from it. Such reframing reveals that the discourse of the dialectic forces forming alternative city futures is not holistic. Generally, the urban forces of change fall within the material, biological/ecological, and psychosocial relations of city form. The metaphysical or spiritual relations are largely neglected from the city planning agenda. Only in the realm of city visions do humans dare to dream of a city that achieves their spiritual fulfilment.

The urban weights tend to be posited mainly within the material and psychosocial relations of the city. This is logical, as weights are those relations difficult to change. Current physical settlement patterns (whether compact or sprawling), their free market economies with resultant consumerism, and their production of segregated space and growing social polarisation, are grounded in the way humans use and make the material world and how they view themselves within it. Urbanisation as a complex historical phenomenon affects the material production of space, the biological and ecological health of humans and the biosphere and the psychosocial wellbeing of citizens. However, the current discourse does not recognise that urbanisation has the potential to affect the development of human consciousness and spirituality.

The urban drivers are located more evenly across the material, biological and psychosocial relations of the city. Urbanisation as an unrelenting driver of change is fuelled by the hopes and expectations of migrants seeking a better quality of life. This hope is in contrast to the tensions that exist in cities, such as urban apartheid, cultural conflicts and poverty. Technological, sustainability and civic governance revolutions are seen as the three best means to create better city futures that meet their citizens' individual and collective expectations, as well as human survival. Likewise there is no significant debate about cities' role as a driver and loci for the metaphysical development of the human species. Such a strategy may reconcile the cultural dilemmas and conflicts faced by many cities.

The urban visions/utopias of the 20th century are more comprehensive in their coverage of the human levels of reality. However, only three visionary images of the city, the *Ecological City*, *Arcology* and *Cosmopolis*, argue for the importance of the spiritual dimension of the city. According to Patrick Geddes (in Welter, 2002), Lewis Mumford (1961), Paolo Soleri (1977, 1985), Christopher Alexander (2004) and Leonie Sandercock (1998, 2004), the city needs to have sacred places to nurture the human spirit. Soleri (1977) goes further, arguing that it is humanity's evolutionary destiny to reach its spiritual potential only within the city, designed as *Arcology*.

Urbanisation as a phenomenon affects all levels of reality, but the urban planning discourse focuses mainly on its impact on the material, biological and psychosocial dimensions of human habitation. Likewise the sustainability movement and agenda is a counter-revolutionary phenomenon seeking to transform the detrimental impacts of urbanisation at the same levels of reality. Whilst the drivers and weights of urban change receive attention both in terms of research and policy, the power of city visions in affecting policy and cultural change is not clearly understood. Using multi-dimensional frameworks, the current research intends to explore the relations between visions of the future city and their underlying social and technical systems, worldviews, and cultural paradigms, values and myths. Such analysis will explicate the dynamics of cultural change influencing the process of city making, which is the key contribution of this research.

The reframing of the urban problem clearly reveals that the way in which problems are conceptualised in terms of cities determines the solutions. It is a matter of perspective, ways of knowing and consciousness, yet the methods and tools to explore and understand the cultural and metaphysical dynamics of urban change require development within the urban planning/design field (Sandercock, 1998, 2004).

The goal of this thesis is to show that futures-orientated planning methods provide an opportunity to transform the way in which present cities and their associated issues are conceptualised. The process of envisioning the future thus allows liberation from the weight that binds mankind to the past or present, and a motivating force which can shape the drivers of change. However, the success of the implementation of such visions is reliant on concomitant cultural change at various discourse levels, including paradigms, worldviews and myths.

A multi-dimensional futures process that develops a line of inquiry between the levels of reality (material, ecological, psychosocial and metaphysical) is more likely to succeed when developing policy actions to improve cities and create preferred visions for the future. The critical uncertainties upon which the future of cities depends are threefold, governance, urban development industry practices and sustainable development. In conjuction, cities' futures relie on the effectiveness of city governance in managing the urbanisation processes of the global market economy in the midst of an ecological crisis or more positively, a sustainability revolution. These variables will be used in the thesis to generate city future scenarios.

1.2.2   Research purpose, objectives and questions

The first part of this chapter presented the research context and reframed the urban problem. The need to develop the application of futures-orientated methods within the urban planning/design field, in order to transform ways of knowing and seeing cities, was identified. The dominant urban development paradigm in both Western and non-Western cities is that of the sprawling polycentric metropolitan region. This paradigm is perceived

by the majority of urban theorists and practitioners to be unsustainable and dissonant with the needs and expectations of their growing communities (UN-HABITAT, 1996b; 2004).

The research purpose, objectives and questions will now be explicitly presented. The general purpose of this research is, through critical discursive analysis, to understand the culture of the Western city and its manifestation. In the context of a clear gap between urban theory and practice (Hall 1996; Castells 1999; Sandercock; 1998) this thesis asks how the Western city is fabricated as a cultural product within the world's multi-dimensional reality. In addition, how might the relationships between city visions and the systems of power (political, social movements, technological, economic) influence city making? Understanding this open-ended dialectic between levels of reality (from the *litany* of vision, *social systems*, *worldview/episteme* and *myth/metaphor*), and across the evolution of the city, will hopefully provide the means for effective city transformations. Effective action is particularly needed to challenge and transform the dominant Western urban development paradigm of growth and the planning epistemology that manages this growth. Affecting change in Western cities will influence how non-Western cities are built to accommodate their growing urban cultures; due to the phenomena of globalisation and the network society (Castells, 1996).

To facilitate transformation and sustainable development intervention is required at all levels of the city, from citizens' cultural paradigms to their ways of life and the resulting social system's products and processes. Currently, however, sustainable development is practised within a milieu of competing systemic frames of reference (worldviews), and this struggle is consuming this focus rather than achieving tangible outcomes within cities (Daffara, 2004b).

The FS field offers critical methods and tools to unpack the competing discourses about sustainable or dystopic city visions and the cultural dynamics underlying urban revolutions. The primary research objective proposes the glo-cal Western visions of human habitation and their defining cultural paradigms. This objective drives the methodological approach used throughout the thesis, and is overviewed in the second part of this chapter. The first question asks, 'what are the civilisational worldviews and cultural paradigms influencing glo-cal Western city visions?' In this context glo-cal refers to the conjunction of global and local perspectives (Figure 1.4). It assumes that in the

arena of human consciousness there are shared images of the future city, and by implication values, between global and local communities of interest. The research examines the power of glo-cal images of the future city when shaping the quality of Western cities.
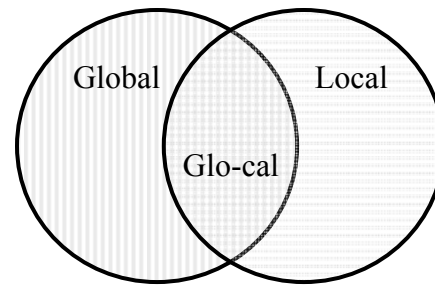
Figure 1.4: Glo-cal influence

Three further objectives arise from the primary research objective. These relate to applicable theoretical frameworks; the possibility of testing these frameworks; and how the synthesis of applicable frameworks may reconstruct the cultural meaning of the city. Linked to these objectives are specific questions. The research questions for the second objective are twofold. First, what alternative models of cultural change exist that may explain the dynamics of urban revolutions (particularly in regard to the relationship between the realisation of city visions and their defining cultural paradigms)? Second, do cultural change theories explain the recursive or cyclic emergence of city archetypes couched within historical city visions? The research question for the third objective asks whether it is possible to design research methods to quantitatively measure the effect of behavioural relationships between deeper worldviews and cultural paradigms on preferred visions of human habitation. The research question for the fourth objective investigates how the schism between urban planning theory and practice might be resolved, thereby innovating a holistic (multi-dimensional) teleology of the city and its cultural meaning.

To achieve the purpose and emergent objectives, this thesis combines frameworks from socio-cultural change studies (SCCS), urban planning/design studies (UP/DS) and futures studies (FS). This approach is consistent with the transformation from the Enlightenment's modernist planning paradigm to planning's epistemology and theory of multiplicity, as discussed in the next chapter.

1.3   Methodological overview

The present section describes the methodological approach of the current research using four interconnected themes: (1) the research process; (2) the scope and limits of the

research; (3) the 'positionality' of the researcher; and (4) the subsequent research assumptions.

1.3.1   Process

To answer the research questions, the research process is conducted in two inter-related phases (Figure 1.5). The first phase establishes the multi-dimensional city model to be applied, borrowing frameworks and methods from the three discourses, FS, UP/DS and SCCS. The second phase uses anticipatory action learning to explore the possibility of quantitatively testing the qualitative model and its propositions. The testing is undertaken in the form of participant surveys and workshops. For both phases the discourse analysis uses the city as the cultural unit (subject) of study.

Phase one focuses on theory and methodology and is presented in three chapters. First, the theoretical frameworks used to explore the relations between city visions and cultural paradigms are presented. Causal Layered Analysis (CLA) (Inayatullah, 2002a, 2004) structures the various frameworks across different disciplines and levels of reality to reorder maps authored by Wilber (2000a, 2000b); Sorokin ([1957], 1970); Thompson, Ellis, and Wildavsky, (1990); and Lynch ([1981], 1989). Second, normative theories of the city – mainly from 20th century planning discourse – are presented and compared to explore the construction of purpose and meaning for the city. This lays the foundation for considering whether the schism between urban planning theory and practice may be resolved and how a holistic purpose of the city and its cultural meaning might be constructed. Third, a genealogy of city visions from historic epistemological eras is assembled to examine which images of the city, their archetypes and cultural paradigms have dominated the construction of the city. This analysis investigates whether cultural change theories explain the recursive or cyclic emergence of city archetypes couched within historical city visions.

Phase two focuses on empirical, action learning and critical research and is presented in two chapters. First, future city scenarios are generated and their qualities are proposed, including their defining cultural paradigms based on Sorokin's (1970) framework and Thompson et al's (1990) social groups. The surveys act as a pre-test to examine whether research methods can be designed to quantitatively measure the behavioural impact of

deeper worldviews and cultural paradigms on preferred visions of human habitation. Local and global surveys are used to collect data about preferred visions for human habitation on the Earth in 2100 (city futures scenarios) and test whether it is possible to analyse relationships between them and cultural paradigms.

Second, a CLA of city futures unpacks the multi-dimensional dynamics across alternative city visions/scenarios and their deeper levels of reality. CLA when applied to the primary research question demonstrates that the FS field offers critical methods to the UP/DS field. These methods allow the competing discourses about sustainable or dystopic city visions and the cultural dynamics underlying urban change to be examined. Finally, a hypothesis for the construction of a holistic city purpose (teleology) and its cultural meaning for the 21st century is posited and directions for further research stated.

1 Research Framework: What are the civilisational worldviews and cultural paradigms influencing western city visions?

2 Methodology: Use CLA to structure research and reorder maps authored by Wilber, Sorokin, Habermas, Thompson, and Lynch. Formulate City Change Model (CCM)

3 Urban Theories – how ought a city be made? Reconstruct cultural meaning. Use planning epistemologies and levels of reality. Argument for an integral vision of the city, propose *integral* meta-framework

4 Genealogy of city visions across "historic" epistemological eras. Dialectical forces "Δ"for each era to reveal recursive images of the city

City Visions of:
Antiquity
Pre-modernity
Modernity
Post-modernity
Eclectic-hybrid →Trans

5 City scenario generation and reporting of local and global surveys. Test the CCM: relations between visions, qualities and cultural paradigms

Techno City;
Smart City;
Eco City;
Gaian City

6 CLA of sustainable city futures: Visions/scenarios, cultural paradigms; their archetypes and myths

7 Conclusion: Research objectives and outcomes. An *integral* city model and directions for further research

Phase One

Phase Two

Figure 1.5: Research Process

1.3.2   Scope and limitations of the research

The discourse about normative theories of the city has existed for more than two and a half millennia across place, civilisations and time. The scope of that discourse is enormous and so this research necessarily limits itself according to parameters. The parameters are fourfold, based on the following methodological approaches: (1) empirical/predictive, (2) interpretative, (3) critical and (4) anticipatory action learning (Inayatullah, 2002a: 7-8). This multi-fold approach is influenced by Slaughter's (1999:216-9) argument for critical futures methods, and Habermas' theory of cognitive interests (*Knowledge and Human Interests*, 1972: 309) that seek balanced consideration of technical (empirical), practical (interpretative) and emancipatory (critical and anticipatory action learning) interests.

Firstly, to capture the predictive dialectic forces of the future of the city, the review of the urban studies discourse followed that of an 'environmental scan' (Slaughter, 1999:256, 263). The review presented earlier in this chapter cited the works of others based on observable trends of the forces or phenomena of urban change. The assessment of dialectical forces thus enabled the urban problem to be defined.

Secondly, interpretation of the city's cultural meaning requires knowledge about models of cultural change, urban archetypes and utopian/dystopic city visions as concomitant reciprocities. An analysis of the city as the social and cultural unit, using fourteen diverse models of macrohistory (Daffara, 2004), reveals that macrohistory provides insights into the relationship between civilisations and their cities as cultural products. As a result of that earlier research Sorokin's macrohistory is applied in the current research, because it acknowledges a spiritual paradigm that reifies the quality of civilisations and cities. Chapter two explains in more detail why Sorokin's, Thompson et al's and Lynch's models are used to examine city change or revolutions. A multi-level city change framework is created using Sorokin's ([1957], 1970) super-rhythm of cultural paradigms, Thompson et al's (1990) social groups and ways of life, and Lynch's (1989) city archetypes. Meta-patterns were sought between the diverse cultural change models by using worldviews and myths/metaphors as cultural markers to interpret city visions.

Thirdly, the critical discursive analysis of urban planning's theoretical models, and their relations to urban visions and deeper cultural paradigms, is limited to those developed in the context of Western civilisations. The exception is one Indic planning theory and practice – Vāstu – which allows space for the 'Other' to challenge Enlightenment's epistemological dominance in the planning discourse (Sandercock, 2004). Vāstu Śāstras is added to the selection of theories to be assessed, as it is a part of the Hindu-Indic episteme that has influenced that civilisation's cities for over 26 centuries. It also provides an opportunity for urban futures to be colonised by an alternative worldview and cultural paradigm, instead of perpetuating the mistake of colonising the future with Western paradigms. The Western planning theories are themselves limited to those that emerged after, and as a consequence of the industrial revolution, from modernity to contemporary post-industrial society. Sandercock's (1998) critique of planning's official story, which argues that it is missing diverse histories, has serious implications for the selection of urban theories and city visions. The current research may well be vulnerable to the same critique. The genealogy of city visions presented in this thesis is predominately a representation of the history of white male visioning using the lens of gender-neutral social change theories. This research did not examine in detail the question of who was privileged in history by each city vision and how these visions excluded subaltern cultures. Consequently, the current research did not analyse using feminist, postcolonial, or queer theory how subaltern cultures contest the future of the city.

Fourthly, the extent of anticipatory action learning designed into the process is constrained by the limited range of the global city futures online survey. English and Spanish language speakers only are incorporated into this process (due to limited funds) and therefore the findings are likewise targeted at Western urban residents and stakeholders. Considering that the most significant urban challenge within the 21st century lies with developing nations, it is unfortunate that the survey was not more accessible to these regions. However, the global and local surveys are only a pre-test to examine the possibility of designing a method of analysing the CCM's proposed relationships between visions of human habitation and their defining cultural paradigms. As such the surveys will not empirically validate any correlations or cultural change propositions. Pre-tests in the Western world can thus be justified as they seek to refine the multi-level change model before conducting further surveys in developing regions of the world, and (later)

applying change interventions based on their findings. Another limiting factor of the current research is that the local habitat futures survey is conducted within Maroochy Shire and the Sunshine Coast region[4], a part of Australia experiencing the 'Seachange effect' (Salt, 2003). This effect is essentially rapid development due to high interstate urban migration to the coastal Sunbelt and its lifestyle.

1.3.3   'Positionality' of researcher and multiple perspectives of reality

> Harvey and other postmodernist critics argue that not only do different groups disagree with each other [about city theory and practice]; each group's arguments are based on their own worldview. They are engaged in their own "discourse", and it is a goal of postmodernist critical theory to understand these multiple "discourses" (LeGates and Stout, 2000: 200).

Harvey ([1992], 2000b: 200) points out that, "the question of 'positionality' is fundamental to all debates about how to create infrastructures and urban environments for living and working in the 21st century". Positionality defined by Harvey is, "how we now might think about urban problems and how by virtue of such thinking we can better position ourselves with respect to solutions" (200).

Understanding the positionality of the stakeholders of the city, and how they think about its problems before designing solutions, aligns with the view of theorists and practitioners in the FS field (Slaughter, 1997:11; Inayatullah, 2002). Inayatullah states that there are different levels of reality and ways of knowing amongst stakeholders responsible for creating transformation (2002a: 14, 30-33) and from a futures-orientated policy perspective, it is crucial to explore the ideological, civilisational and epistemological layers that guide people's actions. For Inayatullah, "causal layered analysis is based on the assumption that the way in which one frames a problem changes the policy solution and the actors responsible for creating transformation" (2002a: 30). The application of CLA (Inayatullah, 2002) within urban research is made all the more pertinent and

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[4] The locale is where the author lives, works and plays. The research was also sponsored by Maroochy Shire Council, a registered City for Climate Protection with the International Council for Local Environmental Initiatives (ICLEI) in Australia.

worthwhile by Harvey's argument that different discourses and their positionality need to be deconstructed and understood before solutions are synergised.

Whilst undertaking this research, an awareness of the author's own positionality is important to make transparent personal biases. This positionality is characterised by the following four beliefs. Firstly, respect for multiplicity of perspectives and worldviews. The cultural study of how cities change is an intellectual and pragmatic exercise involving both the subject of study (the city) and its object, the location of political criticism and action to create better urban futures. This research, as a result, is not value-free scholarship, but committed to social reconstruction of the city by critical political and stakeholder involvement. Its object is similar to Sandercock's (1998) argument for an epistemology of multiplicity for radical planning practice. Secondly, cities are the major producers of entropy (disorder and pollution) on the planet and threaten its ecological viability. This is the major urban problem that challenges human and interspecies survival (Donella & Dennis Meadows, 1974, 1992; Spirn, 1984; Clark, 1996; Hamm and Muttagi, 1998; AtKisson, 1999). As such, sustainability must take primacy in urban futures. Without a living planet, human civilisation has no home within cities.

Thirdly, the author's own preference for Gaia theory necessarily influences this research. As postulated by Lovelock (1979), this new paradigm of life on Earth considers the whole planet as a living organism, as a self regulating (cybernetic) system, maintaining conditions favourable to the existence of life on Earth. Jones (in Galtung and Inayatullah, 1997:157-8) argues that failure to recognise and act on Gaia theory may jeopardise humanity's future as a global civilisation. Jones' warning echoes that given by the sustainability movement. A fourth belief affecting positionality is emergent from the author's disciplinary training as an architect, with its accompanying preference for synthesis and the interplay of synergies. The result is an aversion to reductionist rationalism as the sole means to explicate the nature of the city within consciousness and the cosmos. Another consequence is the author's critical tendency to search beneath the official discourse or litany (Inayatullah, 2004) about urban problems and their policy responses, for the grand patterns of cultural change and linking these to local community. A key underlying belief is that citizens have agency in making their city, not only through action in the outer world, but also by changing their awareness of the worldviews and paradigms they individually and collectively hold in their inner realm.

1.3.4   Research assumptions

When considering the research objectives and questions, and postulating a multi-dimensional teleology of the city, the following four assumptions are explicitly stated and accepted as part of the urban condition.

Firstly, the inquiry is conducted in the philosophical perspective of Critical Realism, that the real is not only what can be observed through the senses in the outer world, but what cannot be seen in the inner world (Keat and Urry, 1982). The implication for the city is that it incorporates both what can be empirically observed at the systems level of reality and unobservable worldviews, values and urban myths/utopias that impact on citizen behaviour and community action. As previously discussed, one research objective is to identify whether deeper levels of reality motivate the visions of the future of the city.

Secondly, the present inquiry assumes the post-structural position with some middle ground, based on the belief that words point not to some concrete external reality but merely to other words that individuals use to construct social reality (Giddens, 1987). People actively engage in creating the social and urban reality in which they live by the words they invent and use to construct ideas about the city. Through this dialectic, urban citizens both shape their urban environment and are shaped by it. This aligns with Giddens' (1984) earlier work in developing his theory of *structuration*. Habermas (1981) developed a similar dualism of society between the concepts of 'lifeworld' and 'structural systems' without reducing one to the other. Lifeworld as explained by Elliot comprises "those public and private domains in which meaning and value reside, of deeply layered communicative interactions between subjects" (Elliot, 1999:15). The city's cultural meaning and purpose is thus embedded within its lifeworld, that is, how people interact within it as agents of change. There is a parallel here to Dewey's philosophy of 'pragmatism', knowledge gained via reflective social learning through social experimentation (action) aimed at making a difference in the world (Friedmann, 1987 in Sandercock, 1998: 60, 82). Friedmann (1987) demonstrates that Dewey's pragmatism, as an epistemology of practice, developed a strong following in the urban planning discourse. The implication for the present research is that citizens can make alternative city futures.

Thirdly, the influence of scientific paradigms (Kuhn, Thomas S. 1970) within scientific and social revolutions is both accepted and relevant to the changing nature of the city (Capra, 1983, 1987, 1996; Castells [1989], 2002: 261; Sardar, 1997; Sandercock, 1998). Urban planning/design theory and practice is influenced and shaped by broader orders of knowledge (paradigms) within the culture in which it is undertaken. A parallel here is Foucault's (1975) explication of how particular discourses create endogenous definitions of truth and power relations that maintain that discourse's legitimacy and existence. The relevance of this assumption to the current research is whether the thematic revolutions that have occurred in the UP/DS field this last century relate to cultural paradigm shifts, and images of the city.

Fourthly, much of the urban theory discourse from the 1970s onwards is based on or influenced by the Marxist perspective of historical events (Hall, 1996:5). This approach argues that the technological (means of production) and economic (modes of production) motor drives the socio-political system and social consciousness. Hall observes that in some cases of urban revolution the "conventional urban-political analysis, especially of the Marxist kind, does not help [to explain it]" (Hall, 1997:267). This thesis assumes Hall's position to be valid. As a result the Marxist perspective is not rejected, but rather the current research seeks alternative models of cultural change that may explain urban revolutions as motivated by city visions. As stated previously, this thesis is more closely allied with the contemporary radical planning model – that has roots in the Marxian notion of dialectic materialism – which aims to transform internal social contradictions and inequalities through the empowerment of the disempowered. Underpinning this position is the same assumption, namely that alternative futures of the city can be made by citizens.

1.4   Chapter outline

In this first chapter the research context was described by identifying the glo-cal dialectic forces and phenomena of urban change that affect city futures. The urban problem was reframed through different levels of reality. Whilst the forces of urban change categorised by the current research as urban drivers and weights are receiving research and policy attention, the urban problem that remains, is that the power of city visions in affecting policy and cultural change is not clearly understood. The purpose of the current research

was clarified, to understand the culture of the Western city and its manifestation. In response the research purpose, objectives and questions were outlined to clarify the need to explore the relations between visions of the future city and their underlying social and technical systems, worldviews, and cultural paradigms, values and myths. In summary these research objectives and related questions are:

1. to propose a theory explaining the relationships between glo-cal Western visions of human habitation and their defining cultural paradigms.

2. to propose a methodology of applicable theoretical frameworks to investigate the first question. Specifically, research question two(a) asks, what alternative models of cultural change exist that may explain the dynamics of urban revolutions? Research question two(b) asks, do cultural change theories explain the recursive or cyclic emergence of city archetypes couched within historical city visions?

3. to explore the possibility of empirically and critically testing these frameworks. Research question three asks, is it possible to design research methods to quantitatively measure the effect of behavioural relationships between deeper worldviews and cultural paradigms on preferred visions of human habitation.

4. to propose how the synthesis of applicable frameworks may reconstruct the cultural meaning of the city. Research question four considers, how the schism between urban planning theory and practice might be resolved, thereby conceptualising a holistic (multi-dimensional) teleology of the city and its cultural meaning.

The research objectives in turn informed the research process, its scope and assumptions. The explanation of the city futures dialectic also revealed the critical uncertainties for the urban future that will be later used to generate five city futures scenarios. The scenario logic used to generate these five local/global scenarios analyses the interacting variables of *Government Policy* in relationship with the *Urban Development Industry*. This relationship was driven by a third major variable or critical uncertainty, being the level of social adoption of *Sustainability* and sustainable technologies/practices within the society.

Chapter Two aims to examine alternative cultural change models that may be used to explore city futures and their archetypal images (research objective two(a)). It therefore maps and describes in more detail the futures studies methods applied in the research and discusses the relationships between the theoretical frameworks and models of Wilber, Sorokin, Thompson et al and Lynch. It reiterates the current approach that cities are the

cultural products of civilisation and addresses Harvey's [1992] appeal for further work to be done in continually confronting world systems in, "the struggle to create liveable cities and workable environments for the 21st Century" (Harvey, 2000b: 206). In response, a multi-level cultural/social change model is developed for application in subsequent chapters. The process identifies ideal or abstract social groups and their ways of life, worldviews (cultural paradigms), and myths responsible for the fabrication of the city and images of its future. These social groups can be viewed as major actors of urban change.

Chapter Three aims to explore the possibility of formulating a multi-dimensional teleology of the city, resolving the urban theory-practice schism (research objective four). It simultaneously reviews contemporary and 20th century city models in terms of their degree of holism, thus revealing gaps in the dialogue about the city's purpose. Clues also emerge regarding the construction of cultural meaning for the city, which relates back to the power of city visions within urban revolutions.

Chapter Four aims to address research objective two(b), to understand whether the proposed cultural change model explains the recursive or cyclic emergence of city archetypes couched within specific (historic) city visions or urban planning agendas. Firstly, recurring city visions and archetypes are identified in Western history through a genealogy of these ideas revealing their confrontations, rise and fall. This chapter speculates that these city visions emerge and re-emerge synchronously with the dominant cultural paradigms of human consciousness. These quasi-scientific urban revolutions are also the products of culture, and thus the aim of this section is to relate these with underlying cultural paradigms and archetypal city metaphors.

Chapter Five aims to design research methods which quantitatively measure the behavioural relationships between deeper worldviews, cultural paradigms and preferred visions of human habitation (research objective three). Firstly, five scenarios for the future city are generated for use within different forms of survey pre-testing, namely self-completion, workshop and phone interviews. These rudimentary surveys examined whether it was possible to analyse relations between images of the future city and worldviews/cultural paradigms. Some workshop methods also explored the concept that the city has agency in creating alternatives to the probable future, through intervention at

all levels of reality. The local and global survey results are discussed in order to provide evidence for theories of relations between city visions and cultural paradigms.

Chapter Six aims to answer the primary research question by synthesising the preceding arguments to unpack city futures' multi-dimensional reality. This section uses CLA to achieve this goal. CLA probes the different stakeholders' frames of reference (litany, social systems, worldviews and myth/metaphor) seeking causal linkages, contradictions and dialectic resolutions. By referring to the research's CCM, the CLA establishes a hypothesis for the cultural paradigms responsible for the replication and reproducibility of the identified urban visions (aspirations) for human habitation. The CLA abstracts 'ideal' (as opposed to 'real') city visions/archetypes for each dominant group of agency and its driving value system. Further, it locates the urban contradictions that exist in the achievement of sustainability at each level of urban reality. Chapter Six demonstrates that these 'sustainability' contradictions within each level of reality are interrelated, and discusses how these are resolved create alternative urban futures. Based on the CLA's trans-layer findings, a multi-dimensional framework for a 21st century city policy agenda is proposed.

Chapter Seven summarises the main hypothesis generated by this research for a cultural change model for the city. It explains the cultural paradigms responsible for the replication and reproducibility of the archetypal urban visions (aspirations) for human habitation. The current research argues that the five identifiable future scenarios for the city are: (1) the possible future, the Spiritual or *Gaian City*; (2) the probable future, *Collapse Scenario*; (3) and (4) the bipolar plausible futures of the *Techno City* versus *Smart City*; and (5) the preferred future, *Eco City*. Further, the thesis proposes that Egalitarians and Hermits enable the Spiritual/*Gaian City*. Fatalists and Individualists enable the *Collapse Scenario*. Individualists enable the *Techno City*. Hierarchists and Egalitarians enable the *Smart City*. Finally, Hierarchists in partnership with Egalitarians and Individualists enable the *Eco City*. Next, the teleology of the city is proposed. The city's purpose is defined as the multi-dimensional habitat (*physis*, *bios*, *nous* and *theos*) for human and non-human exchange that allows civilisation to realise its potential. It is conceived as a holon within the cosmos. The implications of this proposal are discussed and directions for further research are suggested.

2 Methodology – dialogue on mental maps
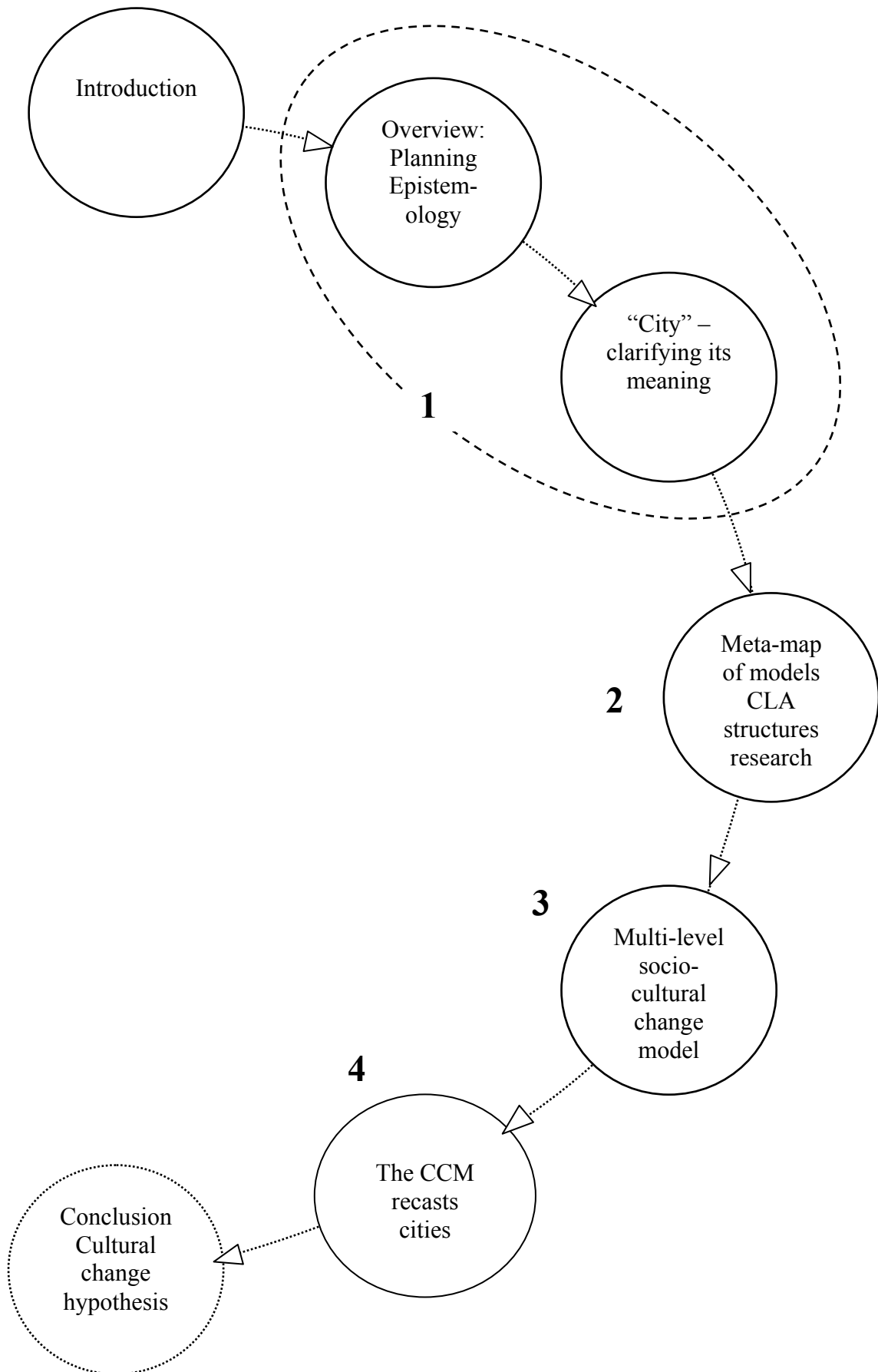
Figure (2.1): Chapter Two Roadmap

2.1   Introduction

Chapter Two has two main aims. The first is to discuss and establish the use of mental maps for the body of the research. An overview of planning theory and epistemology is provided, in order to demonstrate Chapter One's claim that the research is posited within the radical planning epistemology. Within these paradigms of planning knowledge the concept of the city is clarified as being a multi-dimensional manifestation of civilisation. The second aim is to address research objective two(a), to examine alternative cultural change models that may be used to explore city futures and their archetypal images. CLA structures the research such that it generates a multi-dimensional map of maps (meta-map) from the fields of FS, SCCS and UP/DS. After this methodological meta-map is presented, the current chapter describes in more detail the futures studies methods applied in the research and discusses the relationships between the theoretical frameworks and models of Wilber; Sorokin; Thompson, Ellis and Wildavsky; and Lynch. Emergent from the proposal that cities are the multi-dimensional products of civilisation, a multi-level cultural/social change model focussed on city development is generated, for application in subsequent chapters. The intent of the model is to examine whether cultural change theories explain the cyclic emergence of city archetypes couched within historical city visions.

The compatibility of Sorokin's *Super-rhythm of cultural paradigms* with Thompson, Ellis and Wildavsky's *Socio-cultural viability theory,* and Lynch's *Archetypes* is demonstrated by representing historic examples of Lynch's city archetypes using cultural paradigms to explain their manifestation. The resulting speculations are centred on the ideal or abstract social groups, their ways of life and worldviews (cultural paradigms) responsible for the fabrication of the city. These social groups may be seen as major actors of urban change.

In a final section, Chapter Two establishes a hypothesis about what cultural paradigms are responsible for the replication and reproducibility of the cultural metaphors of ideal city form.

2.2   Overview of planning theory

A brief overview of planning theory now presented in order to provide context for Chapter One's claim that a contributing factor of the urban problem is that the way in which problems are conceptualised in cities determines their solutions. Perspective, ways of knowing and consciousness form paradigms within the urban planning discourse that affect praxis. Moreover, the reification of different paradigms between theoretical and practical discourses widens the schism between urban theory/epistemology and planning practice. This overview also seeks to demonstrate Chapter one's claim that the research is posited within the radical planning epistemology.

Sandercock (1998) argues that the official history of planning theory is typically a history of the planning profession as the subject of research and its objective is to describe its emergence. As a result this history is a textual reconstruction of the past rather than direct reflection of it. This has two significant consequences. "One is the absence of diversity in these texts. The other is the absence of any critical/theoretical perspective. These sins of omission are the *noir* side of planning" (Sandercock, 1998: 37). She explains that the role of women, minority groups, and gays/lesbians as social actors in the shaping of the definition and object of planning; are missing from the official discourse on urban planning history during the height of the modernist project (or Enlightenment epistemology). The latter point is demonstrated by contrasting the planning histories of Hall ([1988], 1996) and Scott (1969) with Birch (1983) and Sandercock (1998). Whilst Hall reconstructs a historiography based on resurgent themes through the visions, ideas and works of mainly experts, Scott presents a seamless narrative – an abstracted evolutionary continuum of planning's heroic struggle in city-building. In contrast, Birch represents urban planning's historiography through feminist planning eyes, whilst Sandercock examines the role of diverse perspectives of insurgent planning in broadening the definition and object of planning towards one of multiplicity.

An overview of planning's knowledge or epistemology, according to Sandercock (1998), begins with the Enlightenment epistemology that underpins the heroic model of modernist planning. "The five pillars of this heroic model … [are] rationality; comprehensiveness;

scientific method; faith in state-directed futures; and faith in planners' ability to know what is good for people generally, 'the public interest'" (Sandercock, 1998: 62). Enlightenment epistemology continues to inform the rational comprehensive model of urban planning, but its influence peaked during the post-WWII baby boom and that period's phase of suburbanisation. The metaphor for the planner in this model is the *hero servant to power*.

Critiques of this model are explained through the works of Friedmann (1973), Scön (1983) and Forester (1989), each of which influenced the emergence of different planning models. Friedmann's argument for 'Mutual Learning' seeks to reconcile the perceived polarity between experts and client-actors and their respective knowledge. His *transactive style of planning* places an emphasis on interpersonal relationships and skills to bridge the science-based professional knowledge of the planner with the experiential knowledge of the client-actors (e.g., a community) in a process of mutual learning. Scön's argument for the 'Reflective Practitioner' stems from another perceived crisis within the Enlightenment epistemology, namely that it focuses on technical rationality and is blind to practical competence or wisdom. According to Scön (1983), this crisis is exposed by the different knowledge and work required for problem-solving versus problem setting. Whilst problem-solving relies heavily on technical rationality, "before a problem can be solved it has to be defined" (in Sandercock 1998: 63). Problem setting is the task of defining the decision that has to be made, the ends to be achieved and the appropriate means, and as such requires reflection in action. The reflective planner participates in larger societal conversations when problem settings (as descriptions of reality) are themselves socially constructed. Forester's argument for 'Talking and Listening' within planning is drawn from Habermas' work on a *Theory of Communicative Action* (1984). Forester concludes that planning is an interactive, communicative activity reliant on a paradigm that acknowledges three different ways of knowing: (1) self reflection; (2) emancipatory knowledge through discourse and dialectic; and (3) praxis (experience and practical know-how through action).

Further critiques of the Enlightenment epistemology and its modernist planning model are provided by feminist, post-modern and post-colonial critiques (e.g., Belenky *et al.*, 1986; Foucault, 1975; Yeatman, 1994). Feminist critiques challenged the way modernist planning of cities embodied new forms of social control directed at women and the

cultural reassertion of sexual difference and the dominate male/subordinate female relations between them. Metaphorically, the female body "became synonymous with that which disorders, threatens, undoes the work of Man, the work of Reason, the idea of the Plan" (Sandercock, 1998: 48). According to Sandercock (1998), city planning during the 19th century was, symbolically, a process of the male disciplining of cities' social disorders (e.g., prostitution on the streets).

Post-modern critiques challenge the very idea of a coherent theory of the city, as revealed through rationality and its unitary definition of truth. Postmodernism rejects an absolute truth explaining the nature of the city and how it ought to be planned. Rather, there are many definitions of truth, each framed by a particular discourse. Foucault's (1975) deconstruction of modern power relations built into everyday life practices – the modern techniques of social domination/discipline/normalisation – depicts the agents of this power as being the professionals and citizens of society themselves. The panoptic schema, Foucault (1997b) argues, is an organising, polyvalent, disciplinary principle of Western society. It amplifies the power relations between the observed and the observer through surveillance to economically improve any social function. For Foucault (1997a-c), spatial form is fundamental (in a reciprocal sense) as a means to express or exercise the power relations of a regime (or indeed a city). As part of the power regime, urban planning carries within it (through knowledge and language) the techniques for controlling others within society. Foucault's (1997a) concept (and principles) of *heterotopia* propose that other localised spaces (real unreal places – e.g., cemeteries, museums, libraries, resorts) contest the spaces in which humans live. That is, they reveal and synchronously challenge the way cities as socio-spatial constructs express societies' and cultures' deeper collective dreams.

Post-colonial critiques of Enlightenment epistemology contest its superiority and question the role of "Western thought… as a coloniser of other cultures and sought to impose its own rationality and language" (Sandercock, 1998: 74). As a result, the 'Other' – all those placed in a client relationship to expert professional authority by Enlightenment epistemology's privileging of scientific hegemony – are disrupting power relations by insisting on their own voice and status as subjects. As a result, a notion of a politics of difference and multiple publics has emerged. Post-colonial critiques of modernist planning challenge the Western dominance of urban social science, spatial concepts, and

technology to offer and defend different ways of knowing (new and pre-modern), design and construction of cities.

In light of the various critiques (that since the mid-1960s continue to challenge the modernist-planning paradigm) alternative planning models have emerged. The first alternative planning model is Davidoff's (1965) *Advocacy Planning* model in which urban planners (Hall, 1996: 333): (1) intervene in a variety of ways, in a variety of groups; (2) value diversity; (3) help to inform the public of alternatives; (4) force public planning agencies to compete for support; (5) help critics to generate plans that were superior to official ones; and (6) compel consideration of underlying values. The metaphor for the planner in this model is as the *expert facilitator for the disadvantaged*.

During the 1970s the work of neo-Marxist urban scholars developed a second alternative model, the *Radical Political Economy Model* of planning. Harvey and Castells were the main advocates working within this perspective. Both Harvey's ([1973], 1988) and Castells' (1972, 1996, 2000) urban theories are examined in greater detail in Chapter Three. For now, the neo-Marxist narrative can be described as conceptualising planning as a servant of the capitalist state, rather than a progressive practice. Further, neo-Marxist analysis has deconstructed the idea that planning operates for the 'public interest'. In contrast, this approach argues that it operates for class interests by making clear who gains and loses in the capitalist city through the planning process. However, Sandercock (1998) states that this focus on class interest is a weakness, as other forms of oppression based on gender, race, ethnicity and sexual preference are ignored or subsumed. The metaphor for the planner in this model is the *naïve fool servant of capital*. Whilst Sandercock argues that the *Radical Political Economy Model* did not inspire a new generation of planners because of, "its inability to provide an alternative definition for planning, and for what planners do" (1998: 92), Hall (1996: 340) claims that neo-Marxist theory alienated the planning practitioners from academia and widened the schism between theory and practice.

During the 1970s the *Advocacy Planning Model* continued to inspire new generations of planners and developed into three related planning approaches: (1) the *Equity Planning Model*; (2) the *Social Learning and Communicative Action Model*; and (3) the 1990s' *Radical Planning Model*. In the *Equity Planning Model*, as described by Krumholz and

Forester (1990), the planner is still the key expert actor in the modernist planning sense. However, the planner chooses to support a progressive regime. They are not naïve servants of capital in the Marxist sense, but choose the politicians they want to work for to benefit the marginalised and so act as *expert equaliser*. However, the marginalised are still absent from the planning action. In the *Social Learning and Communicative Action Model* (inspired by Friedmann's (1973) articulation of a *transactive style of planning*), the planner is no longer the key expert actor. Metaphorically, the planner is rather a *learning partner* and *critical listener* willing to include local citizens and their experiential knowledge in the planning process. Planning is more about ethical commitment and equity enabled by the Habermasian concept of communicative action, rather than the modernist-planning's professional expertise and efficiency (Forester, 1989). The *Radical Planning Model*, Sandercock argues, is "linked into multiple critical discourses about social transformation" (1998: 97). The planner is now a social activist, working for structural transformation of systemic inequalities, such as unequal distributions of power, opportunity and resources (Sandercock, 1998: 97). Whilst maintaining a 'critical distance' as mediators (Friedmann, 1987), radical planners are community allies, helping people to clarify their goals and enabling them to achieve collective empowerment and self-determination.

Because of the post-modern, feminist and post-colonial critiques, Sandercock (1998) argues for a transformation towards an epistemology of multiplicity for planning practice:

> If we accept what is common to all of the above critiques – that all knowledge is embodied, historically situated, shaped by language, and embedded in power relations, institutionalised or not – then the very idea of the expert planner able to arrive at an understanding of the 'public interest' through rational deliberation will have to be revised in favour of a notion of planning for multiple publics, based on an epistemology of multiplicity…Such an epistemology of multiplicity for planning would consist of at least six different ways of knowing:…knowing through dialogue; from experience; through gaining local knowledge of the specific and concrete; through learning to read symbolic, non-verbal evidence; through contemplation; and through action planning (Sandercock, 1998: 74, 75).

She argues that all six planning paradigms are active within contemporary urban planning practice, "and that adhering to one rather than another involves a political choice rather

than scientific verification" (Sandercock, 1998: 103). She also suggests that because of the diversity of models, "what planning is and what planners do and know…there can never be the *one* true all-embracing planning theory" (103). However, she claims that the *radical planning model* is the only one capable of accommodating the multicultural implications of the postmodern world and it seeks social transformation beyond modernisation through theory and practice.

The aim of the previous overview of planning theory and practice is to emphasise the important dialectic of both in effecting change in the real urbanising world. Since there is a gap between contemporary urban planning theory and practice (Hall, 1996: 340-1) any conscious efforts to transform cities are fragmented from the start. Not only does this schism exist within the UP/DS field between academia and practitioners, but also in terms of the broader social purpose and cultural meaning of the city. This is due in part to modernity's reductionism and particularism in urban research. For example, urban sociology developed tools and methods particular to that field's focus of inquiry, which differed from the methods of the architectural/urban design school of inquiry. In addition, both the question and the answer regarding the purpose of the city within the post-modern world differ between different schools of thought. The subsequent diversity of discourse in itself is only natural, but the urban practitioner perceives this academic discourse as 'noise' in the face of real urban challenges and dilemmas.

> […] of the huge output of books and papers from the planning schools in the 1980's, there were many – often, those most highly regarded within the academic community – that were simply irrelevant, even completely incomprehensible, to the average practitioner (Hall, 1996: 340).

Castells (1999) is hopeful that a new 'integrative' breakthrough in urban studies will transcend multi-disciplinary approaches, within a cross-cultural, comparative framework, to reconcile the schism between urban research and people's well-being in cities:

> So doing, we may be on the way to understanding how cities and nature can be preserved, and their quality enhanced, in the Information Age. Considering that we are entering a predominately urban world, this accomplishment would be no small feat. It would constitute a meaningful connection between scholarly research and people's well-being in the frontiers of the mind in the twenty-first century. […] It must also abandon futile

exercises of deconstruction and reconstruction enclosed in the verbal games of most postmodernist theorizing, […] and [develop new conceptual tools to] understand the new relationships between space and society (Castells, [1999, 2000] 2002: 386, 404).

The reconciliation of this schism with a holistic comparative framework is one of the current research's objectives and will be further explored in Chapter Three.

In the context of planning epistemologies, the research aligns with the *radical planning model* and aims to develop a comparative framework in order to understand the cultural dynamics between Western images of future cities (future space) and society's paradigms. Next, the concept of 'city' is clarified, before examining in more detail the disciplines, their frameworks and methods used in developing the cultural change model.

2.2.1   The 'City' – clarifications

…cities–those "workshops of civilization"–are founded upon the exploitation of the many by the few. An urbanism founded upon exploitation is a legacy of history. A genuinely humanising urbanism has yet to be brought into being. It remains for revolutionary theory to chart the path from an urbanism based on exploitation to an urbanism appropriate for the human species. And it remains for revolutionary practice to accomplish such a transformation (Harvey, [1973] 1988:314).

The question of how cities are produced and transform is as old as the existence of cities in human history (Hall, 1998). The term 'cities' requires clarification before proceeding. The term 'cities' as used here is not limited to only spatial form, but is extended to holistically integrate the other biological, socio-psychological and spiritual dimensions above the simply material. In response to Sandercock's (2004) call for multiple ways of knowing to be fostered within urban planning, Wilber's (2000a-b) *integral* model is applied, to define cities as multi-dimensional holons or 'gestalts'[5] (organic, irreducible wholes) perceived as a system of spatial (physis), ecological (bios), cultural and technico-

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[5] See Fritjof Capra, The Web Of Life: A New Synthesis of Mind and Matter, HarperCollins, 1996, 31-32. *Gestalt* is the German word for organic form, as distinct from *form*, which denotes inanimate form. Capra outlines that "Gestalt psychologists, led by Max Wetheimer and Wolfgang Kohler, saw the existence of irreducible wholes as a key aspect of perception. Living organisms, they asserted, do not perceive things in terms of isolated elements but as integrated perceptual patterns – meaningful organised wholes, which exhibit qualities that are absent in their parts".

economic (nous), and spiritual (theos) forms. This conception of the city is not the norm, as evident from Chapter Three's review of research literature on the subject.

The term 'urban' also has a long and tortuous history and ideology (as demonstrated by Castells, [1972], 1977). Like Castells, the current use of the concept 'urban' rejects the previous ideological dichotomy of 'traditional society versus modern society' and is used to signify the phenomenon of a new social system's (as per the gestalt concept of city) occupation of space by its population, but one that is not separate from the rural one. This approach aims to avoid past complexities encountered by sociological definitions and their functionalist determinisms and their empirical limits/units of urban forms. In other words this thesis rejects the determination of social content and behaviour by urban (spatial) form (which is a structuralist hypothesis), and the theoretical definition of the size and density of spatial units that can be regarded as urban (Castells, [1972], 2002: 22, 48).

The imperative for post structural discourse about future cities and civilisation in this research is informed by Inayatullah's (2002a, 2004) CLA as a critical method, Slaughter's argument for *integral* (holistic) futures thinking as a catalyst for civilisational change (1999, 2001, 2006, based on Wilber's (2000b) critique of modernity and proposal to integrate holons of reality across discourses), and Sardar's (1996, 1999) argument to decolonise the future from modernist-Western classifications of knowledge and include 'the other' in a multicultural future. Civilisation is defined here as the process of intellectual, spiritual, technological, social, cultural and ecological evolution or development. It is not inferring, in a colonial sense, an advanced state of development that is better or more valid than another (e.g., Western civilisation over indigenous fourth-world cultures). Planetary civilisation is the same process, being promoted and facilitated for the benefit of the global community of diverse cultures and ecology. The process of civilisation is able to realise its potential when it is promoted to achieve universal human virtues such as justice, equity, dignity, peace, freedom and love (Universal Declaration of Human Rights, UN, 1948). This thesis submits that the city has a role to play in this social transformation.

Buckminster-Fuller (1969), considered to be one of the first planetists, provides a warning against rampant resource consumption, warfare and reductionist thinking and argues for

synergistic thinking and strategies for planetary civilisation. More recently others have followed in his footsteps, as demonstrated by works such as Hawken et al's "Natural Capitalism: the next industrial revolution" (1999) or McDonough et al's "Cradle to cradle: remaking the way we make things" (2002). Mayor and Binde (2001) in "The World Ahead - our future in the making" cite Mendes (1995), "Human Habitat is political as its intrinsic biodiversity is related to human values and lifestyles. This means that strategies have to be adopted that defend cultural pluralism, preservation of ecology and democracy". Mayor and Binde (2001) expand on Mendes' conclusion by arguing that a new concept of development of the city must be invented to deal with all the urban problems in their complexity. Such a conceptualisation must combine:

- Sustainable development - the city is a living environment interacting with the natural meeting the needs of the present without compromising the ability of future generations to meet their own needs;

- Human development – the city broadens the range of possibilities to each person with dignity and provides a quality urban life; and

- Social development – the city is a framework for the construction of citizenship, society and civility.

Such an approach supports the argument that cities have agency in the transformation towards planetary civilisation, as opposed to hegemonic globalisation. However, there are limits in the recursive change dynamic between civilisation and cities. These limits emerge out of the determinism debate. For example, it is outside the scope of this thesis to explore the environmental design/behavioural science deterministic theory that the urban design of the city effects human and social behaviour. Indeed, some researchers such as Graham and Marvin (1996) reject the myths of determinism, both technological and social, as well as their linear causal relationships. However, the premise that the city is the physical manifestation or expression of culture and social exchange is clearly established by the work of other researchers of the city. The work of Childe (1950) on the emergence of the first cities with the concurrent rise of social capital and surplus has laid the foundation for later urban sociologists. One of these is Harvey (1988: 310), who proposes that, "it is probable that our culture, conceived as an ethnic domain, emanates from created space more than it succeeds in creating space".

Furthermore, the deterministic theory of spatial environmental design/behavioural science, though unsubstantiated (Gans, 1969; Jacobs 1961; and Webber 1963; in Harvey, 1988: 44), does provide enough evidence to establish that the meta-architecture or spatial design of the city influences human and social behaviour and wellbeing (Sommer, 1969 in Harvey, 1988: 45). For example, healthy cities tend to equate to healthy people and a healthy economy (Tegart and Jewell, 2001). This is an example of Gidden's (1984) theory of structuration in action – a duality of 'structure' and 'system' – in which urban citizens both shape their urban environment (being a structural property) and are shaped by it (changing social practices). Soleri (1969) in his treatise "Arcology: the city in the image of man", argues strongly that the city as created space (or *neonature* as he terms it), needs to be constructed to extend an individual's potential or 'reach' and thereby facilitate the evolution of civilisation. Soleri shares a fundamental belief that the city has a social purpose; with Aristotle's classical thought (in Mumford, 1989: 184); Mumford's (1989) teleology of the city; and Harvey's (1988: 314) early post-modern conclusions (as quoted at the beginning of this section).

To conclude this section, the city is defined as a holonic habitat of spatial, biological, psychosocial and metaphysical dimensions, for human and non-human exchange (cultural and ecological) that allows civilisation to realise its potential. If this is the case, how might new conceptual tools be developed for the urban planning field to understand the relationships between images of future cities (visions) and cultural paradigms? The next section deals with this question by mapping the applicable methods.

2.3   Rationale – Disciplines, their frameworks and methods

In this section the disciplines, their respective frameworks and methods that are used in the research are described. The current research methodology is informed by a number of frameworks that overlap to develop an epistemological position for the inquiry. To aid comprehension, the disciplinary orders of knowledge that provide the frames of reference for the research are described in three subsections, namely futures studies, socio-cultural change studies and urban planning and design studies. Each discipline offers a range of research methods. Firstly, FS provide the methods to understand how individuals' actions colonise the urban future by employing (a) purposive action; (b) models of history; and

(c) techniques to colonise and decolonise the future. Secondly, SCCS provide the knowledge to understand the diverse impacts of social intervention when attempting to create a better future. This approach clarifies constructs about (a) society; (b) paradigms; and (c) indicators of change. Thirdly, UP/DS provide the technical means to describe (a) the urban problem; (b) urban theories of what exists (ontology of the city); and (c) urban practice (how urban actions are implemented). Causal Layered Analysis (CLA) is applied across the mentioned disciplines and their respective discourses to formulate a meta-map of maps for the inquiry. Accordingly, CLA as a method will be introduced prior to providing the meta-map or comparative framework of research methods/models.

CLA is a post-structural method of critical thinking applicable through multiple dimensions of reality and across discourses. It relies on the researcher's evaluative capacities when using the post-structural futures concepts of: (1) deconstruction; (2) genealogy; (3) distance; (4) alternative pasts and futures; and (5) reordering knowledge (Inayatullah, 2004: 8-9). CLA's vertical aspect of inquiry examines the causal relations between four layers of reality: (1) the *litany* level that discloses the official problem statement or definition and its resolution; (2) the *systems* level that frames the technical limits of and relations within the problem setting's context; (3) the *worldview/discourse* level that frames the problem setting/solving actions through deeper structures such as civilisation, ideology or episteme; and (4) the *myth/metaphor* level that provides collective subconscious narratives about what the problem is and how it may be perceived in terms of cultural meaning. CLA's horizontal aspect of inquiry examines how alternative discourses or futures scenarios reframe the problem/solution statement at the litany level. Horizontally, CLA generates alternative ways of explaining the real and therefore diverse 'truths', whilst vertically it deconstructs how each 'truth' is causally related to different ways of knowing (Figure 2.2).
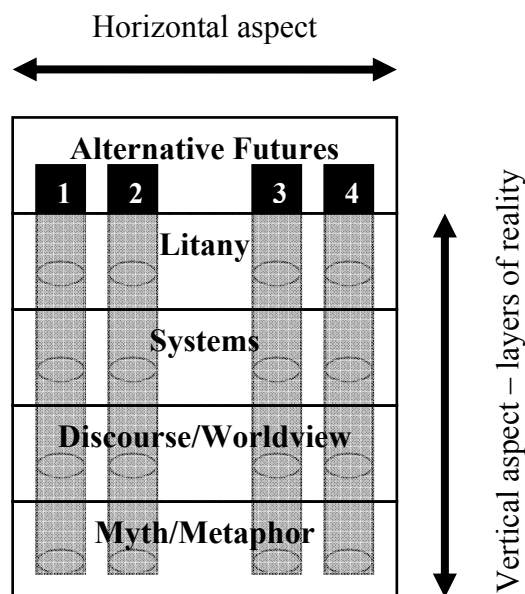
Figure 2.2: Aspects of CLA

To explore the research questions, a holistic cultural change model for the city and its cultural meaning is formulated and critically tested. The city change model (CCM) is a multi-dimensional construct that comprises different frames of reference or levels of reality. The relationships between the following different levels of reality within the city are investigated using CLA. (1) The dialectic forces that influence its future, as formed by its social, technological, environmental, economic and political systems. (2) Civilisational worldviews or cultural paradigms. (3) The deeper utopian/dystopian myths of human habitation. The CCM is constructed using established frameworks from the disciplines of urban planning and design, cultural studies and macrohistory, and the field of futures studies. CLA is also used to re-order knowledge about the city and posit the various disciplinary frameworks within the inquiry. To demonstrate this latter point, the application of the intra-discourse frameworks are now situated using CLA's levels of reality or knowledge (refer to Table 2.1).

Table 2.1: Causal Layered Analysis structures the intra-discourse frameworks			
	Intra-discourse Frameworks		
Levels of Reality	*Futures Studies*	*Urban Studies*	*Socio-cultural Change Studies*
Litany (problem definition)	Civilisational/planetary sustainability	Urban sustainability: Alternative city visions	Cities as catalysts of social transformation
Systems (problem setting)	Futures triangle Scenario generation Emerging Issues Analysis	Technical Paradigms of urban development	Politics of urban transformation - CCM
Worldview	Civilisations; Ideologies; Episteme	Planning's epistemologies	Socio-cultural viability theory's social solidarities; Sorokin's cultural paradigms
Myth/Metaphor	Deep Narratives	Utopias; Genealogy of city visions - Lynch's socio-spatial city archetypes	Utopias

At the *litany* level, the main issue in the context of the futures studies discourse is civilisational/planetary sustainability, whereas from the urban studies discourse the issue is urban sustainability. The key bridging question between the two discourses can be garnered from the socio-cultural change discourse, namely are cities capable of being catalysts for social transformation?

At the *systems* level, the methods of analysis applied to the city derived from the futures studies discourse include the futures triangle (dialectic forces of history), scenario generation and planning, and emerging issues analysis. These methods reassemble urban concepts developed in the urban studies discourse to explore images of alternative city futures. Technical paradigms of urban development and sustainability describe the glo-cal city futures scenarios at the systemic layer of reality. The socio-cultural change discourse provides focus for the power relations at the systemic level of the city. Cultural change models are applied to the city (as the cultural unit of analysis) to reframe the politics of urban transformation.

At the *worldview/discourse* level, the main frameworks derive from the socio-cultural studies discourse. Socio-cultural viability theory (Thompson, Ellis, and Wildavsky, 1990) deals with abstract social solidarities/groups that inform worldviews about nature and human nature. Sorokin's ([1957] 1970) cultural paradigms also illuminate worldviews. The use of these frameworks enables the organisation of an archaeology (history of ideas) and genealogy of city visions.

At the *myth/metaphor* level, the futures studies' discourse provides the main subconscious narratives for ways of living sourced from utopian analysis. The urban studies' discourse focuses on historical visions of the future city, which overlaps or relates to the broader discussion on utopias. Lynch's ([1981] 1989) socio-spatial city archetypes also provide the means of proposing how memetic socio-spatial values systems relate to the conscious emergence of visions of human habitation.

Understanding the causal relationships between subconscious memetic archetypes at the myth level of urban reality, cultural paradigms at the worldview level, and purposive actions at the systemic level of urban reality, reveals the social interventions required to achieve alternative city futures. A politics of holistic, iterative transformation emerges,

civilisation to city to civilisation, which is compatible with aims of the *radical planning model*. In this way the primary research question, 'what are the civilisational worldviews and cultural paradigms influencing Western city visions?' will be answered. The previous discussion (structured through the lens of CLA) outlines a roadmap of the research methods. These are explained in greater detail in the next section.

2.3.1   Futures studies' (FS) methods

Future studies methods provide direction and frameworks for the current research, clarifying the purpose of the city in relation to the development of a future planetary humane civilisation. As a consequence the research radically transforms social and urban development paradigms by articulating purposive action for stakeholders of the world's cities. These radical aims are consistent with the aims of FS as well as the *radical planning model* discussed earlier. Slaughter (2001) notes that the ultimate goal of FS needs to be seen and used as a civilisational catalyst in order to create a better planetary future. He describes five challenges to be addressed in developing civilisation. Firstly (citing Wilber, 1996, 2000a), Slaughter describes the persistence of the modern 'flatland' where a richer *integral* approach to humanity is denied. Secondly, there is the continued ideology of economic growth (that growth is good). Thirdly, there is the impact of this on the global ecological system. Fourthly, Slaughter expounds the defects of short-term thinking within cultures (particularly the West). Lastly, he proposes that technological narcissism remains a largely unquestioned force within the late industrial context. For Slaughter, "the essence of the civilisational challenge is very simple - wake up or die" (2001:14). He argues that FS is a strategy that humanity has developed to create history in the context of modernity by making the future an artefact, a focus of legitimate enquiry, something that can be understood, grasped and influenced. Slaughter (2001) argues, however, that civilisation is largely in denial. He suggests that FS needs to be de-colonised as a discipline, and be diffused into cultures at a practical level.

The current research acknowledges this point and takes on board some of Slaughter's (2001) strategies to assimilate FS' methods into other fields, in this case within the field of urbanism and in the inquiry concerning urban futures. The implications of Slaughter's relevant strategies (as applicable to this research and its objectives), are to: (1) establish

shared meta-goals about urban policy; (2) assimilate FS knowledge within urban studies in order to critique Enlightenment's modernist-planning paradigm, which continues to dominate and colonise urban futures; (3) provide community access to foresight through the global and local habitat survey; and (4) the recovery of panoramic futures (meta-narratives) about the city and its civilisational purpose. Just as Slaughter (2001) argues that FS is a *catalyst* for the positive evolution of civilization, so too this research examines the premise that the city as multi-dimensional product, process and holon may also function as a catalyst for the development of a positive planetary civilization.

The FS field provides (from a number of contributors) the following methods: (1) visioning; (2) analysis of dialectic forces of the future; (3) scenario generation/planning; (4) anticipatory action learning; (5) emerging issues analysis; and (6) causal layered analysis. The application of each method within the research now described.

First, Polak (1973) as cited by Inayatullah (2002a: 5, 78), established the fundamental relationship between vision and social progress. He argued that the concept of a positive *vision* or 'the image of the future' with the opportunity for individual or collective agency; is necessary for a culture to advance and avoid decline. Utopian visions of the city throughout discontinuous histories, whether ancient, pre-modern, modern or post-modern, have influenced change in the real world. A genealogy of city visions in Western civilisations is presented in Chapter Four. This genealogy reveals which city visions continue to dominate or be privileged in current urban planning discourse and practice, thereby colonising urban futures. Inayatullah (2002a: 219) also argues for (and details criteria for) a vision. A vision in this context must be extra-rational, have legitimacy within the culture, must include leadership, ennoble a people, must improve the material (real) world, include a spiritual dimension, and have intergenerational relevancy (not too near or far). These criteria are used during this research to identify urban visions across civilisations and histories and to present the genealogy of city visions.

Wilber (2000a) likewise argues for an *integral* vision to guide human development into the future. He critiques scientific materialism, fragmented pluralism and deconstructive postmodernism, and argues how the latter have failed to bring humankind, closer to understanding the holistic nature of being (consciousness). Rather, these perspectives constitute what Wilber calls 'flatland'. In a sense flatland is simply the failure to

recognise the entire human spiral of development (a concept derived from evolutionary psychology) or the full spectrum of consciousness. The antidote to flatland is an *integral* vision, which is what Wilber's *Theory of Everything* or a 'holonic' model attempts to provide.

> An integral vision – or a genuine theory of everything – attempts to include matter, body, mind, soul, and spirit as they appear in self, culture, and nature. A vision that attempts to be comprehensive, balanced, inclusive. A vision that therefore embraces science, art, and morals; that equally includes [many] disciplines from physics to spirituality, [...] (Wilber, 2000a:xii).

Wilber's *integral* model (internal/external focus transposed with individual/collective agency across all dimensions: matter, body, mind and spirit) when applied to the city reinforces its multi-dimensional nature (as defined earlier) and also lifts the inquiry out of the urban studies discourse. Wilber's model informs Chapter Three's comparative review of city theories and provides direction for research objective four, namely how might the schism between urban planning theory and practice be resolved by means of innovating a holistic (multi-dimensional) teleology of the city and its cultural meaning?

Second, the *futures triangle* (Inayatullah, 2002a: 186) is a method to understand the dialectic forces of the present that informs the future. It maps the drivers of change (push), the attractors of change (pull) as being visions, and the resistances to change (weights). The *futures triangle* (Figure 2.3) embodies the notion that the future is not determined by a singular variable, but a multiplicity of historic forces. Competing visions, as previously mentioned, are part of the dialectical forces that motivate individual and social actions for change and progression. An analysis of the dialectic forces of city futures was conducted in Chapter One to radically re-define the urban futures problem
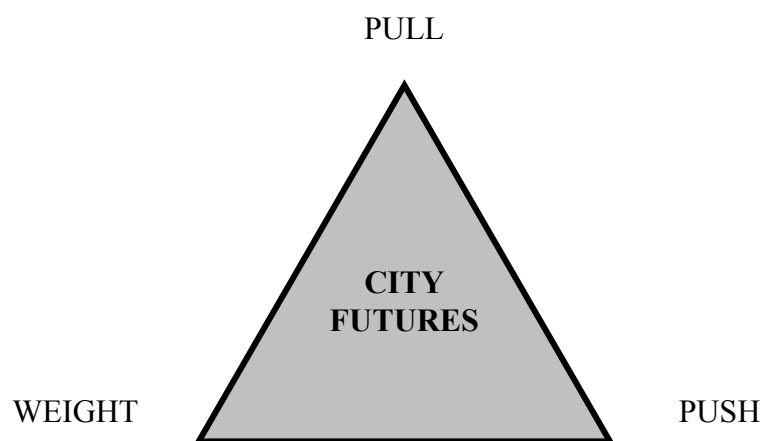
Figure (2.3): The Futures Triangle, Dialectic Forces that Create the Future, (Daffara, 2002)

by reframing the urban studies' discourse. The futures triangle is also used in Chapter Four's genealogy of city visions.

Third, *scenario generation/planning* (Schwartz, 1996; Inayatullah 2002a; Ogilvy, 2002) methods are used to build alternative futures that are believable across the spectrum of actualisation, whether possible, plausible, probable or preferred. Scenarios may be generated in many ways. The techniques used in this research include the double variable method in conjunction with CLA, to ensure internal consistency through the levels of urban reality. Scenario development follows a systematic sequence of steps. A focus for the work is first established (the research question), followed by research into the critical uncertainties or driving forces of the scenarios. These critical uncertainties are the major sources of change that impact on the future.

The scenario logic or pattern of interactions that explain how the driving forces or critical uncertainties could combine to determine future conditions are then established. The driving forces are divided into pre-determined elements (i.e., what is inevitable, such as many demographic factors that are already 'in the pipeline') and critical uncertainties (i.e., what is unpredictable, unknowable, or a matter of choice or concern, such as public opinion). The double variable method conjoins two variables (each at bipolar states) to generate four distinct scenarios. These scenarios are given depth by describing their differences through a set of attributes. These attributes are based on social, technological, economic, environmental and political (STEEP) factors that interact at the systems level of reality. Causal Layered Analysis is then used to map and relate the *litany*, *worldview* and *myth/metaphor* levels with the systems level for each scenario, to make them transparent, and logically and intuitively consistent (e.g., Section 5.2, Table 5.1).

Fourth, *anticipatory action learning* (Inayatullah, 2002a: 96-7) is a methodology relevant to the inquiry. It seeks to question and construct the future through stakeholder participation, shifting the focus from content learning to process learning. This is essentially building foresight capabilities and ownership within those who have interests in that future (Inayatullah, 2002a: 8). The principle and method of *anticipatory action learning* influenced research objective three, particularly how the city futures scenarios were tested by the community surveys. Different methods of questioning the future by

participants were designed to explore whether it is possible to quantitatively validate the behavioural relationships between deeper worldviews/cultural paradigms and preferred visions of human habitation. The results of this anticipatory action learning are discussed in Chapter Five.

Fifth, *emerging issues analysis* (Molitor, 2003:4) is a futures method that identifies issues before they reach the trend or problem phase. It makes the assumption that issues follow an s-curve growth pattern from emerging phase through trend phase to problem phase (see Figure 2.4). "Emerging issues are those with a low probability of occurring; but which, if they emerge, will have a dramatic impact on society" (Dator, 1980 cited in Inayatullah 2002:12). Dator (1980) argues that since these issues are usually undeveloped they often appear ridiculous. Inayatullah (2002) considers these issues important as they disturb and provoke, forcing individuals to change how they think, especially when challenging assumptions about the nature of the present and the future. As a futures method, emerging issues analysis is not only predictive (able to identify trends and problems in their emergent phase) but critical, as it is able to disturb conventions and reorder knowledge (Inayatullah, 2002a: 29).

Figure 2.4: The S-Curve & Emerging Issues Analysis

2.3.2   Urban planning/design studies' (UP/DS) frameworks and concepts

The UP/DS discourse provides the technical means to describe the urban problem, urban theories of what exists (ontology of the city) and urban practice (how urban actions were or are implemented). In the research context (refer to Chapter One), urban phenomena and concepts are synthesised around the categories of vision, drivers and weights of urban futures, using the *Futures Triangle*. The discourses relevant to theories about urban

ontology, phenomenology, ideology and epistemology are vast and cover a number of fields or disciplines. Those fields relevant to the research include: (1) the historiography of planning epistemology as overviewed earlier of this chapter (Sandercock, 1998, 2004); (2) urban geography, covering cities' spatial, economic and temporal characteristics (Clark; 1996, 2003; Hall, and Pfeiffer, 2000; Graham and Marvin, 2001); (3) urban (built) environment studies and planning practice based on the perspective of human ecology (Duncun, 1961), as well as the practices of architecture and urban design (Moughtin, 1996, 1999; Alexander, 1975; Jencks and Kropf, 2001); (4) urban sociology, particularly concerning the social/cultural production of space and the hermeneutics of the city and its places (Harvey, 1988; Castells 1989, 2002, Lynch, 1989); and (5) urban visions and utopias (Mumford,[1961], 1989; Fishman, 1982; Hollis, 1998).

To link the impact of the theoretical UP/DS discourse with the reality of urban practice, the current research relies on the historical and analytical accounts of authors such as Hall (1996, 2000), Gleeson (2000), Ellin (1999), Sandercock (1998), and organisations such as the United Nations Centre for Human Settlements (Habitat).

Chapter Three continues to explore research question three by reviewing major urban theories for their degree of holism or multiplicity across the dimensions of physis, bios, nous and theos. This exploration therefore identifies different ways of knowing/thinking about the city. The contributors of the city theories are also introduced in Chapter Three. That review focuses on the construction of socio-cultural meaning for the city, pinpointing what is needed to reconcile the urban theory-practice schism.

2.3.3   Socio-cultural change studies' (SCCS) frameworks and models

The discourse of SCCS provides the present research with a body of knowledge with which to understand the diverse impacts of social intervention when attempting to create better urban futures. This social science field offers conceptualisations of society, paradigms and indicators of change.

First, the work of Simmel (1093), Weber ([1912], 1958), Keat (1982), and Giddens (1984, 1987), all inform the body of knowledge used to understand society. Particular social theories developed by Sorokin ([1957] 1970), and Thompson *et al* (1990) are used and contrasted in order to understand the complex change dynamics of cities and society. From these models, cultural indicators of change are applicable for the city.

Second, the concept of paradigms is based on the work of Kuhn ([1962], 1970), and technical paradigms on the work of Perez (1983). For instance, Castells' (1989) argument for a new informational technological paradigm within society acknowledges Perez's contribution. Castells' work is also based on Marx's (1845) dialectic materialism. Castells concludes, "the new informational technological paradigm emphasises the historical importance of the Marxian proposition on the close interaction between productive forces and social systems" (Castells 1989:16). In other words, urban sociologists such as Castells use neo-Marxian theory to argue that space is an expression of society (Castells, [1993], 2000: 557-567; Harvey, 1988). For example, Castells (1993) postulated that the *Informational City* is the urban expression of the whole matrix of determinations of the *Informational Society*, as the Industrial City was the spatial expression of the Industrial Society. Frederic Stout reiterates that:

> A fundamental precept of Marxist cultural analysis is that superstructures of thought and artistic expression rest upon and derive from a material base rooted in social and economic reality. Thus each historical era creates characteristic forms of expressions and explanatory discourse that reflect, indeed construct, the social reality of the period (Stout, [1999], 2000: 143).

Chapter Three returns to Castells' contribution to urban theory. For now, shifts in technical paradigms of city development are also conceptualised as serving as indicators of social and urban change.

Giddens' theory of structuration (1984) from *The Constitution of Society*, seeks to integrate the divisions between hermeneutics (or interpretative sociology) and functionalism (or structuralism). In Giddens' words, "the theory of structuration is neither the experience of the individual actor nor the existence of any form of any social totality, but social practices ordered across space and time" ([1984], 1999: 120). His formulation emphasises the duality of structure where, "the structural properties of social systems are

both medium and outcome of the practices they recursively organise" (Giddens, 1999: 127). Structure and systems interact and are mutually dependent, forming the process by which each reproduce or change over time (*structuration*). Giddens' clarifies the definitions for each being:

> Structure(s): rules and resources, or sets of transformation relations, organised as properties of social systems;
> System(s): reproduced relations between actors or collectivities, organised as regular social practices; and
> Structuration: conditions governing the continuity or transmutation of structures, and therefore the reproduction of social systems (Giddens, 1999: 127).

Giddens "argues that it is a mistake to pose social systems and individual agency as separate from each other, because neither exists except in relation to the other" (Johnson, 2000: 7). For example, there is no such thing as an architect or city planner, without the social game of spatial city building with its rules and structured relationships between players. Likewise it is individuals (citizens) who literally create the reality of the city each day as they live, work or play within, or modify, its real and virtual spaces.

The relevance of Giddens' work to this research is substantive, in that *structuration* implies that the city is not only a social product but also 'structure' and 'system' (agency) as a duality (as opposed to a dualism). To understand how the city manifests, reproduces and transforms both its structural properties and systemic practices requires multi-dimensional investigation.

The research meta-map of frameworks juxtaposes three disciplinary discourses to mirror Giddens' theory of *structuration*. Urban planning/design theories are used to understand the organising 'properties' of the geographic city and its socio-spatial form, which is an analogue of social structure. Theories of cultural/social change are used to formulate a CCM to understand the reproducible relations and social practices (agency) between stakeholders of the psychosocial city (which is analogous of system). The implication of alternative city futures reveals long-term consequences for, and conditions of optimal human agency in space and time for the concomitant development of planetary civilisation and holistic cities (structure and system). This process is an analogue of

Giddens' *structuration*. With the comparative meta-map of frameworks in place to guide the research, the discussion now turns to the construction of the CCM.

2.4   Formulating a City Change Model (CCM)

2.4.1   Wilber's *integral* model

Wilber (2000a, 2000b) influenced by the field of cognitive developmental psychology (Fechner, 1835; Baldwin, 1906; Graves, 1981; Alexander and Langer eds, 1990) [6] and the works of Habermas (1981, 1987), Aurobindo (1985, 1993) and Maslow ([1962] 1998), argues for an *integral* model of consciousness (or being) based on four *holons*[7] or levels of the real. These are the physiosphere (matter), biosphere (body/life), noosphere (mind) and theosphere (spirit). Wilber refers to these *holons* in conjunction (holarchy) as the "great nest of being" (2000a: 67-9) and considers it "most basically that general morphogenetic field or developmental space [for consciousness]" (2000b: 30).

Wilber defines holarchy as a system of relations that includes both asymmetrical hierarchy (qualitatively ranked levels of increasing capacity) and heterarchy (mutually linked dimensions within each level) (2000b: 32). Wilber's (2000a) *Theory of Everything* is a *holarchy,* an *integral* model of how to discursively situate and navigate between different ways of knowing, rather than an explanation of the nature of the cosmos. Its dimensions (quadrants) of knowing cover the subjective, inter-subjective, objective and inter-objective realities, encompassing the spheres of art (aesthetic/expressive realm), morals (ethical/ normative realm) and science (exterior/ empirical realm). In Wilber's view, conjoining the full spectrum of consciousness (matter, body, mind, soul and spirit)

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[6] Wilber cites the following authors whilst developing his integral psychology. They are not listed in the bibliography as it is beyond the scope of the current research to review this material:
Gustav Fechner, trans. by Dr Hugo Wernekke (Trans.), *On life after death*, Open Court, [1835] 1914.
Gustav Fechner, *Elements of Psychophysics*, Holt Rinehart & Winston, 1966.
James Mark Baldwin, *Thought and things: A study of the development and meaning of thought, or genetic logic*, Macmillian, 1906.
Clare Graves, *Summary Statement: The Emergent, Cyclical, Double-Helix Model of the Adult Human Biopsychosocial Systems*, Boston, May 20, 1981.
Charles Alexander and Ellen Langer (Eds.), *Higher Stages of Human Development: Perspectives on Adult Growth*, Oxford University Press, 1990.
Sri Aurobindo, *Integral Yoga*, Lotus Press, 1993. Sri Aurobindo, Life Divine, Lotus Press, 1985.
Abraham Maslow, trans. by Van Nostrand [1962], *Toward a Psychology of Being*, Wiley, 1998.
[7] Arthur Koestler, *The Ghost in the Machine*, 1967, coined the term *holon* being something that is simultaneously a whole and a part.

with the realms of knowledge reintegrates what Enlightenment's modernity differentiated into discourses (2000a: 69). His *integral* model conjoins a hierarchy of consciousness with a heterarchy of knowledge (discourses) to form a holarchy of being that may be applied to any subject (Figure 2.5). In this case the intention is to apply Wilber's *integral* model to construct a CCM.
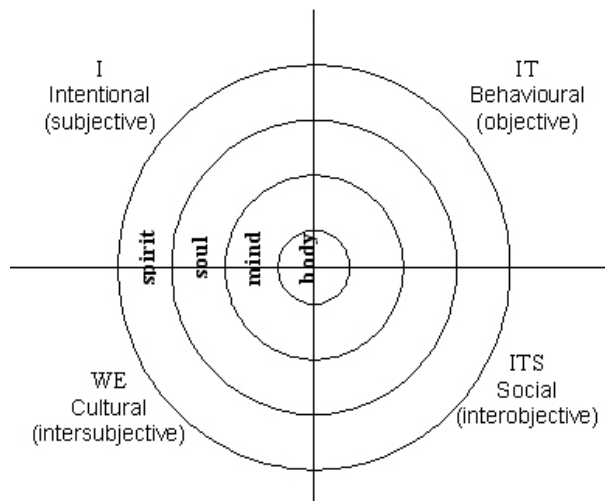
Figure 2.5: Ken Wilber's "All Quadrant, All Level" Integral Model of Being (Adapted from Wilber, 2001a, 71-2)

"Wilber argues that Western culture mistakenly assumed that rationality was the culmination and the end of evolution - whereas in this [integral] view it is seen as a stage [of consciousness] which may be transcended (and included) in a larger synthesis" (Slaughter, 1999: 345). Wilber develops an *integral* vision and model to progress the emergence of a sustainable planetary civilisation ('integral culture' (2000a: 30, 126-7) that provides a holistic view of being and of how humans develop their potential and act. Wilber's intent is to assist dialogue to move beyond modernity's emphasis on the empirical and positivistic, and post-modernity's emphasis on pluralistic relativism and recursive hermeneutic deconstruction. He seeks a cultural recovery that integrates the best of both epistemic paradigms. Wilber's aim is to assimilate the discursive differentiations within modernity and provide a meta-map for the clarification and pursuit of further stages of human (individual) and social (collective) development. From a different perspective, Wilber's work can be viewed as an attempt to unite the best of ancient wisdom (metaphysical consciousness) with that of modernity (science) to create a *constructive postmodernity* (2000b: 73).

Slaughter (1999) agrees with Wilber's intent, and considers how his model (which goes beyond the rational level of consciousness) challenges the knowledge base of FS:

> "Wilber's characterisation of 'The Great Chain of Being' provides a general framework of practical utility. Just to begin thinking of the future in terms of subtle awareness, causal insight and ultimate identity (with the source, Atman, That Which Is) is to radically alter the terms of the debate" (Slaughter, 1999:333).

Slaughter (1999: 349-50) critiques Wilber's model, finding four areas that are problematic. These are the use of epistemological hyperbole, the emphasis on spiritual training versus enquiry, the difficulty of inter-cultural consensus (and interpretation) over space and time, and the fact that 'higher' social stages may well emerge from 'lower', but this remains unknowable. In short, Slaughter states that to overcome these difficulties, Wilber's meta-narrative should be regarded as suggestive rather than axiomatic, prescriptive or law-like in character (Slaughter, 1999:350).

On the basis of Wilber's *integral* model Slaughter (1999) identifies four implications for mainstream FS. Each in turn is relevant to the exploration of city futures and concomitant cultural change. Briefly, the *integral* model provides the following. First, a cultural diagnosis (of historic and cosmic evolution) and renewed world story. In Slaughter's words, "it provides a basis for a renewed world story; an account of reality that gives real hope and inspiration, provides multiple pathways into futures beyond dystopia and the vast and sterile empire of machines" (351). Second, a critique of systems, ecology, and chaos theory. That is, the *integral* model warns of the dangers of reductionism and the interests of the 'flatland'[8] world in systems thinking. Wilber's states, "each structure weighs carefully the evidence that it can see...The hermeneutics of any world space is closed and perfectly evidential for that world space" (Wilber, 1995:376, in Slaughter, 1999:352). Likewise the conceptualisation of the city solely based in the mental-egoic level of reality (as a system of personal and cultural relations in the internal world, and behavioural and social relations in the external world), would miss the point of holism entirely by ignoring the prerational and transrational levels of consciousness. Wilber's

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[8] Slaughter (1999:345) reiterates Wilber's definition that 'flatland' is an epistemological view of the nature of reality that devalues vertical depths of human experience and is confined to an expansive horizontal dimension focussed on rational, measurable interlocking orders and sensory forms.

model challenges researchers to redefine the concept of the city to one that encompasses a holistic inner and outer world perspective interested in personal and social human development. Third, a redefinition of the central purposes of future studies, "…not to serve the already-powerful…but to illuminate the way beyond limited and instrumental interests altogether to shared transpersonal ends" (Slaughter, 1999:353). Fourth, a redefinition of the path ahead –

> "the central project of Futures Studies can be re-framed and re-constituted, taken beyond the polarities of modernity and post-modernity, re-situated in a larger world that is resonant with meaning, purpose and emergent potential. It follows that futures workers can join with other workers and traditions to move out of the confined epistemological, ontological and technological spaces of the late-industrial 'flatland' to explore a new synthesis of 'I', 'We' and 'It'" (Slaughter, 1999:354).

The implication of points three and four combined for the study of the city is a challenge to *Technotopia's* colonisation of the future. Space for alternative futures (other than a city dominated by social transformations created by technological innovation), need to be created through critical discursive analysis. Slaughter's argument adds weight to the use of Wilber's *integral* model for the explication of a CCM. Specifically, the implication for the formulation of a CCM is that it ought to cover multiple levels of reality, from material to metaphysical across inner and outer dimensions. Hence, the research objective seeks the relations between individual and collective cultural paradigms, their influence on the images of the future city, and the actions that realise it.

2.4.2   Multi-level process integrating macrohistory, cultural change theory and city archetypes

Civilisation's episteme of self, the way cultures understand and order the knowledge of human existence, influences the visions of the city, the place of human habitation and where civilisations may manifest their being. The concept of self is relevant, as it influences the identity and role of all stakeholders in the process of fabricating the city (see Figure 2.6). Understanding how these two processes occur is the objective of the CCM. In this section the CCM uses a multi-level framework to explore the relationship between grand civilisational patterns of change (macrohistory), cultural theory and city archetypes. From Wilber's *integral* perspective, the beliefs and actions of 'self' are

posited within the *intentional* and *behavioural fields*, the images of the future city held by citizens (along with their archetypes) are posited within the *cultural field*, whilst the inter-objective change impact of visions on collective, purposive action in fabricating the city in civilisation is posited within the *social field* (see Figure 2.4). These fields represent different dimensions of reality, each of which the CCM needs to navigate among and expound the relationships between. For this reason, Sorokin's ([1957] 1970) macrohistory of civilisations is integrated with Thompson et al's (1990) meso view of social solidarities, and with Lynch's ([1981] 1989) micro view of city archetypes, in order to provide holistic depth to the analysis of city change dynamics. However, before integration each framework will be explained separately. Further reasons for the use of these three models, is given after each is separately explained.

Figure 2.6: Holarchy of Habitation
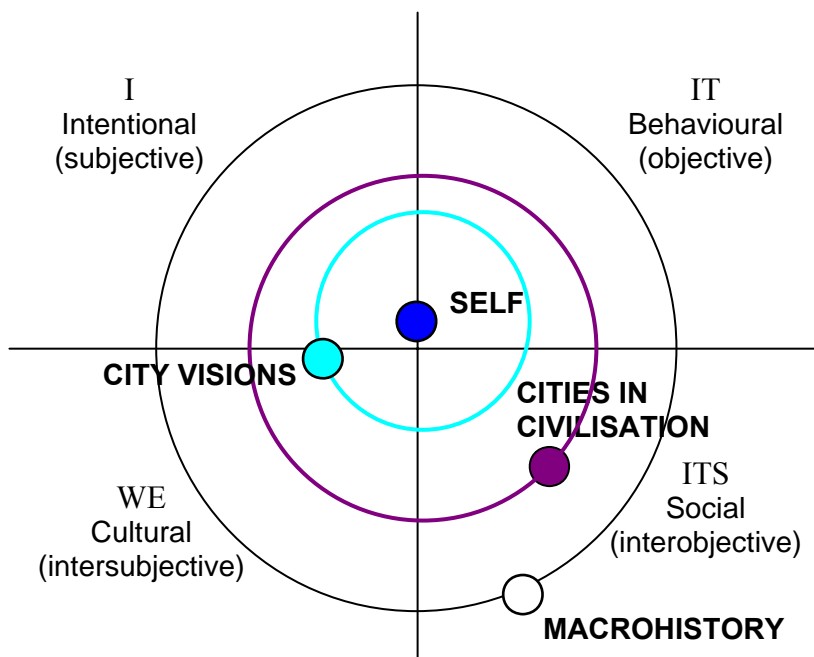
2.4.3   Models of socio-cultural change

2.4.3.1   Sorokin's macrohistory of social dynamics: cyclic cultural paradigms

Sorokin (1889-1968), through his macrohistory of social and cultural dynamics, provides a grand pattern of the future from which the relationship between self, society and the formation of the next phase of the city can be understood. His model of socio-cultural dynamics is applicable here in the construction of a multi-level CCM, by revealing the relationships between cultural paradigms and architecture, which are transferable to the broader art of city making.

Sorokin's *Social and Cultural Dynamics* ([1957] 1970, written between 1913 and 1941) provides a change model based on the 'mentality' of the culture. Sorokin's macrohistory is not characterised by geo-historically identifiable stages or categories, rather they are typologies of how cultures perceive the nature of reality (cultural mentalities or paradigms). He categorises cultures as being predominately:

- *Ideational* (spiritual) – the nature of reality concerned with ideas (meta-empirical or transcendental);

- *Sensate* (materialistic) – the nature of reality concerned with matter and satisfying the senses; and

- *Idealistic* (eclectic/integrated) – the nature of reality concerned with or balanced by both matter and ideas.

Inayatullah (2002:282) explains that Sorokin categorises only five ways in which meaning can apply to the real. The three mentioned above are the dominant cultural paradigms that tend to create cultures, whilst the following two do not serve to create a viable culture, as they are not grounded in the real:

- Ascetic *Ideational* (hyper-spiritual) – the nature of being is to transcend the real; and

- Cynical *Sensate* (scepticism) – the nature of reality concerned with matter, but with a spiritual mask.

Sorokin thus argues that the dominant three cultural paradigms repeat themselves throughout history.

Sorokin argues that civilisational /cultural change is cyclic in the form of a pendulum, moving from *ideational* to *idealistic* to *sensate*, and back to *ideational* (Figure 2.7). This super-rhythm in history is caused by the interaction of three hypotheses: (1) the principle of immanent change (Sorokin, 1970: 634, 654); (2) the

Figure 2.7: Sorokin's Super-rhythm, (Daffara, 2002)

Sensate: **Materialistic**

Ideational: **Spiritual**

Idealistic: **Integrated**

principle of limits (676-9); and (3) the theory of truth and reality (680-3).
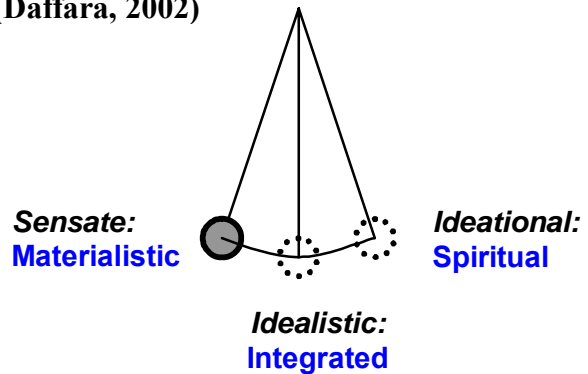
Inayatullah explains Sorokin's *principle of immanent change* as a quality that socio-cultural systems are imbued with, "as all cultures act they change naturally" (Inayatullah, 2002: 280). The external world's conditions (milieu) cause change and cultures change because of their own internal characteristics and limits. Sorokin explores this endogenous dialectic in his principle of limits. Galtung argues that the dynamism in Sorokin's model is brought about as a result of, "the principle of limits, human beings have richer spectrums of needs than any socio-cultural formation built around coherent themes can satisfy; their limits are their undoing" (Galtung, 1997:116). These human limits also define the range of possibilities for socio-cultural formation. Hence Sorokin's proposition that the three main cultural paradigms (active *ideational*, *sensate* and *idealistic*) that apply meaning to the real re-emerge throughout history embodied within socio-cultural systems.

The final dynamic is the theory of truth and reality. For Sorokin, each cultural paradigm articulates their system of truth and reality. *Ideational* systems form symbolic 'truth of faith'; *idealistic* systems form dialectic 'truth of reason'; and *sensate* systems form empirical 'truth of senses' (Sorokin, 1970: 228).

> "Now each of three main systems of truth and reality may be either entirely true, or entirely false, or partly true or false. […] Hence the super-rhythm studied seems to be possible only under the condition that each of the three main systems of truth and reality –

and the corresponding form of culture – is partly true and partly false, partly adequate and partly inadequate" (Sorokin, 1970: 680).

As one of the truth systems grows and dominates it tends to, "drive out all the other systems of truth and reality and with them the valid parts they contain" (Sorokin, 1970: 681). The dominant paradigm develops in turn its falsities, with the overall result being that the dominating 'truth' becomes more inadequate. In other words, dissonance between human expectations and reality or the 'failure of truth' (Sorokin, 1970: 679-683, 693) delivered by the socio-cultural form (civilisation) creates the impetus for collapse or change.

Sorokin (1970: 37) develops seven types of cultural mentalities or paradigms within his model, each with their own worldview, method of power and object of control (Table 2.2). His cyclic macrohistory of cultural paradigms is based on the dialectic between the material and spiritual. Sorokin's (1970: 149-159) argument correlates the styles of Greco-Roman architecture and Christian/Western architecture with the cultural swing from *ideational* to *sensate* paradigms. Sorokin demonstrates that his socio-cultural change model is able to explain the relations between cultural paradigms and the spatial fabrication of the city. Indeed, Sorokin uses architecture as one indicator or 'logical manifestation' (1970: 158) of the dominant paradigm prevalent in its socio-cultural form.

Sorokin, for example, sums up *ideational* architecture as dedicating the building to transcendental values (1970: 148). Its form is spiritual symbolism, communicating the meaning and value of what is beyond the material world. Design integrity is apparent where space and mass is carved out of the external world in sacred geometric proportions. The architecture thus displays frugality (structural functionalism), tactile harmony and an enduring quality.

In contrast, visual/*sensate* architecture is devoid of spiritual symbolism. Rather, its value lies in its ability to visually display power or impress and in its success in luxuriously meeting the utilitarian needs which it has to serve. This architecture thus tends towards monumentality. It seeks to make the static more dynamic, using light and shade effects, illusions in perspective, intricacy of forms, abundance of decoration and embellishments.

Theatrical experience is important. To achieve it superfluous structural elements may be used for sensual impact.

Sorokin demonstrates the synchronous evolution between cultural paradigm and architecture with the column, arguably the most significant architectural element in Western history. The Doric column is the most *ideational* (1970: 150). The Ionic column developed next and is an intermediary type reflecting a more mixed or *idealistic* cultural paradigm. The Corinthian column followed. Used by the Hellenistic and Roman architects, it is richly ornamented and reflects their *sensate* aspirations.

Further, Sorokin's macrohistory fits independent historical accounts of the evolution of the city within Western civilisations, for instance the work of Pirenne (1925), Childe (1950), Kitto (1951), and Savage and Warde (1993). This is demonstrated in Table 2.3, where the cycle is shown to have occurred twice from primordial urbanisation to industrial urbanisation.

Using Sorokin's model, present Western culture is interpreted as being sensate. This premise is based on an experienced empirical reality, a reality that is underpinned by scientific reductionist observation and social values of wealth, comfort and material resource consumption to benefit a utilitarian morality. The meta-architecture of the city that has emerged during the modernist 20th century is similarly reductionist, sprawling, utilitarian and resource consumptive. The modern rationalistic city and the post-modern eclectic city both serve the cosmology of the present time, namely the gratification of sensate, materialistic individualism.

The major implication of Sorokin's model for city futures is that the city is likely to continue its trend towards a hyper-sensate culture, with cities making a grab for limited global resources. Before ecological collapse, those cities that will survive do so by facilitating a rising *ideational* (spiritual) culture that will, in turn, transform the city's physical manifestation or typology. This rise or revolution may be already apparent in Western societies, with the rise of 'cultural creatives' (Ray & Anderson, 2000), individuals seeking sustainable humanistic solutions in life. These solutions are driven by smart, green consumer choices.

Table 2.2: Summary of Sorokin's Cultural Paradigms							
Main Elements	**Types of Cultural Paradigms**						
	Ascetic Ideational	**Active Sensate**	**Active Ideational**	**Idealistic**	**Passive Sensate**	**Cynical Sensate**	**Pseudo-Ideational**
Reality	Transcendental	Empirical	Both with emphasis on the eternal	Dualistic, Integrated	Narrow/shallow materialism	Empirical with a spiritual mask	Painfully sensate, conflicted, spirituality
Needs & Ends	Spiritual	Diverse needs and Narcissism	Both with predominance of spiritual	Dualistic, Eclectic	Focussed, limited material use and impacts	Material with convenient spirituality	Mainly material with unintegrated spiritual elements
Methodology	Self-modification	External modification	Both ways with prevalence of self-modification and conversion of others	Both ways	World to be used and enjoyed not modified	Adjust superficial values to gain external modification	Mere enforced endurance of life conditions
Weltanschauung **(Worldview)**	Being	Becoming	Both with emphasis on Being	Both	Limited Becoming (take the opportunity while it lasts)	Restricted Becoming with a mask of Being	Vague and fragmentary ideas
Power and object of control	Self-control	External control	Both, with emphasis on self-control	Both equally represented	No real control of either self or external conditions	Control of assuming any belief to gain advantage	No control: The oppressed
Extent of Satisfaction	Maximum	Maximum	Great, but moderated	Great, but balanced	Maximum for limited sensate needs	According to circumstance	Very limited

Table 2.3: Evolution of Western Architecture explained by Sorokin's Macrohistory (super rhythm) of Cultural Paradigms			
Evolution of Occident Cities from Savage & Warde	**History of Occidental Cities from Pirenne, Childe & Kitto**	**Principal city role or characteristic**	**Sorokin's Macrohistory of Cultural Paradigms streamed against evolution of cities**
Primordial urbanisation 15000 BC – 4000 BC	Mesopotamian and Egyptian Cities. Greek Doric architectural Order (pre fifth century BCE)	City of God/deity King role, storing agricultural surplus.	*Ideational* (spiritual)
Pre-industrial 'definitive urbanisation' Up to 1700	Greek Polis Ionic architectural Order (fifth century BCE)	Community, Defence, Religion	*Idealistic* (eclectic/integrated, with a emphasis on the ideational)
	Greek Hellenistic & Roman Cities (post mid fourth century BC – fifth century AD)	Imperial Empire	*Sensate* (materialistic)
	Medieval City - Christian architecture – Byzantine to early Gothic (sixth – twelfth century AD)	Theocratic	*Ideational*
	Renaissance Ideal City High Gothic to Mannerism & eclecticism (thirteenth – sixteenth century AD)	Pluralistic	*Idealistic* (eclectic/mixed)
	Highly visual eclectic styles: Baroque, Rococo, Classicism and various revivals	Bourgeoisie – display power & wealth	*Cynical Sensate* (materialism with false mask of spirituality)
Industrial 'definitive urbanisation' After 1700	Friedrich Engel's 1844 Critique of Industrial Towns/City	Capitalism + labour markets	*Sensate*

2.4.3.2   Thompson, Ellis and Wildavsky's socio-cultural viability theory

Thompson et al's (1990) socio-cultural viability (S-CV) theory is another approach to understanding social dynamics. It is useful because it avoids the closed dualisms of previous theories such as Marxism's market versus state structure. S-CV theory provides, from Wilber's (2000a,b) perspective, a pluralistic framework that operates across the intentional, behavioural, cultural and social fields, in order to understand how ways of life manifest within the social system and inform city visions and their realisation. Who is in power within the culture has the capacity to affect urban/environmental policy and change the quality of human habitation.

S-CV theory maps social solidarities or perspectives to five main groupings using a grid-group typology. A 'grid' in this context refers to the rules that relate one person to others on an ego-centred basis. It is the degree of social prescription operating within a culture. A 'group' refers to the experience of a bounded social unit. It is the degree and sense of collectiveness (cohesion) within a culture (refer to Figure 2.8). A social solidarity with high levels of externally imposed social prescription and low levels of social cohesion is identified as fatalism. A social solidarity with high levels of social prescription and high levels of social cohesion is identified as hierarchy. A social solidarity with low levels of social prescription and high levels of social cohesion is identified as egalitarianism. A social solidarity with low levels of social prescription and low levels of social cohesion is identified as individualism. The other major social solidarity seeks to withdraw from the first four social solidarities, minimising its transactions with the other ways of life. This group is identified as autonomy (the Hermit).

S-CV theory thus maintains that there are no fewer than five ways of life, being Individualists, Egalitarians, Hierarchists, Fatalists and Hermits. The five ways of life are interdependent on each other, seeking by their transactions to make their 'way' viable. As a result people, by their interactions, organise themselves into these five social solidarities (groups). However, individuals may change and move through each of the ways of life in their lifetime. People's approach may change through 'surprise', when their lifestyle

expectations are not supported by the emerging reality (actuality). This is essentially the conjunction of Sorokin's (1970) principle of human limits and theory of truth and reality.

Each social group or way of life has a particular worldview of nature and human nature, thereby defining how that group relates to ecology (which supports their way of life) and to each other. Thompson et al (1990) argue that Hierarchists view nature as tolerant within strictly accountable limits (1990: 73) and consider humans are born sinful but can be redeemed by good institutions (1990: 35). Egalitarians view nature as delicate and strictly accountable (1990: 73), and that humans are born good but are highly malleable, prone to corruption by evil institutions (1990: 34). Individualists view nature as benign, a skill-controlled cornucopia (1990: 73), whilst conceptualising human nature as extraordinarily stable, where they are self-seeking (1990: 34). Fatalists view nature as capricious, a lottery-controlled cornucopia (1990: 73) and human nature as unpredictable and thus are distrustful of their fellows (1990: 35). Finally, Hermits view nature as resilient and freely available, seeking to become one with it (1990: 30), whilst they see human nature as encompassing yet transcending all four previous constructs (1990: 36). Each worldview is in actuality, myth, yet they are partial representations of reality and believed to be true within their respective groups.
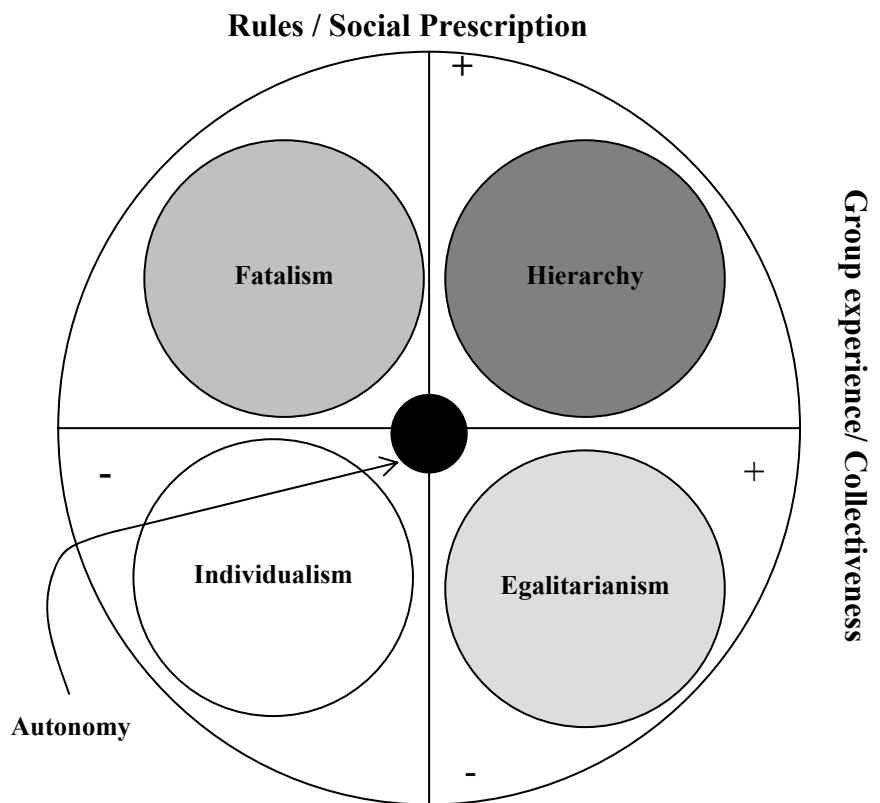
Figure 2.8: Social groups of SC-V Theory

Culture is characterised by permanent dynamic imbalance (1990: 87), driven by the need for alliances. The incapacities of the three active ways of life (Hierarchy, Egalitarianism and Individualism) prompt them to reach out for cultural allies who can compensate for their weaknesses, or for recruits from Fatalists and Hermits. Another parallel emerges with Sorokin's model, such that S-CV theory likewise argues that only three social solidarities form viable socio-cultural forms with power structures.

The implications of S-CV theory for the CCM is that each of the above social solidarities with its distinct worldviews about nature and human nature (and corresponding way of life) ought to also have a preferred vision of the future and of cities within it. It follows that the image of the future city held by the current dominating social solidarity is the one that is most apparent within the litany of public and political discourse, as it is most able to tap into the mass media power of the information age. Understanding the social dynamics between these different solidarities may enable considered intervention to influence which competing visions will dominate to create the preferred image of the city of the future.

2.4.3.3　City archetypes

Lynch (1981) argues for three theoretical constructs or archetypes for the way cities procure meaning and symbolism for its citizens through socio-spatial organisation. They are the *Cosmic City*, *Organic City*, and *Mechanistic City* (depicted in Figure 2.9). Lynch sourced these archetypes from antiquity (both from early Western and non-Western cities). As such they are synonymous with preferred images and normative visions for what a city ought to be, regardless of the historic cultural perspective. This suggests that deeper paradigms that relate to humans' psychosocial beings inform the city archetypes. Real cities in the world today are hybrid manifestations of these archetypes (Moughtin, 1996: 76), and it will be shown in Chapter Four that how urban visions are formulated throughout history are also related to an archetype or hybrid combination.

Physical characteristics of the *Cosmic City* include the encircling enclosure and its protected gates, axial line of procession and approach, monumental use of scale in the public realm, the sacred centre, and the meaning of place as influenced by cosmology, geomancy and astronomy. The mathematical order of the settlement pattern and the

hierarchical organisation of space and bilateral symmetry as an expression of polarity and dualism (material versus spiritual) also characterise the *Cosmic City*. Historic examples of this form include Babylon (600 BCE), Teotihuacán, (AD 450), and Chang'an (AD 700).
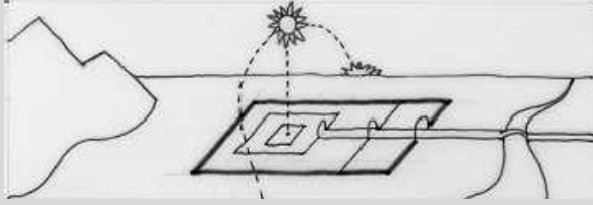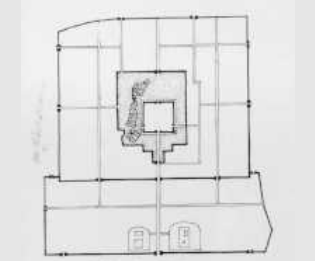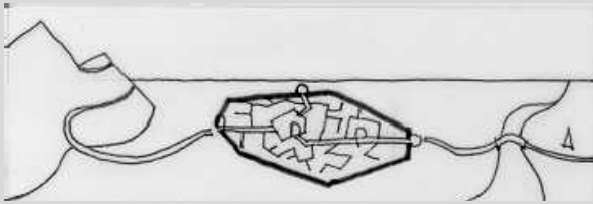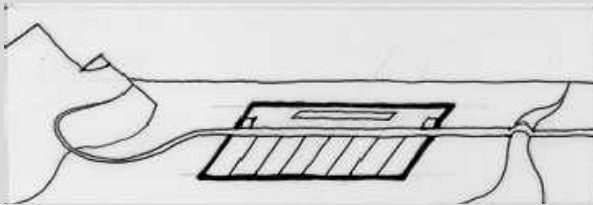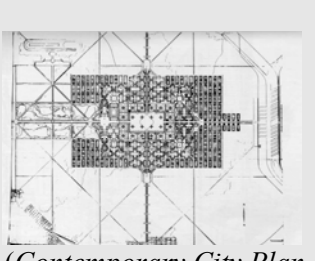
Spatial Characteristic	Archetype	Example
(Daffara, 2002)	**1 Cosmic City** Nature of reality concerned with ideas	The Forbidden City, Peiping (Moughtin, 1996: 57)
(Daffara, 2002)	**2 Organic City** Nature of reality concerned with or balanced by both matter and ideas	(Munich, c.1840 in Rowe and Koetter, 1985: 131)
(Daffara, 2002)	**3 Mechanistic City** Nature of reality concerned with material good	(*Contemporary City Plan*, in Fishman, 1982)

Figure 2.9: City Archetypes

Physical characteristics of the *Organic City* include anti-geometrical layouts, the neighbourhood unit as the key concept of settlement organisation, balance and interaction of diverse parts and intimate scale and closeness to Nature. Other hallmarks of the *Organic City* are definite boundaries and the size of the settlement, use of traditional materials, preservation of historic landmarks and celebration of special landscape features, and incremental development over time. Historic examples of this form include Ur (1900 BCE), Athens (500-400 BCE), and the *Medieval City*.

Physical characteristics of the *Mechanistic City* include simplicity, productive efficiency, autonomous parts linked by well-defined dynamic connections, and explicit rationality for the division of space and the managing of the flow of goods and people. Other characteristics are the grid settlement patterns preserving adaptability and standardisation separations which tend to isolate and alienate, and the non-human meta-scale of development. Historic examples of this form include the Greek and Roman Military Colony (e.g., Neopolis), Le Corbusier's *Contemporary City Plan*, and Modern Brasilia.

One implication for the CCM is that Lynch´s (1981) three city archetypes can be related directly to Sorokin's cultural paradigms as they both index the culture's nature of reality (Figure 2.9). From Sorokin's perspective the *Cosmic City* manifests where the culture's nature of reality is concerned with metaphysical ideas, the *Organic City* manifests where the culture's nature of reality is balanced by both ideas and matter, and the *Mechanistic City* manifests where the culture's nature of reality is concerned with material good.

2.4.4 Synergy of the three socio-cultural change frameworks
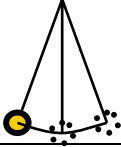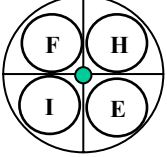
Why were these three models selected to formulate a CCM, in order to explore the possibility of illuminating the socio-cultural production of space, alternative to the neo-Marxist *radical political economy model* of planning? Firstly, Sorokin's super-rhythm of cultural paradigms is the only macrohistory of civilisations (reviewed out of 13 macrohistories (Daffara, 2004)), that uses architecture, and by implication, the design of the city as a logical manifestation of socio-cultural forms. As a result, Sorokin's work is related to the research objective of explaining the relations between cultural paradigms, city visions and human agency in making the city. Thompson et al's S-CV theory overcomes the dualism inherent in Marxist thinking and social dynamics (State versus Market) by explicating viable strategies and modes of life related to worldviews of nature and human nature. The diversity of social solidarities in S-CV theory acknowledges the complexity that emerges in real life through changing alliances between social actors. From Wilber's *integral* perspective, the S-CV model may explain individual inner intentions and corresponding outward behaviour, whilst also describing inner cultural worldviews and myths and outward social system dynamics and characteristics. Simply

put, S-CV operates across all dimensions of reality. S-CV theory is also used by sustainability advocates (Rotmans and de Vries, 1997) to devise computer models and to explain the difficulties of making cultural change interventions in the individual (behavioural) and collective (social) dimensions (in terms of how one group's utopia may be another group's dystopia, AtKisson, 1999: 114). Thirdly, Lynch's ideal city archetypes not only operate at the myth level of city visions, but also manifest in varying degrees in the real world. As a result, they potentially bridge the gap as cultural metaphors for ideal city form.

The CCM is essentially the conjunctive use of Sorokin, Thompson et al, and Lynch's separate models. In this section, the compatibility and meta-patterns between the three models is discussed, particularly the relations between: (1) cultural paradigms at the macro level of civilisational change; (2) social group's worldviews and ways of life at the meso level of cultural change; and (3) cultural metaphors for ideal city form at the micro level of urban change. The discussion proceeds from the vantage point of S-CV theory's social solidarities, and compares relations outwards to cultural paradigms, and then inwards to city archetypes.

Firstly, the social groups of Thompson et al's SC-V theory may be aligned with Sorokin's thesis of the super-rhythm of *sensate* to *ideational* cultural paradigms. This relationship is located in the isomorphic view of human nature, such that it places control in the alternate poles of either self- or order-centred (Table 2.4). This influences the social group's degree of cohesion and collectiveness, which is essentially the dominance of self versus group. Fatalists and Individualists believe that control is centred within, and they tend to flatten hierarchies and group dominance. Hierarchists and Egalitarians posit control externally and both create hierarchies, but to different degrees of social prescription (rules).

Table 2.4: Overlay Sorokin's Macrohistory and SC-V Theory

	Sensate (materialistic)	Ideational (spiritual)
	Modification of the external world using power of self	Modification of self to align with external control
	Fatalists Individualists	Hierarchists Egalitarians

The implication of the above isomorphism is that each social solidarity is dependent on a particular cultural paradigm. The relations are as follows. Individualists tend to be materialistic (*sensate*), as their view of nature is that it is benign, a skill-controlled cornucopia (of matter) for the material benefit of self-seeking humans. Egalitarians tend to be metaphysical thinkers (*ideational*), as their view of nature is that it is ephemeral, 'good' and humans as part of nature are also born 'good', but both are corruptible by the ideas and actions of imperfect institutions. Nature being strictly accountable for use by humans takes pre-eminence over self and is the source of ideas of harmonious living. Hierarchists tend to be balanced (*idealistic*), as their view of nature is that it is perverse and tolerant, bountiful within strictly accountable limits. Their view is eclectic, or to varying degrees an integration of ideas and material well-being. Fatalists and Hermits do not tend to be active players in the social system, but their views of nature tend to be polarised. Fatalists, being passive *sensate*, see nature as capricious, whilst Hermits are ascetic *ideationalists* and thus see it as resilient and freely available.

Moreover, Sorokin's *idealistic* (integrated) cultural paradigm may manifest the following mixed alliances of social solidarities. In each alliance, an integration of power (centred through 'order' and 'self') manifests different political forms.

1. *Hierarchists + Fatalists*   = ethnicity, tribalism, or dictatorship
2. *Egalitarians + Fatalists*   = nationalism, ideology, or theocracy
3. *Hierarchists + Individualists*   = free market and multi-party democracy
4. *Egalitarians + Individualists*   = social democracy, egalitarian humanism, or communitarianism

Inayatullah (2002b) states that Sorokin's model describes only five ways to apply meaning to the real. Thompson et al (1990: 97) similarly state that their model comprehends no fewer than five viable ways of life. The direct correlations can be interpreted as: (1) the *ideational* paradigm informs Egalitarianism; (2) the *sensate* paradigm informs Individualism; (3) the *idealistic* (mixed) paradigm informs Hierarchism; (4) the sceptic paradigm informs Fatalism; and (5) the ascetic *ideational* paradigm informs autonomous ways of life.

Secondly, the relations between social solidarities and city archetypes may be deduced from the shared worldviews of nature that are then expressed as spatial forms. For example, if Hierarchists view nature as perverse/tolerant and bountiful within strict limits, then it is consistent that they tend towards the characteristics of the *Cosmic City* archetype, which places an emphasis on the built environment with bounded limits within the landscape. Egalitarians, who view nature as ephemeral and strictly accountable, would tend towards the characteristics of the *Organic City* archetype, which places an emphasis on harmony with natural assets and a contained settlement pattern. Individualists, who view nature as benign, would tend towards the characteristics of the *Mechanistic City* archetype, which places an emphasis on convenient utility and the capacity to expand limitlessly into the landscape.

To reiterate, the purpose of the CCM is to fulfil two research objectives. The primary question seeks to understand the causal multi-level relationships between city visions, systemic purposive action, worldviews and paradigms, and cultural myths. The secondary question seeks alternative change models that explain the replicating or cyclic emergence of city archetypes couched within historical city visions. The explanation of the CCM's multi-level framework and the relations between grand civilisational paradigms, social groups and their ways of life, and city archetypes (cultural metaphors of the ideal city) has set the scene for the next task; to road test the model against the historical record.

2.5 Application of the CCM: recasting cities

2.5.1 Recasting the emergence of historic cities with cultural paradigms & their city archetypes

Within the application of the CCM, macro-level refers to Sorokin's cultural paradigms, meso-level refers to S-CV theory's dynamics of social solidarities and dominant alliances, and micro-level refers to Lynch's cultural metaphors of ideal cities. Lynch sourced his city archetypes from an analysis of archaeology and the histories of the development of cities. The following section expands on Lynch's work, by applying the CCM to the historic emergence of exemplars of each city archetype, speculating on the fabrication of each through social dynamics and reciprocal cultural paradigms within civilisation.

Firstly, the appearance of the *Cosmic City* can be explained at the macro-level as the manifestation of a culture that orders its knowledge by metaphysical or *ideational* thinking. In this culture the world is considered to be controllable, and humans are deeply flawed but redeemable by firm, long-lasting trustworthy institutions. Examples are the tribal council of the God-King or Church aristocracy at the *ideational* phase and expert bureaucracy at the scientific phase. At the meso-level, S-CV theory explains how the Fatalist's belief that "nature is capricious – a lottery controlled cornucopia – and that human nature is unpredictable" (Thompson et al, 1990:28, 35), comprises the critical mass of the agrarian society, which is then guided by the wisdom and hierarchy of its spiritual elders (elite). This city is foremost a holy place, the material basis of the religious idea and ceremony for psychological domination that binds the peasantry to the system (Lynch, 1989:9). The social solidarities of Hierarchy and Fatalism, in alliance within the culture, define the dominant pattern. At the peak of an *ideational* (spiritual) culture, one can find evidence of the building of the *Cosmic City* archetype. Examples include the cities of Teotihuacán 450AD built by the Aztec Teotihuacán in Mesoamerica, and Babylon (600BC) built by the Chaldeans, and the military town of Palmanova 1593AD built by the Venetians during the Renaissance.

Secondly, the creation of the *Organic City* can be explained at the macro-level as the

manifestation of a culture that orders its knowledge in synergistic harmony between the spiritual and physical. Nature is considered fragile, intricately interconnected and ephemeral, and humans are seen to reach their potential within the community. At the meso-level, S-CV theory reveals how the (often short) wary alliance of Hierarchy and Egalitarianism define the dominant pattern within the *Organic City's* culture. The Egalitarian's belief that nature is ephemeral and strictly accountable, and that human nature is essentially good but corruptible by institutions (Thompson et al, 1990:28, 34), is allied with the Hierarchist's system of administration. The city is foremost the place for healthy community and cultural development. It is a self-regulating and self-organising homeostatic dynamism. The internal organisation of settlement tends to be a hierarchy, with differentiated parts within a complex whole, much like living cells where each unit has its own bounds and its own centre (Lynch, 1989:91). At the peak of an *idealistic* (integrated) culture there is evidence of the building of the *Organic City* archetype. Examples include the cities of Ur 1900BC built by the Sumerians and Athens (500-400BC exemplar of the Polis) by the Greeks. More recent examples include the *Garden/Social City* Movement of late 19th and early 20th centuries that influenced the new towns of Letchworth and Welwyn, England.

Thirdly, the fabrication of the *Mechanistic City* can be explained at the macro-level, as the manifestation of a culture that orders its knowledge by materialistic (empirically observable), rational and reductionist thinking. This culture seeks to achieve the most good for the most number of people, either through maximising individualism (via free market) or utilitarianism (via control). At the meso-level, S-CV theory explains how the alliance of Individualism and Hierarchy define the dominant cultural pattern for the *Mechanistic City*. The Individualist's belief that nature is benign and resilient, and that humans are inherently self-seeking and atomistic regardless of the institutional setting, uses the Hierarchist's system to channel human nature and endeavour rather than changing or redeeming it (Thompson et al, 1990:28, 34). The *Mechanistic City* is foremost a place of triumphant conquest/colonisation and achievement, facilitating as efficiently as possible the work of the civilisation. At the peak of a *sensate* (materialistic) culture one can find evidence of the building of the *Mechanistic City* archetype. Examples include the Imperial Capital Alexandria (3rd century BCE); Roman colony cities (50BC-AD100); and more recently the Federal Capital City of Brasilia, Brazil, as an early to mid-20th century cultural product.

As demonstrated previously, Thompson et al's social solidarities can be integrated within Sorokin's typology of cultural paradigms, and these in turn can be related to the manifestation of city archetypes (Table 2.5). The CCM therefore illuminates relationships between cultural paradigms; group dynamics of ways of life and decision-making; and ideal forms of human habitation. The benefit of integrating these levels of reality within a multi-level framework is that it provides another way of explaining how city archetypes/visions emerge and provides a model for anticipating city futures.

To demonstrate the last point, the CCM infers that the development within cities for the last century has occurred predominantly within the *sensate* cultural paradigm using the *Mechanistic City* archetype. Applying Sorokin's macrohistory to the field of city planning suggests that a shift towards an *idealistic*/integrated cultural paradigm is plausible, manifesting a renaissance of the *Organic City* archetype. Trends that substantiate this inference include:

- The sustainability movement arguing for the Green City;
- The message that UNESCO brought to the City Summit (Habitat II) in Istanbul that could be expressed in three words: Humanising the City. Further to this is the growing awareness of the need for a multi-cultural politics of difference in cities;
- Urban Policies aiming for walkable, compact cities instead of sprawl (e.g., New Urbanism's Transit Orientated Development principles), in order to provide efficient public transport, to counter urban apartheid and social isolation; and
- Advocacy for greater community participation and visioning in city governance, planning, design and construction (e.g., *The Oregon Model* of community visioning).

Table 2.5: Cultural paradigms, Group dynamics and City Archetypes		
Sorokin's Macro-History of Cultural Paradigms	**Thompson & Wildavsky's Cultural Model of Social Solidarities (ways of life)** *Dominating Group(s):*	**Lynch's City Archetypes (Ideal form)**
Ideational (Spiritual)	***Hierarchy + Fatalism*** Eg: Babylon 600BCE Teotihuacán AD 450 Palmanova AD 1593	Cosmic City
Idealistic (Eclectic/Integrated)	***Hierarchy + Egalitarianism*** Eg: Ur 1900BCE Athens 500-400BCE Garden City/Social City Movement of late 19thC early 20thC – new towns of Letchworth and Welwyn, England.	Organic City
Sensate (Materialistic)	***Individualism + Hierarchy*** E.g., Imperial Capital Alexandris, Roman Colony cities 50BCE-AD100 and Federal Capital Brasilia, Brazil, early - mid 20th C.	Mechanistic City

2.6   A multi-dimensional view of maps

To conclude, the key messages of this chapter include the overview of planning epistemology and the clarification of the meaning of 'city', the establishment of a meta-map of FS, UP/DS, and SCCS methods to be used in the research, and the formulation of the CCM.

First, this chapter positioned the research within the epistemology of the radical planning model. Accordingly, the definition of the city adopted from Wilber's *integral* model the importance of holism, in which the city is viewed as a holonic habitat of spatial, biological, psychosocial and metaphysical dimensions for human and non-human exchange (social/economic and ecological) that allows civilisation to realise its potential.

Secondly, CLA structures the research to map the applicable FS, UP/DS and SCCS methods. This allows examination of the research questions across the multiple levels of urban reality, including litany, systems, worldviews/paradigms and myth/metaphors. Through the framework of CLA and the application of the CCM, causal relationships are

explored between subconscious memetic archetypes at the myth level of urban reality, cultural paradigms at the worldview level, and purposive actions at the systemic level of urban reality. This examination reveals the social interventions required to achieve alternative city futures. This approach can thus achieve the primary research question.

Thirdly, examples in history (from *Greek polis* to Brasilia and from *Cosmic City* to *Mechanistic City*) clearly demonstrate that the way cultures understand and order the knowledge of human existence influences the cultural metaphors or visions of the city, the place of human habitation where civilisations manifest their being and/or becoming. CCM provides insights into the dynamics of the socio-cultural production of space. In this regard, research objective two(a) is satisfied, such that alternative change models other than the neo-Marxist model are found to explain urban revolutions. Arguably, if these change dynamics are better understood and accepted, redesigning and transforming cities can occur more rigorously to facilitate the journey towards an *integral* future (Wilber, 2000a: 125-7, 138-9), one that is more conscious, holistically healthy and sustainable, and is unified in purpose, within diversity.

3 City theories: multi-dimensional construction of the city
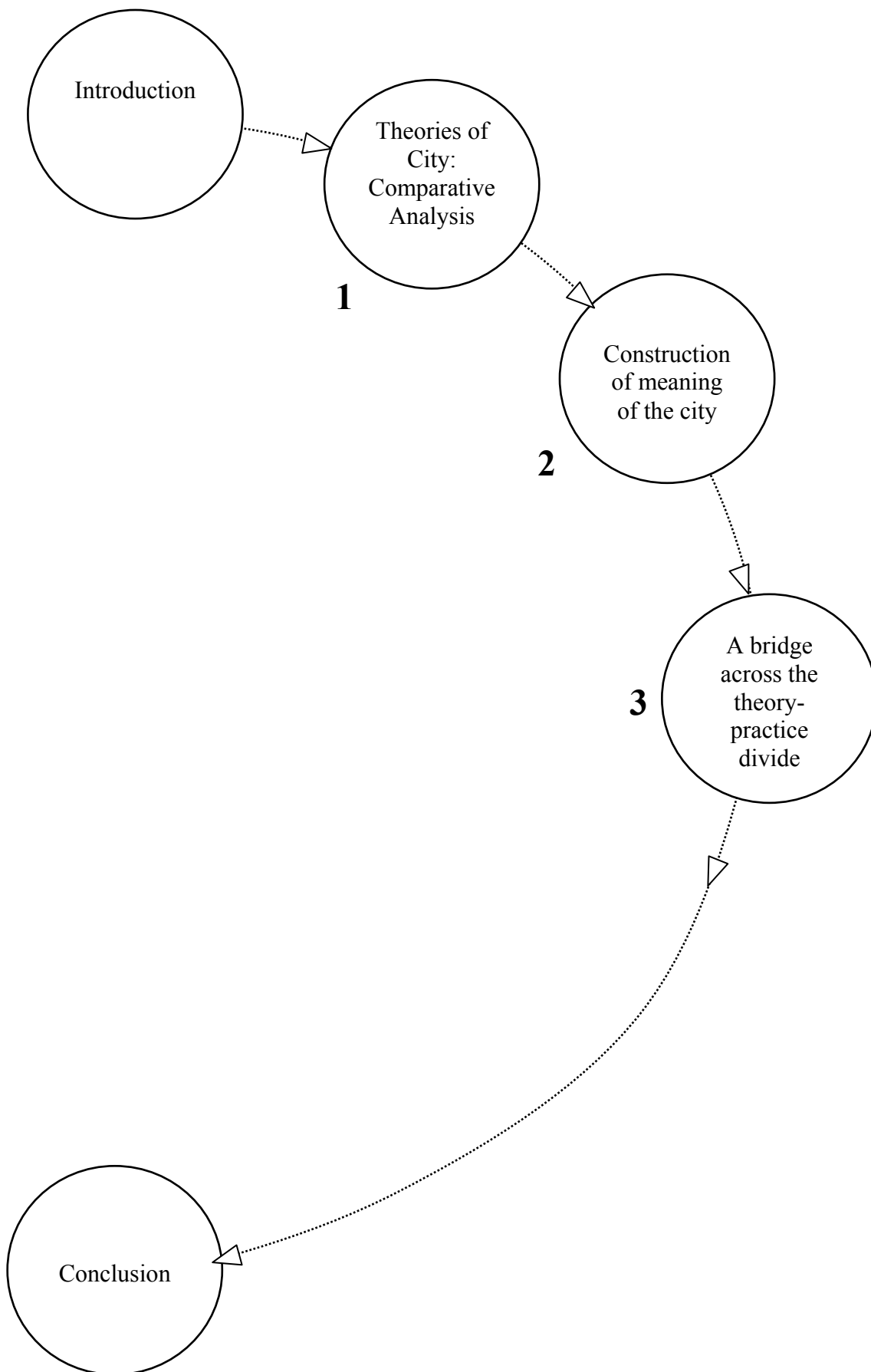
Figure (3.1): Chapter Two Roadmap

3.1   Introduction

Chapter Three aims to address research objective four, to explore the possibility of formulating a multi-dimensional teleology of the city; thus resolving the urban theory-practice schism. It is presented in three parts, a comparative analysis of city theories, a critique of the construction of the meaning of the city, followed by speculations about means of bridging the theory-practice divide.

First, leading on from the previous chapter's clarification of the city as a holistic multi-dimensional habitat, a comparative analysis of eleven theories of the city is undertaken. This analysis examines their degree of wholeness with respect to the four levels of reality: (1) the material (physis); (2) the biological (bios); (3) the psychosocial (nous); and (4) the spiritual (theos). The major contributors to 20th and 21st century city models engage in various debates. The key themes of these debates are identified by Hall (1996) and Castells (1972) as being the construction of cities for their multiple use value (ecological and cultural) instead of their reduction to their market (economic) value, and a focus on social integration and justice within cities.

Contributions included in the forthcoming comparative analysis are sourced from Max Weber, Louis Wirth, Patrick Geddes, Lewis Mumford, Kevin Lynch, Christopher Alexander, David Harvey, UN-HABITAT's declaration on human settlements, Manuel Castells, Peter Hall and Vāstu. They represent multiple disciplines, including sociology, biology, geography, architecture, urban and regional planning, urban sociology, and cosmology. Hence collectively these workss provide diverse perspectives on the nature of the city. Of course, these are by no means the only worthy contributions to the field of urban studies. For the sake of pragmatics the above urbanists and the work of the UN-HABITAT, are selected for further study as their theoretical work embodies and articulates major concepts in the field, which impact on public and private decision-making in cities. Ultimately, their constructions of the nature of the city affects the lives of past, present and future citizens across the world. Each of these theories is located within the major paradigms (epistemology) of planning knowledge/practice described in Chapter Two's overview of planning theory, before a critique of their main arguments is presented. Urban theorists missing from the above list may be accounted for as contributors of city visions that profoundly influenced planning policy, or as authors of

urban empirical studies whose work validates urban weights and drivers of urban change previously discussed.

Following this review and analysis, normative theories of the city are represented and compared to explore the concepts each contributes to the multi-dimensional (or otherwise) construction of purpose and meaning for the city. This lays the foundation for considering whether the schism between urban planning theory and practice may be resolved, and how a holistic purpose of the city and its cultural meaning could be constructed. A link emerges in terms of the construction of cultural meaning for the city, which in turn relates back to the power of city visions within urban revolutions.

This chapter concludes by describing the key lessons emergent from the comparative analysis of city theories. Essentially, it is proposed that it is possible to construct a multi-dimensional comparative framework for urban research and city development. Such a proposed framework can also be used to gauge the relative power of city visions in changing the urban qualities of the real world.

3.2   Theories of City – comparative analysis

3.2.1   Who's who in the landscape

This section relates urban theory contributors to the major paradigms (epistemology) of planning knowledge/practice described in the overview of planning theory (Section 2.2), before discussing the diverse contributions of each.

3.2.1.1   The rational comprehensive model

Max Weber ([1912], 1958), Louis Wirth ([1938], 2000), Patrick Geddes ([1915], 1968) and Lewis Mumford ([1961], 1989) were influenced by planning's Enlightenment epistemology, which underpins the heroic model of modernist planning. All clearly display tendencies in their work towards rational comprehensive models of the city. However, the eccentric Geddes and humanistic Mumford do not necessarily align entirely

with this approach. Whilst Geddes' model of the city is comprehensive in scope – articulating relations between acts/deeds of place, work, folk and the evolutionary path from town to city – he also seeks to understand the metaphysical dimension of the city and its citizens, which broadens the practice of regional planning. Mumford is also critical of the cities of modernity, which he argued are the antithesis to their predecessors. The city's purpose, in his view, must ultimately be for social benefit and human development and not determined by the *techno-economic machine*. His means to achieve this is comprehensive regional planning by expert planners for the benefit of the public. Such an approach, shared by Geddes, Wirth and Weber, relies on the modernist belief in a possible theory of the city, revealed through rationality and its unitary definition of truth, and holds that the purpose of the city is dependent on state-directed power.

3.2.1.2   The advocacy-planning model

Postmodernism rejects an absolute truth explaining the nature of the city and how it ought to be planned. Jencks (2001) in his *Theories and Manifestos* categorises the work of Kevin Lynch within the post-modern camp.

> The image of the city was published at a time when the extreme aridity of Modernist theories of urbanism had reached an extreme. In that environment, Kevin Lynch's pragmatic, perceptually based approach to urban form was all the more readily absorbed. His concern for the legibility of cities countered the abstract rationalism of CIAM as well as the unavoidable reality of suburban sprawl (Jencks, 2001: 18).

Lynch's (1960) schema for understanding the public image of any given city, and his normative theory of good city form ([1981], 1989), draw on the individual and collective images of citizens. At its heart is a shift away from the professional expert and passive public client view of planning, towards the advocacy-planning model. Lynch's method of mapping the *imageability* of a city is formed by an expert facilitator role. "We have used two methods: the interview of a small sample of citizens with regard to their image of the environment, and a systematic examination of the environmental image evoked in trained observers in the field" (Lynch, 1960: 140). His articulation of city archetypes as symbols of the process of human beings again displays a respect for the consideration of underlying diverse values – a trait of advocacy planning.

3.2.1.3 The radical political economy model

Harvey's ([1973] 1988) early work can clearly be located within the radical political economy model. The planner in this context is the servant for capital, and the socio-economic production of space. Over time, however, his position is changing towards the social learning and communicative action model, with the planner as learning partner and critical listener. From this position Harvey expounds his "just planning practices" ([1992], 2000) to counter the faces of oppression in daily life.

Castells, on the other hand, remains steadfast in critiquing and understanding the dynamics of the city and its socio-spatial production using the neo-Marxist economic model. The *informational* society and its networked cities are seen expressions of the techno-economic and cultural restructuring of global capital. Grassroots social movements (e.g., ecological, feminist, or locale-based) in Castells' (2002) view have more opportunity to be effective cultural change agents within the city, than urban planners as agents of metropolitan strategic plans. Castells is thus reiterating his long-held belief that the planner is trapped in a technical paradigm as the servant of capital.

3.2.1.4 Equity planning model

Hall, academic and city historian, appears to work within the equity-planning model. His projects are selective (e.g., *The Inner City in Context*, 1981; *Urban Future* 21, 2000), such that he chooses to do 'good' policy work for progressive governments. In this sense the planner is still the key expert actor choosing the politicians they want to work for in order to benefit the marginalised, in effect acting as an 'expert equalizer'. This is evident in his manifesto, which suggests that the aim of urban policy is to produce economic prosperity, cultural vibrancy, social equity, sustainable and happy lives for all, as well as better city governance with greater levels of citizen participation (Hall and Pfeiffer, 2000: 38).

The Istanbul Declaration on Human Settlements (1996a) is a policy document with essentially the same principles. It advocates planning best practice to improve the urban condition of the poor and marginalised. As such, it explicitly reveals itself as being strongly influenced by the equity-planning model.

3.2.1.5 Social learning and communicative action model and the radical planning model

Alexander's work epitomises the values of the social learning and communicative action model. His democratisation of the design process from the hands of the expert architect to design-literate builders and users of architecture demonstrates his commitment to community learning and action. He is also an activist for urban change against the mechanistic, modernist planning and design paradigm through community alliance and acting as an enabler. In this sense, Alexander's work, embodied in *A Pattern Language* (Volumes 1-3, 1975 – 1979) and *The Nature of Order* (Books 1-4, 2002 – 2004), is also couched within the last planning epistemology, the radical planning model.

3.2.1.6 How can these models influence each other?

Weber has influenced many of the other urban theorists by formulating the concept of *urban community*, with its distinct set of economic and socio-political relations. According to this concept, the city is a market, a citadel, a court, a fraternity and an administrative centre. After Weber's contribution, the other urban researchers' works offer the following critiues. For example, Wirth's empirical insight into measures of the geographic, social and collective personality/cultural characteristics of urban life, provide a method of observing Weber's urban community. Geddes and Mumford might also inform Weber's approach in terms of considering the importance of the inner world's metaphysical relations to the concept of urban community symbolised by the *cloister* or *city temple*. Lynch and Alexander might go further by teaching Weber not to abandon the power of the metaphor (archetype or psychosocial pattern) in shaping not only human values but (as a result) the design of cities. Vāstu and Alexander also re-emphasise the interconnectedness of things in the space-matter continuum and the influence cosmology

has on the spatial form of cities over and above rationalisations, contrary to Weber's rationalist notion of the city. Castells acknowledges that Weber's ([1912], 1958) analysis of the autonomy of the medieval urban community – the politico-administrative relations and institutions – laid the framework for "the ideology of belonging to the city which lasted into advanced industrial society" (Castells, [1972], 2002: 25). Indeed, Castells reserves, "the use of the notion of cities for a specific cultural form in the long-standing tradition of Weber's theory of cities as cultural and political constructions" (2002: 373). Harvey's positionality argument ([1992], 2000) might reveal a flaw in Weber's claim that his notion of the city or urban community only emerged in Western civilisations, and not in the Orient (Eastern civilisations such as India or China). Furthermore, Post-colonial theory exposes Weber's claim as a misunderstanding of the non-Western city as a cultural and political form.

Who's work might provide more insight for Geddes and Mumford – the iconic advocates of the city as the product and recursive catalyst for human civilisation and development? Lynch might show Geddes and Mumford how to realise the art of city building as the spatial expression of human values. His method of analysing and codifying the *imageability* and legibility of a city's form as held in the minds of its citizens, and how planners and urban designers can strengthen this identity might well delight Geddes and Mumford. Moreover, Lynch (using concepts of district, edges, paths, nodes and landmarks) builds on Geddes' technique of *conservative surgery* in urban areas to conserve their sense of place. Harvey's just planning practices might teach Geddes and Mumford to be more aware, firstly, of the pitfalls of expounding universal ideas about the city, and secondly, of cultural imperialism as propagated by the design of urban projects and institutionalised violence. Harvey, Castells and the Istanbul Declaration, might demonstrate to Geddes and Mumford how their paternalistic notions of the city bias its spatial design and decision-making processes against the inclusion of women and children. If Geddes and Mumford are not explicitly biased then at least it can be said that their urban models are blinded to gender-sensitive place design.

Whose work might inform Castells and Harvey, the advocates of the radical political economy model? Castells' *informational* city, based on historic technical revolutions driving economic restructuring and social polarisation, would probably only spur Geddes, Mumford and Hall to criticism. They would remind Castells that cities ought, through

good governance, to shape their technics for the benefit and wellbeing of their citizens, rather than be detrimentally oppressed by them. Geddes, Mumford and Alexander, along with the practice of Vāstu, might also remind Castells and Harvey to broaden their urban planning epistemology to encompass the unification of inner and outer dimensions of knowing and urban life, in other words, to seek the connections between the spiritual and the material levels of urban reality.

Whose works might critique Hall's concepualisation of the city? No doubt Hall has learnt much from his forebears. It is perhaps from his contemporaries and the radical planning model that Hall might be best challenged. Geddes might remind Hall of the importance of constructing the spiritual city. Alexander and Vāstu might disturb Hall's empirical aims of urban planning policy and ask why the metaphysical aims are missing. Alexander might teach Hall about cities' requirements for incremental growth toward wholeness, such that what happens in the city, happens to its citizens. If the city fails to produce wholeness people suffer (Alexander, 1975: 19). Harvey's (2001) more recent argument for the co-evolutionary development of our socio-cultural forms (cities), their urban transformations, and humans' 'species being' and potential, might also shift Hall's urban planning policy intent. This aim might develop a repertoire of strategic capabilities for human action in the city grounded in humanity's multi-dimensional nature (Harvey, 2000). As a result, planning policy would ensure that cities are, "collaborative enterprises incorporating competitive processes, diversifications (divisions of labour, of function, of lifestyles and values), the production of built environments, of spaces and of divergent temporalities" (Harvey, 2001: 204).

Finally, whose work might teach the radical change agent Alexander, who vehemently critiques the mechanistic, modernist paradigm of city development and continues the anarchist tradition espoused by Ebenezer Howard? In terms of the degree of holism, no other theorists match Alexander's breadth and depth across the material, ecological, psychosocial and metaphysical levels of reality. In finer detail perhaps, Alexander may learn more. Weber, Harvey and Castells may remind Alexander to pay more attention to the culture of city as a market place, and people's pursuit of personal capital and surplus within it. They might also challenge Alexander that the rationalisation process is not about to shift due to transformations in consciousness and cosmology. Consequently

urban futures are contingent on technical, economic, political and cultural processes, and not metaphysical processes.

Vāstu, when critiqued from the neo-Marxist position, incorporates the clearly inequitable Hindu caste system. This system is structurally violent toward the weakest in society and in the city as a cultural form. The Dalits, translated as crushed, stepped on or oppressed, and formerly known as the 'untouchables', are outside the four castes and considered below them. Although the concept of untouchability is outlawed in India, rural Dalits are excluded from parts of the village, including the temple and from drawing water from the same well as caste Hindus. Therefore, Vastu city planning would benefit from incorporating Harvey's ([1992], 2000) 'just planning principles' to counter the diverse forms of oppression.

3.3   Construction of meaning of the city

This section explains how theories contribute to the phenomenology, ontology, ideology and episteme of the city. In particular, different levels of reality are used to theme the discussion of what concepts, and by whom, contribute to the multi-dimensional, theoretical construction of meaning of the city. Urban concepts are posited within the material, biological/ecological, psychosocial, and metaphysical dimensions.

3.3.1   Material construction of the city

The main contributors to the understanding of the city at this level of reality are Harvey and Castells. The physical form of the city ought to provide economic (efficient), equitable and effective (functional) exchange between people. The concept of the city's physical assets, produced through either private or collective surplus, owes much to neo-Marxist critique of the socio-economic production of space (Harvey, 1988; Castells, 1989). Firstly, Harvey's (1988) concepts of 'created space' (the locus of personal and social space, and of ethnic domains and their defensibility) interacting with 'effective space' (locus of production) in a context of oppression (Harvey, 1992), affirm that the image of a city is individually and socially constructed and continually changes.

Harvey (1988) cites Cassirer (1944) and his three categories of spatial experience: 'Organic Space', 'Perceptual Space', and 'Symbolic Space'. He also discusses Langer's (1953) argument about 'Virtual space', Somer's (1969) work on spatial environmental determinism, Lynch's (1960) typology method to interpret social *imageability*, and Dart and Pradhan's (1967) work showing that an individual's spatial schema is culturally and educationally influenced. Harvey concludes that mental spatial schemas are specific to individual experience and undergo continual change.

> Memory itself may fade and parts of the spatial image which are not reinforced may quickly disappear. Social space is not only variable from individual to individual and from group to group; it is also variable over time. If we are to understand space, we must consider its symbolic meaning and its complex impact upon behaviour as it is mediated by cognitive processes. One of the benefits of developing this view of space is that it seems capable of integrating the geographical and the sociological imaginations, for, without an adequate understanding of social processes in all their complexity, we cannot hope to understand social space in all its complexity (Harvey, 1988: 36).

Citing the work of other researchers (Gans 1969, Jacobs 1961, and Webber 1963), Harvey argues against a 'spatial environmental determinism' that regards "the spatial form of a city as a basic determinant of human behaviour" (Harvey 1988: 44). Rather, Harvey argues that, "it is perhaps more reasonable to regard the city as a complex dynamic system in which spatial form and social process are in continuous interaction with each other" (1988: 46). Harvey explores this concept further in *Consciousness and the Urban Experience* (1985) and *Spaces of Hope* (2000), using a critical geography couched in a frame of dialectical species co-evolution between humans and the socio-cultural forms (e.g., cities) that they create. His argument is explored further later in this chapter in the context of psychosocial relations to city form (Section 3.3.3).

Secondly, Castells' (1989) work develops concepts such as the *informational mode of production* driving change to the 'space of places' within the information network ('space of flows'), creating either 'multi-nodal centrality' (hubs) or 'switched-off locales'. Castells' main argument relies on a Marxist analysis of the contradictions of collective consumption between the techno-economic systems of the modes of production and their socio-cultural forms. He argues that, "the interaction between modes of production and

modes of development is at the source of the generation of new social and spatial forms and processes" (Castells, 1989: 11, 7). Castells proposes that the simultaneous development (since the late 1960s) of micro-electronics and telecommunications, with the enhanced ability to store, retrieve and analyse information, constitutes a new technological paradigm (1989: 12-14). He states that the two fundamental features of this new technological paradigm are: (1) focussed on information processing where its raw material itself is information and so its outcome (1989:13); and (2) the main effects of their innovations are on processes rather than products, essentially innovations whose products are in fact processes (1989: 14). Castells concludes that the emergence of this new technological paradigm is driving innovation to create more relationships between society (socio-cultural symbols), scientific knowledge and its productive basis (1989:15).

The impact of restructuring caused by the *informational mode of development* is postulated by Castells as the manifestation of the *Dual City*, a fragmented socio-spatial reality, simultaneously emerging with spatial concentration of power in metropolitan regions. The *Dual City* is the reification of urban apartheid within society, and the city which privileges social groups connected to the informational-networked economy and disadvantages those of the restructured labour class. Castells (1989) empirically demonstrated this phenomenon in his research of the restructuring of New York City and Los Angeles. The *Dual City* is also the arena of conflicts between the a-historical 'space of flows' and the historical 'space of places' in the network society. Since the network society works in flows of capital, information, technology, organisational interaction and symbols, Castells postulates that the "space of flows is the material organisation of time-sharing social practices that work through flows" (1999: 412). He hypothesises that this space constitutes three layers. The first is the infrastructure layer, being the circuit of electronic exchanges, the second is the function of its nodes and hubs, and the third is the spatial organisation of the dominant, managerial elites (1999: 412-415). The impact of this is that citizens are becoming more disenfranchised from the processes of power and decision-making. For example, the managerial elite are cosmopolitan and live in their physical and virtual gated communities. In contrast the people are local, disconnected from global power structures facilitated by the space of flows. This has its own structural logic tied to the technological paradigm of the information age. The *Dual City* is thirdly the manifestation of 'spatial concentration', that is, the formation of networked metropolitan regions/nodes within the global economy, as milieux of innovation, with

competitive advantage and power. An example of such a polycentric settlement pattern is the metropolitan region of cities in the Pearl River Delta, China.

Castells' concept of the global city ([1999], 2002: 372), namely a planetary (trans-territorial) informational network of cities, is an advancement of Geddes' ([1915], 1968) notion of urban conurbation within a neo-technic order. Geddes described the then emerging phenomenon of the decentralised "urban conurbation" (new city regions) of late-industrial society, but saw it as an indicator of the 'neotechnic order' of cooperation and 'higher unity of body politic' (Geddes, [1915] 1968: 38). He saw the potential this new socio-spatial form (conurbation), had in terms of furthering human development and integration (1968: 43-49). In reality, urban conurbations are socially fragmented, with inequitable access to services, housing, infrastructure and economic opportunities (refer to Section 1.1.2.1). Another impact of this spatial concentration is that these major metropolitan regions (clusters of mega-cities) are ecologically unsustainable (Castells, [1999], 2002: 375). This point leads to the next dimension of the city – its biological/ecological assets.

3.3.2   Biological/ecological construction of the city

The main contributors to the understanding of the city at this level of reality are Geddes, Mumford, Lynch, Alexander, Hall and policy makers from UN-HABITAT. Essentially, the biological/ecological assets of the city ought to provide a healthy, hospitable and sustainable environment for humans and biodiversity.

Geddes, a biologist, had a biological conceptualisation of the city (Welter: 2002: 190), emphasising its role in the improvement and evolution of the human species. Geddes was influenced by neo-Lamarckism, and considered the city a habitat for humans and a means of improving the health of its citizens. In this regard, he shared some of the Eugenics movement's concerns. However, genetic heritage was not the overriding concern for Geddes, as his concept of "social heritage provides another means by which human beings can inherit the results of earlier generations' interaction with the environment" (Welter, 2002:191). Geddes was also influenced by Ebenezer Howard's *Garden City* movement, and developed the concept of the 'city in the region' to reconcile the 'town-

country' conflict and expound the interrelationships between the geography, history, culture and economy of a city within its environmental 'catchment' or context using the 'valley section' technique (Geddes, 1909). This concept arguably shifted the scope of the discourse from town planning to regional planning in the developed world. Mumford, one of the founding members of the RPAA (Hall, 1996: 148), and advocate of garden cities within a regional plan, argued for a broader consideration of people, industry and land as a whole entity, in order to provide better quality of life and conserve the city region's natural assets. Later, spurred by the historical context of the Cold War and the associated threat of global nuclear and bio-chemical extinction of ecological systems (Mumford, 1961: 570), he argued that the city, as a socio-cultural form of energy consumption and regulation, has to live within its natural limits like any other organism. He also stated that it must put itself to the service of organic fecundity (1961: 571). His influence continues today, particularly with the new urbanism movement and its charter, which espouses many of the same principles, regulated by smart growth policies such as urban growth boundaries.

After Mumford articulated the regional planning vision, Lynch and Alexander separately added to it the necessary urban design concepts to enable analysis and change to its built character or sense of place. Lynch's (1960) characteristics that contribute to a city's *imageability* include districts, edges, paths, nodes and landmarks. Later he proposed dimensions of performance that allow evaluation and improvement of the social production of city form, grouped under five meta-criteria (Lynch, 1981: 111, 118-223). *Vitality* is Lynch's key performance quality for good city form, relevant to the notion that the city is a habitat for life. His concept of *vitality* is anthropocentric, as it is "the degree to which the form of the settlement supports the vital functions, the biological requirements and capabilities of human beings – above all, how it protects the survival of the species" (1981: 118). *Vitality* consists of sustenance, safety, and consonance (climatic comfort) for human beings and, where it is economically useful to humanity, how well the city provides for the health of biodiversity and future ecological stability (129).

Alexander et al's *The Timeless Way of Building* (1979) presents a new theory and method of architecture, building and planning which has, at its core, that pre-modern traditional process by which the people of a society tended to order their physical world from an understanding of their own being within the cosmos (e.g., Vāstu). Alexander et al's main

argument proposes that when designing their environments people rely on certain spatial 'languages' to give them coherence which, like spoken languages, allow them to articulate and communicate an infinite variety of designs within a formal system. The elements of this language are composed of socio-spatial patterns.

> These patterns of events are always interlocked with certain geometric patterns in the space. Indeed, as we shall see, each building and each town is ultimately made out of patterns in the space, and out of nothing else: they are the atoms and molecules from which a building or town is made (Alexander, 1979: x).

Alexander et al's method, articulated by a socio-spatial *pattern language*, focuses on wholeness and the organic, incremental growth of the city. Bates (1997) draws the analogy that, "what 'a pattern language' does is build human habitats like coral reefs, weaving tiny niches into larger ecologies, creating unique intelligence and comfort levels at every scale" (1997: 14). Alexander et al's biological/ecological relations to city form are principally governed firstly by the patterns for regional structure that shape the distribution of towns, inter-urban greenbelts, and agricultural valleys (which protect the land and mark the limits of cities, 1977: 16-40), and secondly by the pattern of 'site repair' (1977: 509-512). Alexander et al's (1975, 1977, 1979) theory is focused, similar to Lynch (1981), on the quality of city building. But it goes deeper than Lynch by ensuring that human habitats are part of a wider social process of holistic healing and repair to create physically, emotionally and spiritually healthy places.

The purpose of the second United Nations Conference on Human Settlements was to address two themes of equal importance, "adequate shelter for all" and "sustainable human settlements development in an urbanising world" (Habitat II, 3-14 June, 1996). Human beings are at the centre of these concerns, such that they are entitled to a healthy and productive life in harmony with nature (*The Habitat Agenda*, 1996a: 1). Within the *Habitat Agenda*, the city of the 21st century is promoted as a living environment interacting with the natural environment that is reliant on sustainable energy. In response to this agenda, research into the ecological efficiency of cities has increased, and it is evident that "ecological restructuring of the built environment, as well as of consumption and production" (Hall and Pfeiffer, 2000: 203) is a critical development goal for cities. Therefore, the 20th century regional planning discourse about the biological/ecological

city comes full circle, ending with the same goal with which it began from Howard and Geddes' city in the region:

> Urban planning should seek to protect the natural environment both within the city and in the countryside around it, by producing sufficient green spaces within the city and by protecting agricultural land around it, while providing sufficient space for the city's growth: a task that often will involve transformation into a polycentric urban region of networked cities (Hall and Pfeiffer, 2000: 304)

Such a circuitous route, without substantial improvement in the developed and developing worlds, signals that cultural change is also necessary to improve the health of cities within their ecosystems. This point leads to the next dimension of the city – its psychosocial assets.

3.3.3 Psychosocial construction of the city

All the contributors mentioned above add concepts to the understanding of the city as a socio-cultural form. The key authors are Weber, Wirth, Geddes, Mumford, Lynch, and Harvey. The major argument is that the psychosocial assets of the city ought to provide humane, creative and just ways of life and habitats.

"The message that UNESCO brought to the City Summit (1997) in Istanbul could be expressed in three words: 'Humanising the City'" (Mayor and Binde, 2001: 95). The major commitments agreed to by participants at the conference in order to humanise the city are: (1) adequate shelter for all; (2) sustainable human settlements; (3) enablement and participation; (3) gender equality; (4) financing shelter and human settlements; (5) international cooperation; and (6) the assessment of progress (*The Habitat Agenda*, 1996a). Concepts that underpin the culture of cities begin with the emergence of the urban sociology field.

Weber ([1912], 1958) sought to review the concept of the city, finding that socio-economic elements were present and vital in the formation of cities. On this basis he established the concept of the *urban community*, a distinct and limited pattern of human

life. Martindale and Neuwirth (in Weber, 1958: 54) argue that Weber's concept of the *urban community* is formulated, "as a total systematic unit of inter-human life distinguished not by a single institution but by an order of institutions". In other words Weber sought to understand the city through meaningful inter-human behaviour (social actions, relations and institutions) that create an urban community. Weber's main thesis is that the essential features to constitute an urban community are:

> a relative predominance of trade-commercial relations with the settlement as a whole displaying: (1) a fortification [not just physical but comprising a resident/civic militia to take up arms in times of crisis], (2) a market, (3) a court [royal or manorial] of its own and at least partially autonomous law, (4) a related form of association [e.g. citizenship and fraternisation], and (5) at least partial autonomy and autocephaly, thus also an administration by authorities in the election of whom the burghers participated (Weber, [1912] 1958: 81).

'Autocephaly' refers to an autonomous legal and administrative magistracy, whilst 'burghers' means citizens (residents of a borough). Weber's theoretical formulation defined the city as a market place with a politico-administrative capability. The medieval Southern European cities (commune) provide a demonstration of his thesis in the real world. Weber also related how the Italian *Podesta* system of city (commune) governance of the Middle Ages, facilitated and propagated a rationalisation process within southern European cities' legal, property, trade, administrative and military systems, "that led to the development of a body of professionals trained in city administration" (Weber, 1958: 45). By implication, Weber's early work influenced his development of a typology of domination or leadership based on the 'ideal'[9] continuum between charisma (subjectivity-based leadership) and rationalisation (objectivistic legal-based leadership). This typology consists of charismatic, traditional and rational domination. These types can be related to the stages of urban development in Europe as follows. Charismatic leadership is evident during the *patrician city* (e.g., monopolisation of power in Venice by the nobility, 1297-1315) (Weber, 1958: 127). Traditional leadership is obvious during the *plebeian city* and the emergence of the *popolo* (fraternity of professional associations, e.g., Milano, 1198) (1958: 158). Finally, rational domination is evident during the industrial revolution, within cities focused on economic gain. The implication of Weber's domination model

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[9] "Ideal types" as defined and used by Weber are abstract constructs or models used as a standard of comparison to enable us to see the real world in a clearer, more systematic way (Weber, Max. 1947. *Theory of social and economic organization*. New York: Free Press.).

for urban development is that the rationalisation process deepens the divide between citizens and power, and increases differentiation and specialisation in cities. This is similar to Castells' *Dual City* concept.

Wirth (1938), of the Chicago school of sociology, was influenced by Simmel's (1903) work of the evolutionist-functionalist thinking of the German Sociological School. According to this view the individual develops the 'schizoid' mental life and character of the urbanite with their many social masks, within a culture of anomie. Wirth is recognised by urban theorists (Martindale and Neuwirth, 1959; Castells, 1972, 2002; Le Gates, and Stout, 2000; Mumford, 1961; Ellin 1996) as having contributed to the formulation of 'urbanism' as a way of life and the articulation of the causal relations between the urban characteristics (namely dimension, density and heterogeneity) and cultural forms or modes of social life. Wirth's thesis recognises the contributions of Georg Simmel (1903) for his psychosocial concepts of mental life in the city; Max Weber (1912) for his socio-economic concepts of the city; and Robert E. Parks (1925) for his human ecology concepts of the city. Wirth's sociological definition of the city in terms of population, density and heterogeneity is as follows.

> Urbanism as a characteristic mode of life may be approached empirically from three interrelated perspectives: (1) as a physical structure comprising a population base, a technology, and an ecological order; (2) as a system of social organisation involving a characteristic social structure, a series of social institutions, and a typical pattern of social relationships; and (3) as a set of attitudes and ideas, and a constellation of personalities engaging in typical forms of collective behaviour and subject to characteristic mechanisms of social control ([1938], 2000: 102).

Based on his definition, Wirth laid out three theoretical propositions for the city, which are arguably still relevant for today. Firstly, the greater the population the greater the incidence of 'segmentalisation' of human relationships, characterised by secondary rather than primary contacts (2000: 99). Secondly, Wirth (as influenced by evolutionary studies in the biological and social sciences) argued that an increase in density tends to produce differentiation and specialisation, since only in this way can the area support increased numbers. He argued that density reinforces increasing social complexity, where physical contacts are close but social contacts are distant yet multiplied. The result is a "schizoid character of the urban personality" (2000: 99). Urbanites he claims are exposed to glaring

contrasts, a sense of tolerance, a spirit of competition, superficiality, rise of loneliness, and nervous stress. Wirth posited that heterogeneity (diversity in today's discourse) "tends towards the acceptance of instability and insecurity in the world at large as a norm" (2000: 101), and also accounts for the cosmopolitanism of the urban citizens. Today, an increasingly mobile urban population would also contribute to Wirth's latter proposition. This means that no single group has the undivided allegiance of the individual, rather an individual affiliates with diverse groups based on divergent interests to satisfy different segments of their personality.

> Consequences observed include rapid turnover in group membership, difficulty for an individual to determine his own "best interest" within the civic schema and this detachment then makes political participation problematic and unpredictable (Wirth, [1938], 2000: 101).

Wirth (1938) proposed indices to test and empirically measure the aspects of his urban model[10], or rather urban modes of life. This was for the purpose of revising his model and to develop a unified body of knowledge, rather than continue an "ad hoc" approach to urbanism (2000: 105). His legacy is significant as he begat the trend of empirical urban sociological research linking indices (indicators) with what or how the city ought to be. The genealogy of this urban sociology method can be traced through the 20th century to the contemporary urban planning practice of the inclusion of sustainability performance indicators in any 'Community-Vision Plan' or 'Metropolitan Strategic Plan'. Wirth's urban model is rudimentary, yet further empirical research has refined it to contemporary best practice, exemplified by the International Institute of Sustainable Development's (IISD) 'Ecological', 'Social', 'Economic' and 'Governance' model, and Atkinsson's

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[10] Louis Wirth's (1938) proposed indices were:

(1) *Urbanism in ecological (physical) perspective:* population profiles (age, sex, ethnicity), birth and death rates, biological health indices, pattern of landuse and land values, location and function of housing, transportation and communication facilities, public utilities;

(2) *Urbanism as a form of social organisaton:* substitution of secondary for primary contacts, weakening of bonds of kinship, maintenance of home as the locus of a whole round of vital family activities, neighbourhood relations, employment and particpation rates (e.g., mothers), marriage rates and age, household size, group membership and volunteerism, cost of living, wages, rental versus home ownership, urban recreation - participation versus spectatorism; and

(3) *Urban personality and collective behaviour:* personal disorganisation, mental breakdown, suicide, delinquency, crime, corruption, civil disorder, level of communication amongst individuals and interest groups.

(2001) 'Compass Indicator model' comprising 'Nature', 'Social', 'Economic' and 'Wellbeing' indicators.

When Wirth (1938) examined the psychosocial aspect of city life, Geddes had already articulated the psychosocial relations of the development of the city (comprising place, work and folk) via the in and out worlds of thought and action mediated through social types. Inspired by the French sociologist Auguste Comte's four social powers (Welter, 2002: 90), and the four Hindu varnas (labourers, merchants, priests and warriors), Geddes developed a concept of four social types within the Town-City and Act-Deed formulas. They functioned as intermediary social types/groups/movements between the individual and the city collective. For Geddes, these are the 'people', 'chiefs', 'intellectuals' and 'emotionals' of the place/city (Welter, 2002: 97-8), and he saw them as homologous social types that occur in different historical cities and civilisations, making sense of human experience. Geddes' social types are similar to Thompson et al's (1990) social solidarities, such that the people are Fatalists, the chiefs are Individualists, the intellectuals are Hierarchists and the emotionals are Egalitarians.

For Castells, personal 'experience' is a necessary human process driven by the endless search for fulfilment of human needs and desires, and this constitutes a society (Castells, 1989: 8). One impact of the information 'network society' on daily home life is the trend towards 'homecentredness' (Castells, 1999: 398), that concentrates human experience within the home through information and communications technology (e.g., internet shopping). Castells argues that social movements, focused around interests, identity and projects that shape the city, are the agents of progressive change within the network society's cities. One implication of Castells' argument is that the city at the psychosocial dimension; is viewed as an arena of contradictions between personal expectations and opportunity for agency, diverse cultural values and memory, and collective purposive communication and action. In this way, the city ought to exemplify the fulfilment of the urban-social contract amongst citizens that Castells proposes is now under threat of breaking down, due to social polarisation and segregation ([1999], 2002: 377).

In contrast to Castells, Harvey's proposed 'species being' repertoire, as well as his six principles or dimensions of justice, contra the face of social oppression (Harvey, 1992), provides more hope for urban and socio-cultural transformations. In *Social Justice,*

Postmodernism and the City, Harvey (1992) concludes that there is no universal justice. Rather, he cites and explicitly agrees with Marx and Engel's (1951:562-4), that justice varies with time and place and also with individuals. From this conclusion he postulates the question of positionality, which was cited early in Chapter One, and reframes social justice accordingly. Harvey admits the relativism of discourses about justice, as they have emerged within the new social movements (e.g., gender and gay movements) but insists that discourses are expressions of social power. That is, justice is derived from hegemonic discourses from the power exercised by the ruling class. In the context of examining cultural conflicts within public spaces, Harvey (1992) cites Chambers (1987), Young (1990) and Jacobs (1961) as he reiterates that cities should both respect and provide for 'spontaneous' self-diversification among urban populations in the formulation of urban policies and plans. Here the conception of social justice would respect group differences without oppression, and city designers "should engage with an aesthetics which embraces or stimulates that 'spontaneous self-diversification' of which Jacobs speaks" (Harvey, [1992], 2000: 202). Harvey's (1973) concern with the alienation of citizens from the process of creating space is still evident from this statement 19 years later. But Harvey acknowledges that this is little comfort for those groups (e.g., the homeless) in the face of the five faces of social oppression. These are defined by Young (1990) as exploitation, marginalisation, powerlessness, cultural imperialism and violence.

Harvey ([1992], 2000), influenced by Young's *Justice and the Politics of Difference* (1990) draws six principles or dimensions of intergenerational justice for future generations[11]. These he presents not as a formulaic composite strategy, but as a means of

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[11](1) That just planning and policy practices must confront directly the problem of creating forms of social and political organisation and systems of production and consumption which minimise the exploitation of labour power both in the workplace and the living place.
(2) That just planning and policy practices must confront the phenomenon of marginalisation in a non-paternalistic mode and find ways to organise and militate within the politics of marginalisation in such a way as to liberate captive groups from this distinctive form of oppression.
(3) That just planning and policy practices must empower rather than deprive the oppressed of access to political power and the ability to engage in self-expression.
(4) That just planning and policy practices must be particularly sensitive to issues of cultural imperialism and seek, by a variety of means, to eliminate the imperialist attitude both in the design of urban projects and the modes of popular consultation.
(5) That just planning and policy practice must seek out non-exclusionary and non-militarised forms of social control to contain the increasing levels of both personal and institutionalised violence without destroying capacities for empowerment and self expression.
(6) That just planning and policy practices will clearly recognise that the necessary ecological consequences of all social projects have impacts on future generations as well as upon distant peoples and take steps to ensure a reasonable mitigation of negative impacts (Harvey, [1992], 2000: 206-7).

confronting the faces of oppression in individuals' daily lives, and within the heart of the political economy of Capitalism. Harvey's discussion about social justice in the face of oppression reveals the need for further work to be done in terms of confronting the current world systems in the struggle to create liveable cities and workable environments for the 21st century.

In *Justice, Nature and the Geography of Difference* (1996) and *Spaces of Hope* (2000), Harvey returns to a phenomenological approach, which began in his 1973 work. This time influenced by advances in sociobiology, Harvey cites the argument of Geras (1983) that calls for a biological/physical basis of human behaviour. Harvey submits that a conversation about 'species being' is desperately called for. "Unless we confront the idea, however dangerous, of our human nature and species being and get some understanding of them, we cannot know what it is we might be alienated from or what emancipation might mean" (Harvey, 2000: 207). Harvey goes on to propose a basic conception of 'species being' and (rightly) acknowledges that sociobiology provides no adequate explanation of cultural and social evolution. He develops a repertoire of strategic options for human action grounded in his notion of 'species being'. These (in short) are: (1) competition and the struggle for existence; (2) diversification and differentiation (adaptation into niches); (3) collaboration, cooperation and mutual aid; (4) environmental transformations; (5) spatial orderings (the production and reproduction of space); and (6) temporal orderings (the transformation of temporalities, e.g., lunar/solar cycles, the Gregorian calendar, geo-planetary eras) (Harvey, 2000: 209).

> If these form a basic repertoire of capacities and powers, then the long-term question is how to mobilise a particular mix of them to shape alternative urban forms with more humane consequences for social life. Cities are, after all, large scale collaborative enterprises incorporating competitive processes, diversifications (divisions of labour, of function, of lifestyles and values), the production of built environments, of spaces and of divergent temporalities (Harvey, 2001: 204).

From Harvey's perspective, an understanding of humanity's 'species being' and 'species potential' ought to figure centrally within any exploration of social and urban transformations. This brings the current argument full circle to the research objective of building understanding of how human consciousness relates to city development.

At the pragmatic level, Hall and Pfeiffer's universal planning goals of conserving cultural heritage, reducing poverty and empowering citizens, combined with the universal global planning goals for 'good urban governance', 'managing social change' and 'shaping urban space', relate to the city's psychosocial assets (2000: 161-304). The conservation of cultural heritage is linked to the notion that the city's architecture is a resource for cultural memory, contributing to its identity and sense of place. Geddes' pragmatic legacy to the urban planning/design field was his 'historic survey', 'planning', and 'implementation' process of city design, which is still used today (Welter, 2002: 109-110). From the historic survey he develops the technique of 'conservative surgery' to work in an existing city's cultural heritage/fabric or 'genius loci' (spirit of a place). This is demonstrated in his 1910 display of the survey of Edinburgh at the Town Planning Conference in London (in Welter, 2002: 263). Lynch's (1989) performance qualities for good city form, as relevant to the notion that the city is a socio-cultural form for life, include the following components: (1) *sense*, comprising identity, structure, congruence, transparency, legibility, significance, and unfoldingness; (2) *fit,* comprising competence, adaptability (manipulability, reversibility); (3) *access,* comprising its diversity (facilities, opportunities, information), equity, and control; (4) *control* of spatial rights (of presence, of use and action, of appropriation, of modification, of disposition), and clear responsibility and certainty; (5) *efficiency* that balances the latter criteria amongst conflicts and contradictions; and (6) *justice* amongst the above performance dimensions (Lynch, 1989: 118). Lynch's synthesis of the performance dimensions results in his definition of 'Good City Form', where 'good' implies a normative aesthetics.

> It is vital (sustenant, safe, and consonant); it is sensible (identifiable, structured, congruent, transparent, legible, unfolding, and significant); it is well fitted (a close match of form and behaviour which is stable, manipulable, and resilient); it is accessible (diverse, equitable, and locally manageable); and it is well controlled (congruent, certain, responsible, and intermittently loose). And all these are achieved with justice and internal efficiency. OR […] it is a continuous, well connected, open place, conducive to [human] development (1981: 235).

The key message from most contributors, including Mumford, is that the city ought to be conducive to human development, including the psychosocial and cultural potential of the human species. Mumford's main thesis is that cities throughout specific histories were the locus of human civilisation (both positive and negative aspects). However, he argues that

the cities of modernity are the antithesis to their predecessors, where the "processes of production and urban expansion have displaced the human goals they were supposed to serve" (Mumford, 1961: 570).

> Mumford saw the urban experience as an integral component in the development of human culture and the human personality. He consistently argued that the physical design of Cities and their economic functions were secondary to their relationship to the natural environment and to spiritual values of human community (Le Gates and Stout, 2000: 92).

This point, regarding the relationship between cities and the spiritual values of human communities, leads to the next dimension of the city – its metaphysical assets.

3.3.4   Metaphysical construction of the city

One of the historic foundations of the first city is its physical and symbolic space as a 'shrine' (Childe, [1950], 2000; Mumford, 1989). *The Habitat Agenda* acknowledges the role human settlements have to play in providing space for personal and collective sacred rites (UN-HABITAT, 1996a), and its key concerns are the conservation of cultural heritage and religious freedom and dignity. The idea that the city is the locus of personal causal unity (self awareness and actualisation with love) remains an implicit basic assumption evidenced by the tangential agenda goal to support every member of society to realise his or her personal dignity (1996a, Objective 45(d)). The realisation of personal dignity implies the mutual achievement of self-respect and respect from others, but does not necessarily mean the achievement of personal causal unity within an environment of love. *The Habitat Agenda* also addresses, tangentially, the concept that the city is the locus for sacred collective action, under the goal of sustainable human settlements. Here the protection of, "holy places and places of cultural and historic significance" (1996a: Objective 43(s)), at least recognises the need for places of collective sacred action, but posits this need within the context of the preservation of cultural heritage and religious practice. There are no other objectives formulating action to develop the relations between future city form and the expression of universal 'spirituality' or to explore the role of cities in the development of the psyche, described by Mumford as the 'One World Man' (Mumford, [1961], 1989: 573). Beyond the concepts of cultural heritage and

religious freedom, the discourse within the UP/DS field about understanding or creating metaphysical meaning for the city is sparse. The main contributors of concepts to the understanding of the city at this level of reality are Geddes and Alexander. The metaphysical assets of the city ought to nurture the development of personal and collective awareness, and sacred collective action.

Geddes advocated the construction of contemporary 'city temples' or 'culture-institutions' (the least understood of his ideas) for the reconciliation of the real (science) and the ideal (religion) through humanity's universal spirituality directed towards the understanding of life (Welter, 2002: 203). Through these communal spaces he intended that the whole city would become "the cathedral of the People" (Geddes, 1904 in Welter, 2002: 216), the synthesis of metaphysical ideas/visions about life and civic deeds that leaves a legacy for future generations. Complimenting the concept of 'city temples', he also proposed the construction of 'thinking cells', secluded spaces for individual meditation and thought" (Welter, 2002: 220) within the urban environment. For Geddes, the development of each citizen's inner experience is important preparation for active participation in the outer experience of city building. His vision of the neo-technic city temple was the symbol for the development of a neo-technic civilisation, both of which were never realised.

Overall, Geddes' model strives to classify human life and development within a humane habitat in the form of the 'city-proper' in a holistic manner. "Geddes's attempts to resuscitate forms of knowledge other than the rational were not a pursuit of an alternative to modernity but, as Victor Branford puts it, 'a plea for the larger modernism'" (Welter, 2002: 24). This is essentially the same pursuit as Wilber's *integral* model, where he argues that, "that integration [of art, morals, and science, at every level of consciousness, body to mind to soul to spirit], I am suggesting, would involve the best of premodernity [levels of reality], the best of modernity [disciplinary discourse], and the best of postmodernity [multiple perspectives]" (Wilber, 2000b, 73). Their common purpose was manifested in similar conceptual diagrams, such that Geddes' (1927) 'Notation of Life' matrix (Figure 3.2) is strikingly similar to Wilber's (2000) *integral* model (Figure 2.4).

Figure 3.2: Geddes' 'Notation of Life' matrix
(Welter, 2002: 32)

Christopher Alexander provides the most coherent thesis about the metaphysical relations to city form, informed by the process of creating that 'timeless quality' of place and a deeper city 'wholeness' impacts on the human spirit. Alexander's life-long intention is "to bring back our awe…and to allow us to begin again to make things in the world which can intensify this awe" (Alexander, 2004: 335). Alexander (2004) seeks a unifying cosmology to relate the nature of self, the universe, and the art of building (i.e., architecture). At the heart of this search is a new conceptualisation of the nature of order, inspired by the hope for a future physics (spiritualised, holistic science) that reconciles the dichotomy (of non-communicating intellectual domains) between spirit and matter, art and science (Alexander, 2004: 332). Like Geddes, this project is also similar to Wilber's (2000a, 2000b) development of an *integral* model of consciousness. This new paradigm and contingent order, Alexander believes, would reinvigorate the architecture of cities with 'life', spirituality and meaning, which currently is within the most spiritually banal of all the periods of human history. "A conviction about spirituality is not the same as a coherent picture of things in the world within which spirituality or goodness *make sense*" (Alexander, 2004: 18). This search takes Alexander through a treatise on the phenomenon of life, in order to draw out qualities which make places 'feel' connected with self and the ultimate 'I', or qualities which imbue feelings within people that intensify a connectedness to the wholeness of life. He proposes a modified ontology of matter, life,

and mind, to redefine the cosmological assumptions that, in turn, inform the process of building cities. His intent is to transform the meaning behind the work of building, to ensure it relates to the life-making structure/mind of the universe. Alexander's view espouses that the process of building must help the generation of life. The implication for city building is that cities ought to be healthy gestalts, connected with the greater wholeness of the cosmos.

> It is our task, as architects, as artists, as builders, to make this stuff, this matter of the universe, reveal itself more fully. This metaphysical obligation will stem directly from our renewed understanding of the substance of the universe. It does not arise merely from our desire to be comfortable, from our desire to avoid alienation. It arises as a supreme spiritual obligation, which is our obligation to the matter/spirit we ourselves are made of" (Alexander, 2004: 334).

The production of matter-space, Alexander argues, is governed by cosmic laws. If the new conception of the nature of matter-space is being challenged by the notions of *wholeness* as a structural governing principle and of consciousness as a physical feature of the universe (with consciousness and matter as different complimentary aspects of the same reality) then these revelations change the way cites ought to be made.

Firstly, Alexander states the possibility that matter-space inherently has relative *value* and a relative degree of life (2004: 325). This is very different to the Cartesian physicist's view of matter as inert and value-neutral. As a result, he points out the personal quality of space, namely that matter-space might be personal or linked to the human self. "*Feeling* also appears in space" (Alexander, 2004: 326). This concept extends the idea that the city is the locus of personal causal unity. The spaces of the city may have the inherent quality of resonating a 'feeling' of personal connection between self and the undifferentiated plenum of consciousness. For example, Geddes' concept of 'thinking cells' sought to create such timeless, quiet places in the city. Space-matter is therefore an essential medium for personal causal unity, inseparable from consciousness.

Secondly, Alexander's process of city building reinforces the idea that the city is the manifestation of sacred collective action. The process of city building, as described by Alexander, is one of making any portion of space "more or less whole, more or less alive, more healed or less healed, connected or broken" (Alexander, 2004: 330), compared to its

wider structure of wholeness inherent in the universe. If the latter is true, then the act of city construction becomes a sacred collective action when it means to harmonise with the holonic order of the cosmos. By doing so, the spiritual condition of the world and individuals' spiritual development is enriched by the collective attempt to view and reach the essential core of reality. For this reason, Alexander interprets the process of building as having a metaphysical obligation.

Thirdly, Alexander's principle of unfolding wholeness, that articulates a time-asymmetric process of becoming, sees the unfolding of self as the awakening (embodiment) of matter-space's soul-like quality. Such a view is consistent with the idea that the city as a holon may be the locus of collective enlightenment or awakening to the nature of the real. Not only may it be conceived as the locus for enlightenment, but also if "matter-space is viewed as having connections, or windows, to some undifferentiated plenum of light, or unity, or mind […] at every point in the continuum" (Alexander, 2004: 327), then the city by conscious design may help the human species achieve enlightenment and emancipation. This relationship is assumed as fact within Vāstu, as it seeks harmony between the design of space, and personal and communal well-being. This discussion thus leads into the next section, a consideration of Vāstu as an example of holistic and multi-dimensional city theory and practice.

3.3.5   Vāstu Śāstras and Vāstu Vidyā: Hindu science of design and architecture

"The place where men and gods reside is called Vāstu" (Mānasāra text, in Dutt, [1925] 1977: 1).

The cosmology (metaphysical theory) and practice of Indo-Aryan town planning is treated particularly in the Silpa Śāstras and incidentally in the Purānas, the two ancient texts of India. Additional information can be garnered from treatises on Astronomy and Astrology, the Niti Śāstras and Smṛti Śāstras, works of sociology in its widest sense (Dutt, 1977: 1). It is widely practiced in India and has only recently re-emerged in popular literature in the West. Patrick Geddes, when he was designing city improvements in India

(1916-1923), familiarised himself with the practice of Vāstu and was influenced by it. He wrote the forward to Binode Behari Dutt's *Town Planning in Ancient India* (1925). Dutt cites Acharyya's *Summary of Mānasāra*: "Vāstu includes ground (dharā), building (harmya), conveyance [transport] (yāna), and couch [furniture] (paryańka)" (1977: 2). Mānasāra is the sage and author of the treatise of the same name, which traces the mythical genealogy of Vāstu to Brahma, the creator aspect of God, particularly Viśvakarmā the celestial architect.

Bansal explains that the purpose of applying Vāstu is to create a built environment which is ordered within the cosmos that provides harmony within constructed spaces so as to help individuals attain a peaceful mind and a state essential for good biological health. "Vāstu teaches that we humans should maintain in our lives the balance and systematic orderliness that is so evident in the universe" (2002: 7). Bansal posits that harmony is achieved by the application of rules/principles concerning the five elements, fire, water, earth, air and space, and the cardinal directions to direct positive cosmic energy (prana). Dutt (1925) argues that the practice of Vāstu Śāstras (god+human-place rules) did not prejudice its evolution and progress. "The Silpa Śāstras lay down that every town-planning transaction should be performed with regard to its suitability, that is, with reasons (yuktyā). A great freedom of scope was always allowed to individual character and imagination" (Dutt, 1977: 11).

Key concepts of Vāstu include integration with Ayurveda (health and well-being practice) and Jyotish (astrological, psychosocial practice), and application of the Vāstu Purusha Mandala. The mandala provides the structural logic for Vāstu architecture, guiding building orientation, location of uses, and placement of structural supports. The Vāstu Purusha Mandala is applied within all parts of the city (Figure 3.3). Its mathematical logic

Figure 3.3: Vāstu Purusha Mandala

(Lynch, 1989: 76)

informs the dwelling, within the ward, within the site (urban village), within the city, and within the cosmos.

Vāstu aligns the dimensions of human reality and being (the material, biological/ecological, psychosocial and spiritual) with place-rules that correspondingly determine the physical, ecological, cultural and spiritual nature of constructed habitats. The scope of Vāstu applies to city/town, centre of socio-political power (palace), sacred places (temple) and individual dwelling, and fit out of interiors (Bansal, A. K. 2002: 6).

The material relations to city form are addressed within Vāstu through the synonymous organising concepts for city (puram) as a house (geha), a place containing a market and the like (haṭṭādi-viśishṭa-sthānam) and commercial centre (nigama), a place of intercourse between and including many villages (vahu-grāmiya-vyavahāra-sthānam), and a local fastness (sthānīyam) (Concepts from *The Savdakalpadruma*, in Dutt, 1977: 19). These concepts and their place-rules correspond to Western concepts, such as the city as liveable habitats, markets, communal places and defensible spaces.

The biological/ecological relations to city form are embodied in Vāstu's method of 'survey' or site analysis of topography prior to the foundation of a city or building. Dutt (1977: 44-51) notes (citing the Mayamuni and Mānasāra) the important relationship between natural features and the quality of adjacent ecosystems to the establishment of towns. Rivers, forests, climate, soil quality and fertility, and the slope of the land were all factored to ensure future health and well-being of citizens in harmony with the cosmos. Individual aesthetics are respected within the place-rules and personal choice is guided by the integrated practices of

Figure 3.4: Madurai City Plan, based on the Vāstu Purusha Mandala (Lynch, 1989: 77)

'Ayurveda' and 'Jyotish' to best design the 'dosha' (character) of the house to suit the inhabitants.

Vāstu's psychosocial relations to city form via are determined by the principles of Varṇāśrama Dharma (form of social planning) within the Silpa Śāstras. Varṇāśrama Dharma generates a social stratification of the people in general into four castes: Sudras (labourers), Vaishyas (merchants), Brahmins (priests), and Kshatryas (warriors), and also by rank and by trade guilds (subcastes). Dutt (1977: 147) argues that within this framework, social planning (or as he describes it, 'folk-planning') is synonymous with 'site-planning', where each group is allocated a 'ward' (block/plot) within a city/town's 'site' (superblock/village). What results on the ground is a matrix of cosmopolitan urban villages with their own communal spaces and sacred centres forming the city. This is an intentional strategy to promote inter-communication and civic consciousness, where the consecrated temple-compound of a site provides a free forum for inter-caste interaction and fraternity (Dutt, 1977: 307). The patterning of the Vāstu city using the Vāstu Purusha Mandala (Figure 3.4) is likened to the replicating fractal geometry/complexity of the Mandelbrot set (Capra, 1996: 149), and in more ways than one expresses the mathematical complexity of the nature of life in the cosmos. "In a word, a site [composite urban village] was the prototype of the whole city on a smaller scale. This admixture and congregation of classes came as a remedial measure against possible accentuation of class differences" (Dutt, 1977: 148). However, Dutt fails to consider the structural violence/oppression of the Dalits within the city, reinforced by spatial segregation or homelessness.

The metaphysical relations of this approach to city form are already evident from the discussion above. Further to this, the Vāstu practice requires that each, house, ward, site within the city and the whole city itself, is dedicated to a god (tutelary deity), each having its place within the Vāstu Purusha Mandala. Therefore, the Vāstu city is foremost a construction site for metaphysical purposes offering personal freedom to worship the tutelary deities (Dutt, 1977: 309), collective sacred action, and personal and collective enlightenment.

3.4 Speculations about bridging the city theory-practice divide

As a model, Vāstu depicts the translation of cosmology to the practice of city building on the ground. But is it possible to reconcile the city theory-practice divide in Western epistemology by constructing holistic meaning for the city? The previous analysis of urban concepts located within dimensions of the city shows how modernity's twin legacies of reductionism and specialisation hinders, if not fractures, the process of knowing the nature of the city. Whilst this challenge is recognised by researchers (Hall, 1996, Castells [1999], 2002; Sandercock, 2004), it is of little consequence to practitioners dealing with complex urban problems, which require solutions within competing political imperatives. Hence the current acknowledgement of chaos, complexity and multiplicity within urban planning practice (Sandercock, 1998; Engwicht, 1992, 2005), although the big picture view remains elusive.

What is missing from most of modernity's urban theories is the enunciation of the teleology of the city, which then forms concomitant praxis. Rather, modernity's modalities of inquiry (empiricism, reductionism and expert specialism in concert) generate a specific discipline's reciprocal exegesis. For example, the architect designs a building that requires a specific discipline within a context of urban regulations established by the planner's discipline. As a result, the purpose of the city remains intangible amongst the density of discursive material and rapidity of practice. Within this context the research seeks to shift the discourse in search of theoretical totalities, thus juxtaposing urban disciplines to reconstruct holistic meaning for the city. To do so requires a comparative meta-framework to consider various urban theories that have been constructed throughout discontinuous histories. This consideration does not involve evaluating their performance in the real world or exhaustively critiquing the content of each thesis, but rather aims to discursively assess each model's degree of holism or multiplicity between the dimensions of physis, bios, nous and theos, and therefore between different ways of knowing/thinking about the city.

Wilber's (2000a, 2000b) *integral* epistemology (or nest of being) is able to provide the framework for a holistic, big picture view of the city. The implication for the city's

epistemology is that it ought to cover multiple levels of reality, from material to metaphysical, across inner subjective and outer objective dimensions. As a result, it needs to assemble concepts from the disciplinary fields of geography, built environment and urban planning/design studies, urban sociology and metaphysics in order to cover the horizontal levels of reality across the vertical orders of knowledge or truth (Table 3.1). Such a formulation expounds the purposiveness of the urban structure and system by describing normative criteria for city form, whilst bridging the schism between urban planning theory (the ideal) and practice (the real).

Sixteen meta-criteria or attributes for holistic city development are proposed in the current formulation. In brief, a multi-dimensional urban theory-practice ought to explain how:

At the material dimension (*physis*), the city is the locus of:

1. Personal place/shelter;

2. Production and exchange;

3. Communal (public) places (*Genius Loci*); and

4. Defensible space.

At the biological/ecological dimension (*bios*), the city is the locus of:

5. Personal sensed experience;

6. Healthy human habitat;

7. Holistic moral aesthetics and truth claims; and

8. *Deep ecology* – healthy habitat for 'all' living entities.

At the psychosocial dimension (*nous*), the city is the locus of:

9. Personal dreams/expectations;

10. Personal agency and action;

11. Diverse cultural dreams/value systems, norms and memories; and

12. Collective knowledge, agency and action (purposive, rational communication and activity).

At the metaphysical dimension (*theos*), the city is the locus of:

13. Personal spiritual beliefs, myths and rites;

14. Self-actualisation and awareness (personal causal unity);

15. Sacred collective action; and

16. Collective bliss and enlightenment – the peaceful city.

The holistic or *integral* city meta-framework may be metaphorically appreciated as a trans-modern analogon of the Vāstu Purusha Mandala.

Table (3.1) Meta Criteria for holistic City Development					
Orders of Knowledge (Truth):		Phenomenology (Personal perceptions) "I" Subjective truth (Intentional)	Ontology (Empirical) "It" Objective truth (Behavioural)	Ideology (Shared perceptions) "We" Intersubjective truth (Cultural)	Epistemes (Grand Narratives) "Its" Interobjective truth (Systems)
Levels of reality	Fields of Inquiry				
Matter (physis)	Geography	Personal place/shelter	Production and exchange	Communal places	Defensible space
Body/ Life (bios)	Built environment / urban planning/design studies	Personal sensed experience	Healthy human habitat	Holistic moral aesthetics and 'truth claims'	Deep Ecology (Healthy habitat for 'all' living entities)
Mind (nous)	Urban Sociology)	Personal dreams and expectations	Personal agency and action	Diverse cultural dreams, values systems, norms and memories	Collective knowledge, agency and action
Spirit (theos)	Metaphysics/ Cosmology–Cosmogony	Personal spiritual beliefs, myths, and rites	Self awareness + actualisation (personal causal unity)	Sacred collective action	Collective enlightenment / 'Bliss' – the peaceful city

CLA, when applied to the above framework, verifies in a general sense whether a causal layer of reality is missing from it. At the litany level, urban problems may be identified and stated under any of the sixteen attributes. Different stakeholders may focus on particular problems within their sphere of concern and influence. For example, politicians may communicate the urban problem at the material or observable dimension: "We have a housing shortage and we need to fix it now", "Our city's labour costs are uncompetitive", "Our town centre needs a public gathering place" or "We need to clean up crime in the ghettos". These examples follow the attributes (1) to (4) outlined in the meta-framework. At *Lifeworld's* external systems level, the urban attributes (1) to (12) tend to be the focus of urban and social planners, policy makers and designers. The technical experts have agency here, as they grapple with the drivers, weights and visions influencing city futures as well as the urban dilemmas and contradictions that arise within the system. At the discourse/worldview level, various stakeholders converge around attributes (11) and (12). Clashes or resolutions occur between different stakeholder agendas, ideologies, social movements, civilisations and ways of knowing. At this level the current argument concurs with Sandercock's (1998) point that a politics of difference is needed to work through the cultural milieu. At the myth/metaphor level of urban reality, the value of deeper stories of meaning or grand narratives of trauma and the human condition is respected by the attributes (11) and (13) to (16). CLA demonstrates that within the meta-framework there are urban attributes active across the different vertical causal layers of reality. In this sense, there are no causal layers of reality missing from the meta-framework. This does not mean, however, that all meta-attributes are present in the urban model.

How does the proposed holistic city framework provide a bridge between urban theory and practice? The key lies in the holonic nature of its meta-criteria that may also be used as measures for developmental change (progress) and collective action. The urban research of Geddes, Mumford, Harvey and Castells during the 20th century all acknowledges that the city is an arena of contradictions between personal expectations and opportunity for agency, diverse cultural values and memory, and collective purposive communication and action. Applying the work of Giddens (1984), the city is a duality between urban structure (as properties of the social system) and urban systems (as social practices/actions of actors and agents). Harvey's (1988) epistemological argument is allied to the positions of Habermas (1981) and Gidden (1984), as he concludes that it is

the dialectic resolution of social internal contradictions that drives the continuous change process that manifests itself within the city. Cities, being socio-cultural forms, need to transform themselves to resolve the contradictions or problems that exist within their quality of life systems.

The proposed meta-attributes of the city may each be considered conceptually or metaphorically as construction sites for the resolution of tensions between urban structure (properties) and system (practices). In this sense they each signal a nexus for collective purposive communication and action. For this reason, the holistic meta-framework can be stated to bridge theory and practice. The holistic meta-framework by itself does not resolve all contradictions. Rather, it merely locates them, allowing cities to take collective action. The nature of that action in history will undoubtedly create new contradictions. In this way, the meta-criteria provide strategic focus when designing urban interventions to change cities' *lifeworld* conditions. Intervention is required at the systems, worldview/cultural paradigms and myth/metaphor layers of reality to resolve urban contradictions. These interventions will create new sets of problems in the future, setting up the need for continuous change. At the psychosocial level of urban reality a link emerges regarding the construction of cultural meaning for the city which relates back to the power of city visions within urban revolutions – the subject of the research. It follows that the power of a vision or image of a city's future correlates with the degree to which it triggers real change across the qualities (meta-attributes) of the city, from the quality of personal shelter to collective enlightenment. The meta-framework is also open to the fact that the way a problem is defined informs its resolution, by giving space to diverse truths. The urban condition or problem may be reframed from various stakeholder perspectives. For example, stakeholder perspectives may be appreciated from the 'I'-subjective, 'We'-collective, 'It'-objective and 'Its'-interobjective dimensions of knowledge or truth.

The benefits of the proposed holistic city meta-framework are fourfold. Firstly, the meta-framework provides criteria for a 21st century model of the multi-dimensional city, based on the full spectrum of human consciousness. Through these meta-criteria or attributes the city reifies itself as a multi-dimensional habitat (*physis, bios, nous and theos*) within the cosmos.

Secondly, the meta-criteria may be used to assess the degree of holism of other urban theories. Based on the previous analysis of the major theories of the nature of the city formulated during the 20th century, it has been made clear that modernist and post-modernist models of the city are impoverished, because they do not explore how to create a city that spiritually delights.

Thirdly, a cursory analysis of the city as a socio-cultural form supports the claim that a cultural paradigm shift is needed, as well as a deeper spiritual or consciousness shift to create sustainable city futures. If this is the case then the disturbing fact emerges that the urban studies discourse is largely omitting this point altogether. An eutopian[12] let alone utopian vision for the spiritual city is far from the contemporary planner's or designer's agenda or skills set.

Fourthly, the meta-framework is able to assemble existing urban concepts from various disciplinary fields in an attempt to, "create new tools, both theoretical and methodological" (Castells, 2002: 404). Since it seeks to construct a big picture view (meta-map) of the city, it may also make sense of and relate the themes of further research as it occurs. For example, Castells (2002: 398-403) argues for the following themes of further research in urban sociology for the 21st century. His themes are all complex, requiring a holistic approach. They are as follows: (1) social integration and communication; (2) the interface between physical layouts, social organisation, and electronic networks; (3) transforming the city's urban structure, post-patriarchalism; (4) how grassroots movements will continue to shape cities and societies; (5) how 'deep ecology' theory (Capra, 1996) may drive cultural transformation and the development of a new civilisation; (6) urban poverty, racial and social discrimination and social exclusion, and in particular, the increase of technological apartheid in the network society; and (7) new relationships between time and space in the *information age*. These research themes and the resultant work may be contextualised and conducted using the multi-dimensional city framework.

The conclusions from Castells' discourse about the city within the network society are to: (1) reconcile the *Dual City's* spatial segregation of the knowledge-privileged versus

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[12] For a definition of eutopian refer to the glossary of terms.

disadvantaged. This would heal the fragmented metropolis and avoid what Castells describes as the breakdown of the urban contract, such that culturally diverse citizens agree to work together to solve conflicts (Castells, [1999], 2002: 377); (2) resolve/ transcend the dichotomy of space, between 'place' and 'flow' (2002: 382) by using architectural bridges of symbolic meaning; and (3) develop a holistic cross-cultural comparative approach and framework within urban studies/sociology in the 21st century to study cities, "based on the integration of an eco-social approach with a techno-economic study of cities, with an urban design perspective" (2002: 386). Again this argument comes full circle to research objective four, which is the same as Castells' articulation of future urban research directions, namely the search for an integrated multi-disciplinary approach. The proposed holistic city meta-framework may provide a comparative framework for future urban research by relating urban concepts to the meta-attributes of the city, across multiple dimensions and orders of knowledge. In the same manner, it may inform holistic city development policy. It is therefore possible to reconstruct the cultural meaning and purpose of the city.

3.5 Conclusion – multi-dimensional construction of the city

This chapter addresses research objective four, to explore the possibility of formulating a multi-dimensional teleology of the city that reconciles the schism between urban planning theory and practice. The reviews of contemporary and past city theories and their concepts allow the assembling of a multi-dimensional meta-framework based on Wilber's *integral* model of knowledge. The main conclusions of the reconstruction process of the city's cultural meaning and purpose are presented using the frame of reference of planning's epistemologies. Within modernity's *rational comprehensive planning model*, and post-modernity's *equity planning*, *social learning* and *radical planning models*, city theories' degree of holism across levels of reality and orders of knowledge are summarised.

Firstly, city theories that are the least holistic are those developed in the episteme and ideology of modernity (early 20th century), particularly those developed in the emerging discipline of urban sociology. Both Max Weber and Louis Wirth, sociology pioneers at different locales of the Western world and disparate theoretical poles are focussed on the material and pyschosocial levels of reality. Weber's work (*Wirtschaft and Gesellschaft*, 1905, and *The City*, [1912] 1921) comes from the framework of historical materialism. His studies of cities in history produced the central thesis that that social systems tend towards rationality. His contribution gave researchers the understanding of cities as cultural-political constructions, as Castells (1972, 2002) has recognised throughout his career. Wirth's (1938) formulation of a social-psychological theory of the city defines its characteristics as a distinct 'urban culture'. Though recognised and attributed as a founding piece of urban sociology, it nonetheless fails the 'holism' test, as well as perpetuates the urban ideology and the functionalist's myth of an autonomous 'urban culture'. Castells' critique ([1972], 2002) in *The Urban Question: A Marxist Approach,* exposes this myth. The city theories developed by the generalists Geddes and Mumford sought a new modernity and urban culture that was more holistic. Both believed in reconciling humanity's inner and outer life, or the real (science) with the ideal (spirituality) within the civilising context of the city. In *The City in History*, Mumford

(1961) argues that all forms of cities express to some degree the historic patterns and institutions of the original urban integration of shrine, citadel, village, workshop and market, as metaphors for spiritual awareness, political power, cultural identity, personal meaning/purpose and social economy. As such, Mumford's model is multi-layered as it touches the material, biological/ecological, psychosocial and metaphysical levels of reality. But it does not clearly show that it is multi-dimensional, touching diverse orders of knowledge or truth from the inner-subjective to the outer-objective.

Secondly, city theories developed during the episteme and ideology of post-modernity fall within two camps, those developed with a strong urban design orientation, and those developed from the new urban sociology school. Lynch and Alexander championed the formulation of urban design models of the city, whilst Harvey and Castells championed the formulation of neo-Marxist theories about the social production of space. Lynch, from an empirical perspective, studied city form and how it is perceived and valued by humans, focussing research at the ecological and psychosocial realms. Alexander, from an anarchist/humanist perspective, studied how city form impacts human consciousness and how it can heal at a deeper, inner level. Lynch, whilst developing invaluable means to evaluate the quality of urban environments, does not achieve holism. On the other hand Alexander's model, via the 'pattern language' method and principles of city wholeness, is more integrated, but is seen as being on the fringe of legitimate planning theory and practice. Harvey and Castell's theories about the social production of space developed in the episteme and ideology of post-modernity negate the spiritual level of reality, and as a result omit the human metaphysical relations to society and the city. In other words, the city is not recognised as a legitimate locus for sacred collective action and enlightenment.

Thirdly, global and local city planning outcomes and corresponding agenda for best-practice urban planning (developed in the episteme of the *equity planning* and *social learning/communicative action* models), are exemplified by the *Habitat Agenda* and in Hall's global urban agenda. Both incorporate viewing and acting upon the world's urban challenges in real time, with an episteme and an ideology of facilitating sustainable human development via urban/regional and social planning principles. Whilst the sustainability agenda pushes the planning approach towards holism, the metaphysical assets of the city are still off the agenda. *The Habitat Agenda* covers the objective and cultural assets of the city, whilst Hall is firmly grounded in the empirical, systems levels

of reality, namely eco-efficient, productive spatial form, healthy cities, and well governed, just cities.

Fourthly, Vāstu – though outside the Western worldview – provides the most holistic city theory out of the examined models. This is perhaps not surprising as it is a civilisational cosmology or sacred science, providing normative principles for daily life both for the built environment (via Vāstu Vidyā) and for their inhabitants (via the conjunctive practice of Vāstu Shāstra, Ayurveda and Jyotish).

Finally, current theoretical urban concepts, and those developed in future research, can be related to the meta-framework's urban criteria or assets. It therefore has the potential to not only reconstruct 21st century cities' cultural meaning and purpose, based on the full spectrum of human consciousness, but also bridge the city theory-practice divide. Furthermore, the meta-framework implies by deduction that the power of city visions relates to the degree by which it changes the real city's qualities or assets. As such, it will be used in the following chapter to consider the recurring power of city visions in history, for the purpose of mapping a genealogy of dominant, emergent and alternative images of the future. An ideogram based on the meta-framework (Table 3.1) can be used to represent the impact of each city vision in history on urban development and its qualities (refer Figure 3.5). A shaded cell indicates that the subject vision affected the urban quality in the real world denotated by the conjunction of the relevant order of knowledge with its level of reality. The letter 'P' signifies the *physis* realm, 'B' signifies the *bios* realm, 'N' the *nous* realm and 'T' the *theos* realm. The numerals refer to the *integral* city framework's meta-criteria of urban qualities listed in Section 3.4.

Orders of
Knowledge (truth)

	I	It	We	Its
T	13	14	15	16
N	9	10	11	12
B	5	6	7	8
P	1	2	3	4

Levels of reality

Figure 3.5: Ideogram – Impact on cities' qualities

4   Genealogy of city visions
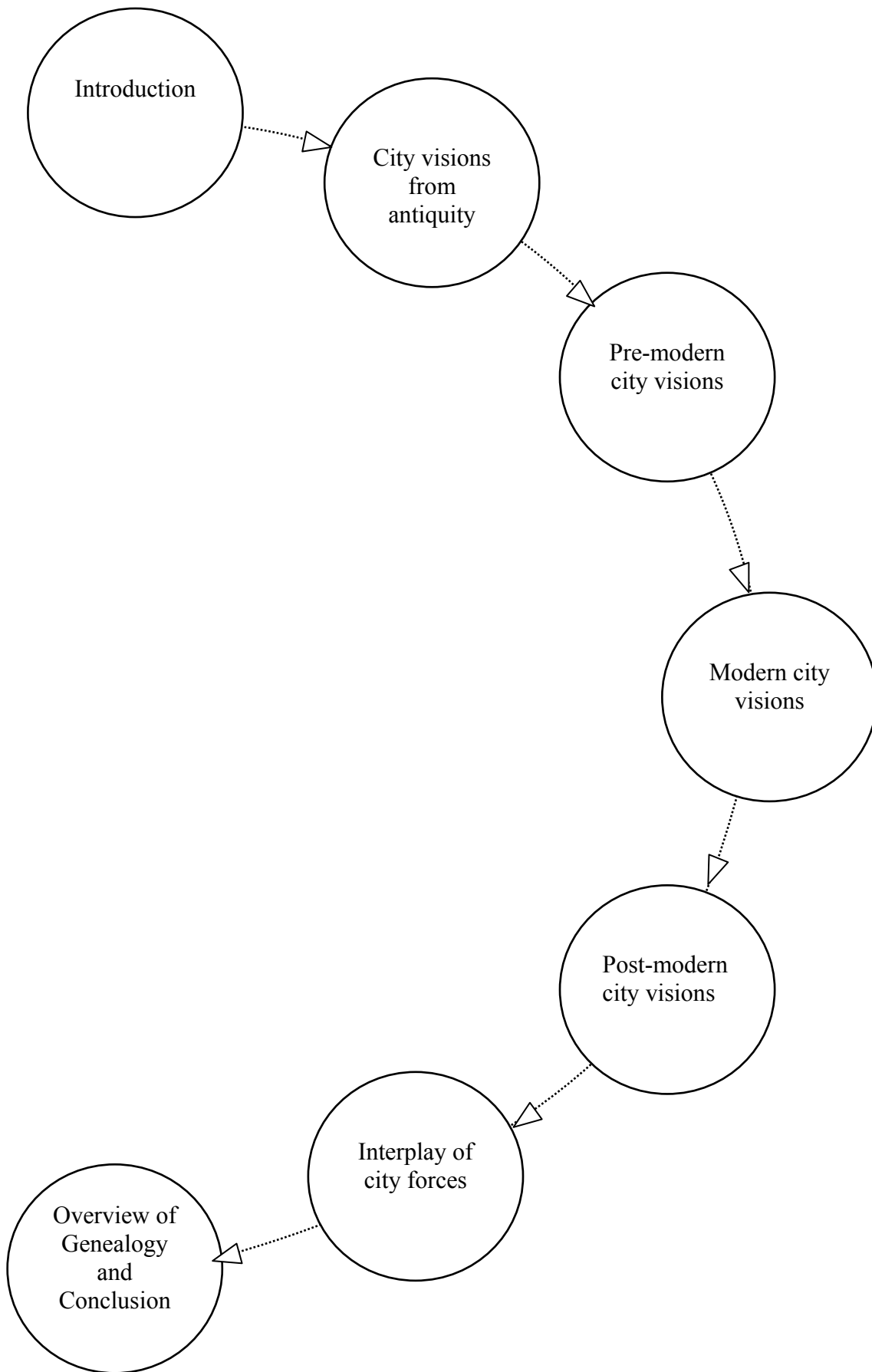
Figure (4.1): Chapter Four Roadmap

4.1   Introduction

This chapter examines research objective two(b), to assess whether the proposed cultural change model explains the cyclic emergence of city archetypes couched within historical city visions or specific urban planning agendas. To examine this question, recurring city visions and themes in Western history are identified and discussed as a genealogy of urban images of the future. These 'quasi-scientific' urban revolutions are also the products of culture, and the aim is to mark these shifts using Lynch's (1981) archetypal city metaphors (*Cosmic City*, *Organic City* and *Mechanistic City*), to discuss how they appear, morph or recur. Lynch's archetypes provide a set of general relationships between the spatial form of a city and the ideology, episteme and social values of its inhabitants that he draws from the historical evolution of cities. The focus of this chapter is on visions of human habitation, because at the deeper psychosocial level they affect actions, relations and urban development policy amongst stakeholders (actors) of a city. A vision or image of the future may provide an inspirational or values-based social pull towards that reality. These include individual and collective visions and their (often subconscious) underlying values. Different stakeholders will often have competing visions/images.

This genealogy explains the images of the future city for each historical era, namely antiquity, pre-modern, modern and post-modern, and reveals those visions which are dominant, emergent or alternative in changing the quality of cities. The meta-framework developed in Chapter Two is used to gauge the power of each city vision in changing real cities' qualities, revealing their level of dominance. The *futures triangle* (Inayatullah, 2002a: 186) is used to discuss the dynamic of competing images which create city futures. It maps visions as attractors of change (pull) and considers which are dominant, emergent and alternative, as well as the drivers and weights which have influenced city visions and their manifestation in the real. The aim is to map which images have been victorious in affecting the present (Inayatullah, 2002) and influencing the future. Dominant visions are those considered to impact most of the urban assets or dimensions, as formulated by the meta-framework. They may also be the probable vision within the culture. Emergent visions are those considered to challenge the dominant, and likewise have the potential to

effect change within most of the urban dimensions. Accordingly, they may also be the preferred future within the culture. Alternative visions offer a possible future and are considered to be on the fringe compared to the main cultural paradigm and praxis. Advocated by minority groups or visionary voices from the margins, alternative visions may effect minimal change on the urban dimensions. Note that the present analysis of visionary images of the city that promote urban transformations focuses only on Western visions, as discussed in Chapter One. The genealogy of city visions will demonstrate a relationship between urban visions formulated throughout Western history, and a specific socio-spatial archetype or hybrid combination of archetypes.

Finally, the reframing of historic city development in terms of cultural dynamics demonstrates how city visions/archetypes emerge and re-emerge synchronously with the dominant cultural paradigms. This 'unpacking' of city change dynamics will improve the capacity for individuals or groups to change the present, "to create new solutions, new structures and new processes that can solve the issue at hand at base levels" (Inayatullah, 2002a: 122). The world's collective urban future is not dependent on a single-issue problem, as the city is a dynamic holon (as previously discussed). The current chapter concludes by presenting propositions about urban visions and their correlating cultural paradigms. The possibility of testing these qualitative relationships is examined in the next chapter.

4.2   City visions from antiquity

This section examines the key city visions from antiquity, being the *cosmic Temple City*, the *organic Greek polis* and the *mechanistic Imperial City*. The *Temple City* vision is considered as the dominant vision, the *Greek polis* as alternate, and the *Imperial city* as the emergent vision (refer to Figure 4.2). The first urban revolutions that accompanied the transformation from Neolithic to agrarian societies provided the historic contexts from which Lynch formulated his city archetypes. Childe (1950) postulated ten abstract criteria[1], shared across four civilisations (Egyptian, Sumerian, Indus and Maya), each deducible from the archaeological record, which distinguish the earliest cities from older or contemporary villages. The central theme emergent from these criteria is that all of

these cities are built on the *Temple City* vision. As a result, the image of the city as a temple is also a characteristic of the *Greek polis* and *Imperial city,* and therefore is the dominant image of antiquity.

Temple City[1]

Antiquity

Imperial City[3]

Greek Polis[2]

Emerging image

Dominant image

Alternative image

Figure 4.2: City visions of Antiquity
(*1*. Refer Figure 4.3; *2*. Refer Figure 4.4;
3. Dinocrates' city plan of Alexandria accessed from
www.utexas.edu, July 2006)
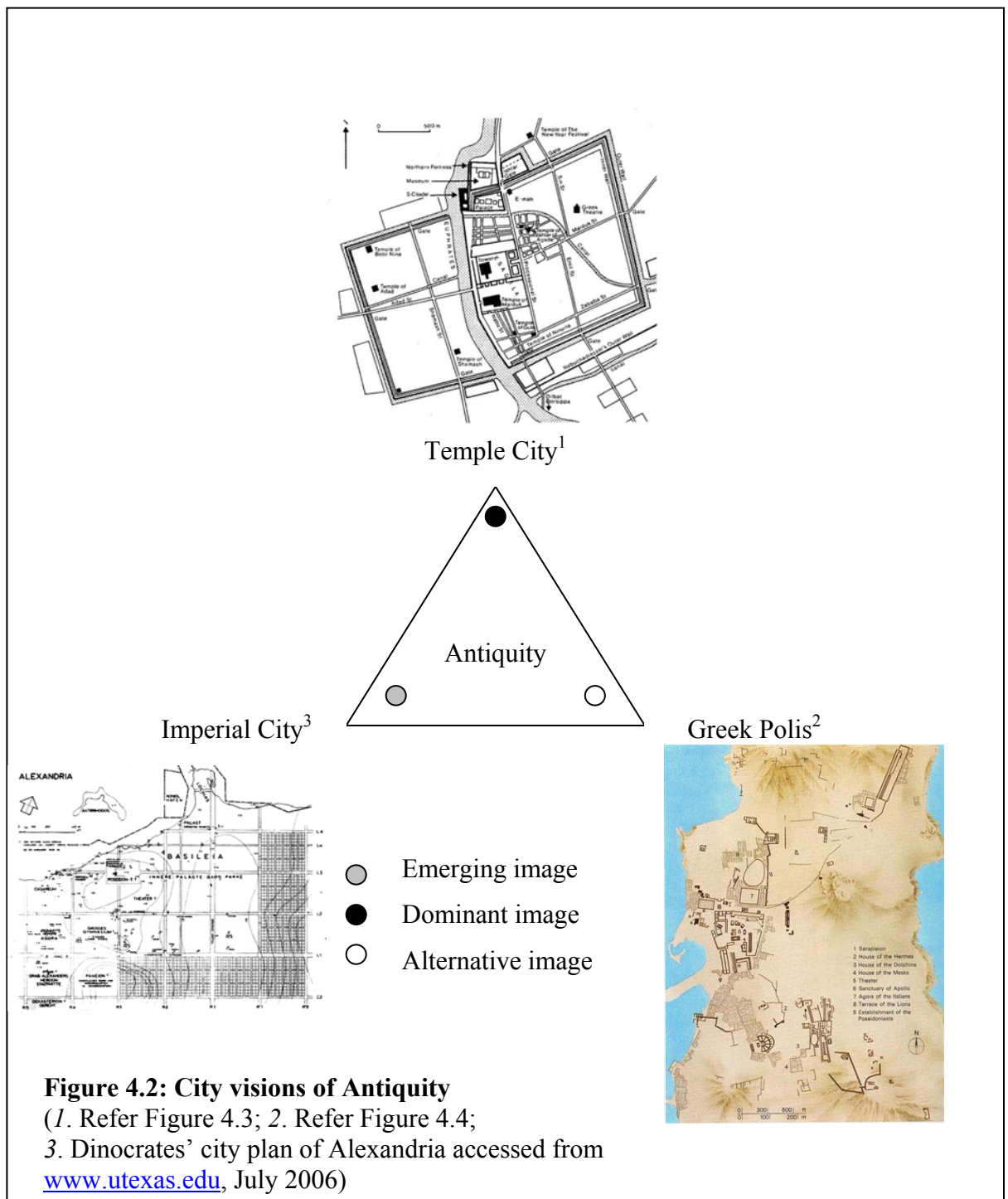
4.2.1　Dominant, cosmic *Temple City*

Within ancient cultures the *Temple City* is isomorphic with the *Cosmic City* archetype, as both have a central meaning as a ceremonial/metaphysical centre for their people. Here, organised religion extended the social influence within and without the city. "It was through religion that men enhanced their own vitality and that of their crops and animals; and it was through the immortality imputed to the gods that man was encouraged to take measures to ensure his own immortality" (Mumford, [1961] 1989: 83). Childe's (1950) analysis reveals that cities and civilisation are interdependent, human systems, and at their genesis lies the search for metaphysical meaning, represented by the *Temple City* image. "A notable example is the Egyptian city of Memphis that remained a sacred community for fifteen hundred years" (Mumford, [1961] 1989: 83), whilst the royal capitals changed during that time. Lynch notes that Babylon (600BCE) at the height of its power is a *Temple City* exemplifying the *Cosmic City* archetype (1989, 10) (Figure 4.3).
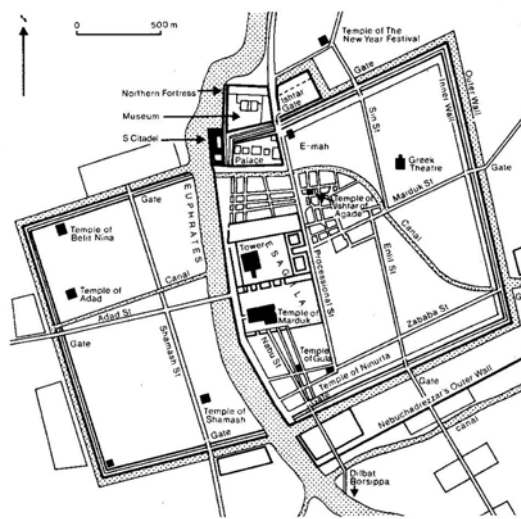
Figure 4.3: Babylon, a 'cosmic' Temple city (Lynch, 1989: 10)

Researchers acknowledge that the archaic/mythical and concentric *Temple City* plan of Atlantis offered Plato an image of an 'ideal city' (Rykwert, 2000: 15; Mumford, [1961] 1989: 174). Mumford argues that the "image of the city that captivated him was a geometric absolute" (1989: 174). This image, which matches the *Cosmic City* template, embodied for Plato the pursuit of a perfect society as a microcosm of the universe – harmony through the virtues of wisdom, courage, self-restraint and justice – and rejection of Athens' disorder and confusion (1989: 174, 175). In Plato's *Republic*, his ideal 'polis' is hierarchical, divided into three social classes. These are the economic class, which serves the ruling class, which is turn is divided into the military and guardians proper (Welter, 2000: 31). The strict social order of Plato's ideal 'polis' is the antithesis to the

real 'polis' that emerged in Greek civilisation, and according to Mumford (1989: 175) "is the denial of all that 5th century Athens might have taught him". To demonstrate his point Mumford argues that if Socrates had been born into Plato's polis he would have remained a stonecutter (due to his apprenticeship) all his life, not entered military service as citizen soldier and not become a philosopher. Hall (1998) reiterates the conclusion that Plato's ideal polis, "is an utterly joyless place in which the individual submits totally to the demands of a rigid society" (Hall, 1998: 27). He acknowledges, however, that Plato was railing against the radical and individualist implications of Sophism and the potential breakdown of morality and laws within Greek city-states.

The power of the *Temple City* vision (Table 4.1) affected the production of all four levels of urban reality during the antiquities, namely site planning via spatial form and architecture, economic and social capital, social composition and political organisation, and spiritual meaning and sacred action. Missing from this image are notions of healthy habitat, *deep ecology* and intellectual space for rational, purposive action. This vision endured as the dominant image during the first urban revolution of cities and during the rise the Hellenistic and Roman

Table 4.1: *Temple City*				
	I	It	We	Its
T				
N				
B				
P				

empires. In contrast, the historic 'polis' that emerged in Greek civilisation offered an alternative vision of the city that continues to provide a humanist image of urbanity.

4.2.2   Alternative, organic *Greek polis*

Aristotle's vision of polis is for a supportive, humanistic structure for human fulfilment. Kitto (1951) notes that Western civilisation does not have an equivalent word for 'polis'. The terms 'city-state', or perhaps 'self-governing community' come closest ([1951], 2000: 35), yet these are foreign entities in the contemporary urban world. Kitto (1951) described the classical (5-4C BCE) *Greek polis* as a living community, almost an extended family, "an active, formative thing, training the minds and characters of the citizens" ([1951], 2000: 36). Population size remained small. Plato argued for five

thousand citizens, whilst Aristotle proposed no more than one hundred thousand to allow for appropriate governing. Kitto (1951) proposes that the polis remained small for two reasons. Firstly, the physical, topographical barriers of Greece impeded trade of goods and demanded self-sufficiency. In addition, the moderate Greek way of life made small material demands on the land surrounding a polis. As a result, "there was no great economic inter-dependence, no reciprocal pull between the different parts of the country, strong enough to counteract the desire of the Greek to live in small communities" ([1951], 2000: 34). While the Greeks were very private in many ways (individualist in the pursuit of their livelihood), Kitto notes that their public life was essentially 'communist' ([1951], 2000: 36). The polis as a social institution defined the very nature of being human for its citizens. Not that the polis supported the development of every resident, for instance women and slaves were not citizens and did not participate in much of the life of the polis. Similarly, foreigners could attend plays but were barred from many institutions. Hall (1998) in *Cities in Civilisation* further questions the extent to which many citizens actually participated in public affairs. He hypothesises that only a small percentage (one in five) of those eligible to participate in public decision-making actually did so in the larger city-states, such as Athens. For the most part, Hall (1988: 37) believes they practiced passive democracy (listening and voting) rather than active participation in public affairs. The same can be said for today's democratic societies. Regardless, the *Greek polis* as a democratic social institution did represent a remarkable advance over social relations present in any previous society. The values it represented for its citizens were of enduring importance as an image of the future, in an imperfect world. Kitto (1951) attributes the rise of the Polis to the character of the Greek mind (psyche), describing it simply as their preferred way to live.

The physical form of the polis during the Classical age emphasised public space and buildings organised spatially by cultural and spiritual ideas about typography and nature (e.g., the temple, theatres, stadium, and the agora, a combined market place and public forum). Rykwert (2000) cites Pausanias (late 2nd century AD) a travel writer, noting that for him (and thus the Greek mind) "it is not the houses and the walls, but the public spaces and the physical presence of institutions that raises any settlement to the status of a city, a *polis*" (Rykwert, 2000: 15). As a result, the *Greek polis* image during the Archaic (700-500 BCE) and Classical periods were related primarily to the *Organic City* archetype, as the socio-spatial organisation of polis relates to the ecological landscape as

well as metaphysical ideas (see Figure 4.4: Delos). However, from the 5th century BCE onwards, for new towns, the Greeks' conscious design effort related the city's parts in an integrated whole using the 'Hippodamian' grid system of planning (Ling, 1976: 120). This design effort demonstrates the then *organic* traditional ethos, in tension with the emerging *mechanistic* orthogonal planning formulae (e.g., Priene, laid out mid-4th century BCE, Figure 4.5). Whilst the Hellenistic period's city colonisation project in Egypt and the Seleucid Empire still placed emphasis on both aesthetic and pragmatic needs, embodied by the orthogonal plan, certain new cities in Asia Minor developed an *organic* urban design modelled on the Athenian Acropolis (Ling, 1976: 120) that employed asymmetrical arrangements with architectural unity (e.g., Pergamum). Later, the Romans and subsequent colonising Western civilisations exploited the rectangular street grid. The Greeks chose to live for some centuries within poleis, which suited their culture and spiritual development "instead of becoming absorbed in the dull mass of a large empire" (Kitto, [1951], 2000: 34). "Not until the time of Alexander the Great and his successors, late in the third century BCE, did one city impose itself on the whole Greek-speaking world as its hub, and not so much for its political, but for its economic and cultural importance – Alexandria in Egypt" (Rykwert, 2000: 16).
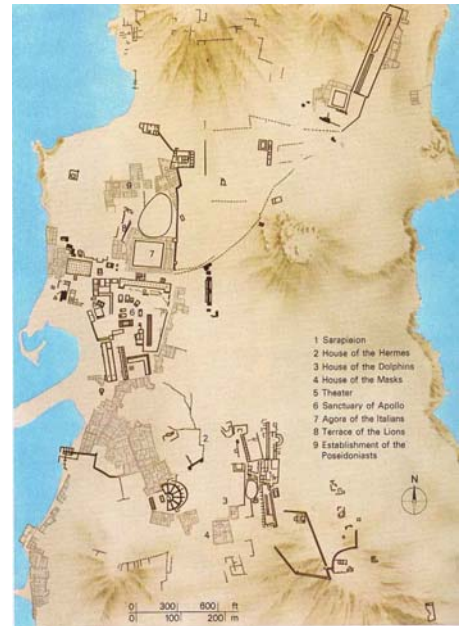
Figure 4.4: Delos, 'organic' example of Archaic to Classical city design (Ling, 1976: 114)

Figure 4.5: Priene, 'mechanistic' example of Hellenistic city design (Ling, 1976: 121)

The *Greek polis* vision, being a specific geo-spatial cultural phenomenon or innovation, is considered within the broader temporal context of antiquity as an alternative image of the city, though strongly dominated by the *Temple City* image. Kitto (1951) cites Aristotle's *Politics* in which he said, "Man is a creature who lives in a polis" (Kitto, [1951], 2000:

36). Kitto claims that, "Aristotle goes on to demonstrate, in his *Politics*, that the polis is the only framework within which man can fully realise his spiritual, moral and intellectual capacities" ([1951], 2000: 36). Kitto (1951) argues that Aristotle's theory has proved itself, given the monumental contribution to human culture Athens and seven hundred or so other settlements of ancient Greece made during the Golden Age. What the Greeks achieved in philosophy, literature, drama, poetry, art, logic, mathematics, sculpture and architecture has exercised a profound influence on Western civilisation. The classical *Greek polis* came of age in the 5th century BCE, about half-way between the emergence of the great Mesopotamian cities (described by Childe, 1950) and the present time.

The *Greek polis* image affected the construction of all four levels of urban reality to the same extent as the *Temple City* image, with the added ingredient of social space for human development and rational purposive action (Table 4.2). During the Hellenization project commenced by Alexander the Great and carried on by his successors, Greek culture spread out from the Mediterranean into the Seleucid and Ptolemaic Empires via the instrument of the city, with its Greek layout, building typologies and institutions. "Alexander is said to have founded more than 70 of these,

Table 4.2: *Greek Polis*				
	I	It	We	Its
T	▓	▓	▓	▓
N	▓	▓	▓	▓
B	▓		▓	
P	▓	▓	▓	▓

all called Alexandria or Alexandropolis, in areas as far apart as Thrace and the Punjab, Egypt and Afghanistan" (Ling, 1976: 77). Alexandria in Egypt, the most known of the Hellenistic cities, shifted the dominant image of the *Temple City* and the localised *Greek polis* towards the historic emergence of the colonising *Imperial city* image, which Rome adopted and perfected. Furthermore, the Polis represents a form of community that has exerted a powerful fascination for more than two millennia, influencing urban scholars such as Max Weber, Patrick Geddes and Spiro Kostof. The legacy of the *Greek polis* continues to fuel its potency as an image of a recaptured city future, for example, the notion of the contemporary urban village.

4.2.3   Emerging, mechanistic *Imperial City*

Rykwert (2000) posits that for Hellenistic Greeks and citizens of the Roman Empire, 'the City' meant Alexandria and Rome respectively. Both carried the sense of *world centre*. However Rome achieved a prominence that no other city in the Western world (including Alexandria) had reached. One of the legacies of Rome's imperial success is, "marked by her imposition of her own Calender in all her territories" (Rykwert, 2000: 16). The legacies of the *Imperial city* image as a whole are fourfold, namely engineering feats and systemising technical applications, monumental public architecture, universal institutions, and splendid materialism. These will be discussed in turn.

Firstly, the engineering feats of the Roman Empire are renowned. The prominent pavement of streets, the aqueducts and water supply, underground sewers and the use of concrete as a building material characterised its newer, smaller colony cities (Mumford, 1989: 215, 216). Rome itself lagged behind in the efficient, comprehensive application of these technologies due to its size, resulting in poor hygiene and traffic congestion.

Secondly, Mumford (1989) argued that the monumental public architecture of the *Imperial city* symbolises civic beauty and order, and masks the violence and greed of the individual and the collective. The Imperial city embodied a command of urban space for mass assembly and mass movement and "found a mass form for all the collective occasions of life, in the market, [the forum,] the amphitheatre, the bath, the racecourse, [the vomitorium]" (1989: 225). Even the tenement houses for the proletariat were massive in their squalor, forming huge blocks called *insulae* or islands (1989: 219). Some reached a flimsy ten stories in the 2nd century AD, without internal sanitation or water supply.

Thirdly, the image of the capital extolled the imperial ideal of unfolding law, peace, order, justice and efficiency whilst masking "rapacity, greed, lust, and cruelty on a gigantic collective scale [for mass spectacle and entertainment]" (Mumford, 1989: 223). The irony is that, particularly under the jurisdiction of the new colonial cities without outer walls, Western civilisation experienced "what it would be like to live in a completely open world, in which law and order everywhere prevailed, and citizenship, in every sense, was the common human heritage" (1989: 206).

Fourthly, Rome's *Imperial city* image is an enduring symbol of the complete embodiment of splendid materialism and of great public works that continues to influence urban visionaries to this day (e.g., the *City Beautiful* movement of the 19th century). London and Paris as Imperial Capitals for their respective colonising Empires have mimicked the traits developed by Rome, such as universal mass culture, law, urban monumentality and utilitarianism.

Mumford ([1961] 1989) discusses the contradictions of Rome, revealing that the power of the *Imperial city* image is a façade for the grim realities of urban life in the ancient world. Mumford's ([1961] 1989) dialectic presentation of the urban condition in the imperial Roman Empire contrasts the benefits of the new colonial cities (Figure 4.6) with those of the colossal imperial capital. From this basis he intentionally promulgates his argument for 'limits of urban growth' and that ancient "Rome remains a
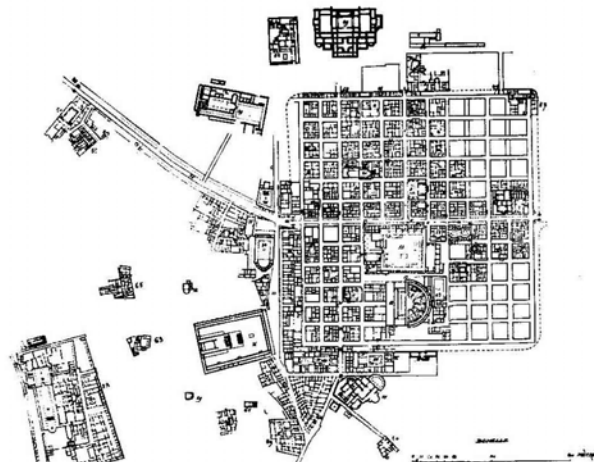
Figure 4.6: Timgad, 'mechanistic' example of a Roman Colony founded by Trajan 110A.D.
N.B. the latter growth outside the grid
(Lynch, 1989: 84)

significant [urban] lesson of what to avoid" (1989: 238, 242). The historic development of Rome is based on the incremental growth and union of seven 'acropolis' towns. Its roots lie in the *Temple City* image, part *cosmic* and *organic* archetypes. At its peak (100 AD) Rome's population reached one million, and by this time its *Imperial city* image had evolved into a colossal, congested hybrid of diverse socio-spatial archetypes, from *cosmic* to *organic*, and (in some rapidly constructed sections) *mechanistic* patterns of development. Successive emperors such as Augustus, Trajan and Hadrian shaped the city and built monuments that borrowed architectural ideas from conquered territories. The accumulative result heightened visual stimulation and a perceived lack of orderly arrangement.

In contrast, the Ionic practice of growth by colonisation drove city building throughout the expanding Roman Empire according to standardised socio-spatial patterns of the

emerging *Mechanistic City* archetype (Figure 4.6). This mobilisation and regimentation of large masses throughout its territories drove the application of the practical universal grid/axial pattern of two principal streets within cities (Mumford, 1989: 205, 207). This pattern is orientated to harmonise with cosmic order, with their open spaces and public buildings sited at the founding rites. Roman colonies seem also to be planned for a limited population of around 50,000 people, supported by adjacent rural lands (Mumford, 1989: 209). These planned characteristics reveal the emergence of the *Mechanistic City* archetype, whilst reinforcing the colossal *Imperial city* image of the capital.

The *Imperial city* image affected the construction of all four levels of urban reality in the ancient world, to the same extent as the *Temple City* image and *Greek polis*, with no significant ecological, technical, economic, cultural or spiritual advances on city form (Table 4.3). Increased politico-administrative skills within the Roman Empire, developed through rationalisation of municipal governments, signal a shift towards the *mechanistic* paradigm. The power of the vision of the capital and its tradition of great public works by autocratic rulers had a

Table 4.3: *Imperial City*				
	I	It	We	Its
T	▓	▓	▓	▓
N	▓	▓	▓	▓
B	▓		▓	
P	▓	▓	▓	▓

profound impact on future cities of Western cultures. Hall (1998: 656) explains that the philosophical tradition of *grands travaux*, of *obras publicos*, survives in continental European cities and is most evident in Paris (through Louis XIV, and later by Napoleon I, Napoleon III and de Gaulle). Even the Christian inheritors of Rome did not abandon the former imperial city, instead recasting its imperial image into the earthly capital of heaven. The Papal capital of the Roman Catholic Church re-colonised the old empire and extended its earthly realm into other non-Western civilisations. Conversion of Rome's pagan city heritage ensued with rigor – either quarried for stone or refurbished – where "the destruction of ancient Rome reached its height in the Renaissance" (Hall, 1998: 73). The power and influence of the 'cloister' served as patron for the development of the *Medieval City* image and *Renaissance City* ideal, as shown by various authors (e.g., Weber, 1912; Pirenne, 1925; Mumford, [1961] 1989; Hall, 1998).

4.3　　Pre-modern city visions

This section examines the main city visions from pre-modernity, that is, from the Middle Ages preceding the Western industrial revolution. Images of this period include the *organic Medieval City/commune*, the *cosmic Renaissance City* and the *mechanistic Amaurote City*. The *Medieval City/commune* vision is considered as dominant, the *Renaissance City* as alternate, whilst the image of *Amaurote* is the emergent vision (Figure 4.7).

Pirenne (1925) argued that the early medieval city of the Carolingian era was not a real urban community in a social, economic and legal sense, and that it did not emerge until the economic revolution. Pirenne (1925) explains that the Roman Empire extended its dominion over the entire Mediterranean world using the municipal system as the basis of its administrative system. The social function of these cities weakened during the Dark Ages as the Germanic and Islamic invasions across Europe occurred, and their function as fortress remained within the dominant agricultural social order. The Roman "Church had based its diocesan boundaries on the boundaries of the former Roman cities. […] A theocratic form of government had completely replaced the municipal regimen of antiquity" (Pirenne, [1925], 2000: 39, 41). Society had recognised only two active orders, the clergy and the nobility. Trade during the 9th century was poor between cities, compared to the Roman Empire. Pirenne's (1925) main thesis is that the emancipation of the rural class (serfs), and the rise of the guilds and merchant classes led the social reordering of the economy and the re-emergence of the city in the medieval form during the 11th century AD. The merchants driving the re-emergence of European cities often lived and traded in suburbs below the walls of medieval fortresses built on hills. The word suburb itself derived from the Latin 'below the town' ('urb' meaning town enclosure). Crucially, the merchant class was free of many of the political, legal and social restrictions that previously kept early medieval society stagnant. For Pirenne (1925), the new community of merchants of the 'economic renaissance' re-created complete cities, "they fought for new codes of law, a private jurisdiction, free property, and eventually distinct communal organisation" (Martindale and Neuwirth, 1958: 50). From this historical context, the three distinct images of the city are now discussed.
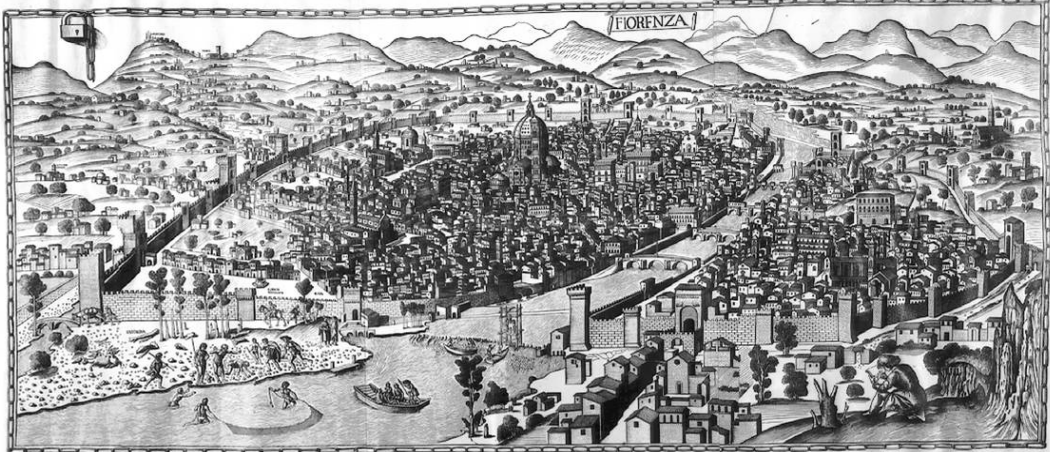
Medieval commune[1]

Pre-
modernity
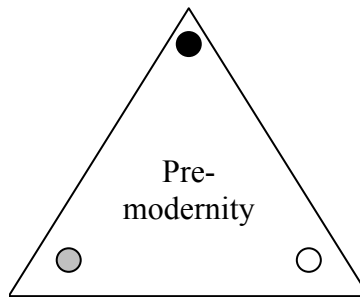
More's Amaurote[3]

Rennaissance City[2]

○ Emerging image

● Dominant image

○ Alternative image
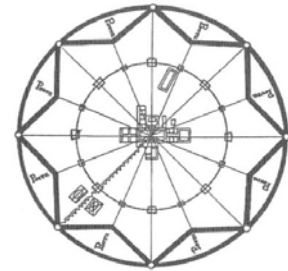
Figure 4.7: City visions of Pre-modernity
(*1*. Florence Chain Map, 1470s, accessed from
www.intranet.arc.miami.edu, July 2006;
2. Scene by Italian Rennaissance painter in Lynch,
1989: 77; Sforzinda Plan in Moughtin, 1996: 98;
3. Cover page from Utopia, 1516 in Rowe and

4.3.1   Dominant, organic Medieval City/commune

Weber (1912) in his study of the city from the historical record distinguished three city types/patterns based on the social and political organisation and relations during the Middle Ages. These are the *Patrician city*, *Medieval City* (Southern and Northern European types were distinct in Weber's analysis) and *Plebeian city*. These roughly translate as an evolutionary trend of socio-political rationalisation of rule, as *Feudal/Family Clans and Nobility* (e.g., Venice, 812 to 1143 AD) developed into *commune-podesta* (e.g., Mediterranean cities during first half of the 13th century AD) and then into "revolutionary *popolo*, a fraternity of professional associations" (Weber, [1912], 1958: 158) and citizens to counter the resurgence of an urban nobility (e.g., Milano, 1198; Verona, 1227). These terms mark the political changes that characterised the Middle Ages from feudal states to monarchies, but this trend was not consistent throughout all of the cities of Europe. For example, even in the 16th century AD Dutch cities continued under the dominion of noble families and shared administration with the *conjuratio* (oath-bound association). Weber (1912) also demonstrates that the development of Italian medieval cities was peculiarly cyclical, from the Patrimonial/Feudal association, to Commune or Commune+Podesta, to Popolo, to Signoria (noble head), to rational Patrimonial association (corporate privileges under the Monarchy). Weber (1912) proposes that the cycle of city development across Europe during the Middle Ages reveals that the power of the city-state began with little importance and then arose "with political rights and autonomous economic policy" (Weber, [1912], 1958: 181), and then proceeded to decline under the rule of the new monarchies. He also concludes that medieval urban development was a carrier for the development of modern Capitalism and the modern state. He demonstrated that the medieval citizen had an economic mindset, whereas the Ancient citizen had a political mindset (1958: 213). "Under the domination of the guild the medieval city was pressed in the direction of industry on a rational economic model in a manner alien to the city of Antiquity throughout the period of the independent polis" (1958: 223).

The peak of the *Medieval City/commune*, during the transition period driven by the rediscovery of trade and legal reform, is the dominant city image in this analysis. As a

result, the characteristics of the *Medieval City/commune* image are based on metaphysical meaning, sense of community, arts and crafts traditions, and sense of place. Firstly, the image of the medieval town comprises a closed hierarchical community of nobility, Church officials, craft guilds, merchants and serfs operating in 'biological or slow time'. This notion of time is grounded in a metaphysical certainty or concept of divine destiny that fosters fatalism and incremental change/innovation. "The medieval city in Europe may be described as a collective structure whose main purpose was the living of a Christian life" (Mumford, [1961] 1989: 267).

Secondly, a sense of community was established as the charismatic, theocratic rule of the city with Patrician administration (oligarchy) declined, and the economic interests of the residents drove the formation of an institutional association. The medieval city was a '*commune*', yet established the legal concept of 'corporation' (Weber, [1912], 1958: 99). The impacts of the Podesta system of 'commune' or municipal administration in Italy lead to the widespread rationalisation of law (1958: 132).

Thirdly, an agricultural economy of self-sufficiency dominated the fortress city with limited material trade between them, whereas trade in municipal officials (*Podesta* system) began amongst communes (Weber, 1912) with increased marriage ties amongst the nobility. The arts and crafts were celebrated as part of one's life vocation, and as a result the technique of production/craft skills transfer was via guild apprenticeships, whilst monastic intellectuals concentrated knowledge generation. Architecture was a principal technology that expressed Christian spirituality within the physical realm (e.g., Byzantine and Gothic architecture) and likewise increased mobility of craftsmen across Christendom.

Fourthly, the built environment consisted of a hilltop castle with the residents' quarters beyond the inner fortress wall. The cathedral was intentionally a dominant form within the landscape, as was the castle. The civic nucleus comprised the abbey or friary, the town hall and the guildhall and the residential precincts, all built to an intimate human scale. The streets were crooked, following the contours of the land and the buildings enclosed streets and open spaces. The socio-spatial pattern fits the *Organic City* archetype (Figure 4.8).

The *Medieval City* image affected the construction of all four levels of urban reality in pre-modernity, as seen above. Site planning via geomancy, spatial form and architecture, economic and social capital, social composition and political organisation, and spiritual meaning and sacred action are legacies of medieval urban development (Table 4.4). Still missing from this image are notions of healthy habitat, *deep ecology*, and universal human development, whilst the

Figure 4.8: San Gimignano, 'organic' example of the Medieval city
(www.san-gimignano.com, 2006)

seeds of collective/civic purposive action were resewn. The medieval dwelling lacked "privacy and comfort" (Mumford, 1989: 287), and municipal sanitation and hygiene was poor. Christianity understood suffering as a part of the mortal human condition, and only saw heaven as being free from it. As a result, no earthly city could achieve it. The *Medieval City* image, as a form, gave paramount expression to the period's stratified ways of life. Today the image endures by romanticising and celebrating the enjoyment of a simple life (e.g., *Under the Tuscan Sun,* Mayes, 1997) and continues to influence city futures through the emergence of the 'Slow Cities' movement that began in Italian towns in 1999.

Table 4.4: *Medieval City*

4.4	I	It	We	Its
T	▓	▓	▓	
N	▓	▓	▓	
B	▓		▓	
P	▓	▓	▓	▓

4.3.2 Alternative, cosmic *Renaissance City*

The advent of the Renaissance stimulated contemplation of alternative images of the city, particularly with the patronage provided by the resurgence of the Patrician city under the new monarchies in Europe. The beginning of the scientific revolution rediscovered antiquity's classicisms (Hall, 1998: 73), and transformed the medieval mind with the

development of humanism (a revival of classical learning which adopted the ideal of the full development of individual potential). A metaphysical shift towards individualism that spoke of human beings having some charge over their own destiny also challenged the cultural weight of religious asceticism.

The characteristics of the ideal *Renaissance City* included the expression of cosmic order, the spatial expression of political power, and increase in specialisation of labour. Firstly, Hall (1998) claims that the environment was fabricated and imbued with the rediscovery of *classical naturalism*, "to see the human body as autonomous, powered by a self generated mobility" (1998: 73). The human form inspired an aesthetic of beauty, proportion, symmetry and geometric perfection. The city was visually decorative, and its underlying pattern still matched the *organic* archetype of the medieval town upon which it grew. In contrast, new renaissance towns (whether real or ideal), reinterpreted the *cosmic* archetypal layout, reflecting the pursuit of absolute geometric perfection. Many medieval towns underwent urban modification to overlay and harmonise another geometric order over the historic *organic* fabric. The ideal city plan was both functional and aesthetically appealing, inspired by classical architectural styles from antiquity, but incorporating Christian themes and emblems.

Secondly, there is the image of the *Renaissance City*, as expressed by architectural plans, symbolically maintained and decorously reinforcing the power of the prince (Rowe and Keotter, [1978], 1985: 14). The 'Plebeian city' and it's 'popolo' system of municipal administration declined (Weber, 1958: 178), and most city-states had lost their independence by the 15th century. This was replaced by dictatorship or oligarchy under the Monarchy (Hall, 1998: 92). To reassert their dominance over citizens, "inherent in almost all Renaissance planned [cities] societies was the goal of retaining aristocratic power" (Holis, 1998: 213). The architecture of the *Renaissance City* was seen as a stage set for upper class life, as depicted in the 1490-1495 scene of an ideal city (refer to Figure 4.7, Rennaissance City).

Thirdly, the former ecclesiastical monopolies on knowledge and education of the Middle Ages were reduced with the advent of universities and municipal grammar and business schools. A more open, pluralistic, creative community developed with advances in the sciences. However, it was still an artisan society with the workshop functioning as the

academy. Technological "activity remained functional, related to specific vocational and professional purposes and directed to meeting social needs" (Hall, 1998: 101). Specialisation of labour and organisation of production via guilds increased, but production was still small-scale and workshop-based. The economic revolution of the merchant class increased international trade and drove innovations in banking and commercial finance (1998: 112).

Antonio di Pietro Averlino (ca. 1400-1469, known by his pen name of Filarete), worked under the patronage of the Milanese duke Francesco Sforza, and wrote *Trattato d'architettura* (1460s) in which he described the model city Sforzinda. Holis (1998) argues that Filarette was among the earliest utopian architects of the ideal city, and illustrated in the design of Sforzinda a concern with community that became characteristic of modern utopias. The design was intended to be symmetrical and functional, the architecture reflecting the status of those who occupied them, "Doric forms for gentlemen, Corithian for merchants, and Ionic for craftsmen" (Holis, 1998: 214). Filarete's model renaissance town, "is a centralised city: the plan is an eight pointed star made of two intersecting quadrangles set within a circle" (Moughtin, 1996: 98), (refer to Figure 4.9).
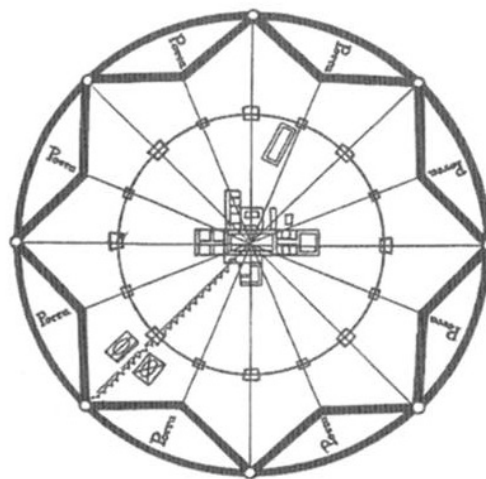
Figure (4.9): Sforzinda, 'cosmic' example of Renaissance city design (Moughtin, 1996: 98)

Other architects participating in the quest for the ideal city design in Renaissance Italy included Leon Battista Alberti (1405-1472) who authored *On Architecture* (1485, published after his death), Giorgio Martini (1439-1501) and polymath Leonardo da Vinci (1452-1519). Alberti's (1485) treatise on architecture expounded that, "architectural beauty also served to influence the moral character in citizens" (Holis, 1998: 215) and thus social paradigms (an early argument of environmental determinism). These scholars and Filarette reflected in their architectural plans for the ideal city the perspective of absolute order – spatial, social and metaphysical.

As a result, historically, the *Renaissance City* vision is considered as an alternate image of the future, compared to the *Medieval City* image. In the real, it did not affect the daily lives of citizens to the same extent as the *commune,* because only the Aristocracy could afford the cost of geometric perfection/order. The abstract ideals of the vision did conceptually reorder all four levels of urban reality to the same degree as the *Medieval City*, with the added humanist pursuit of developing personal potential (see Table 4.5). The outbreak of the Black Death pandemic across Europe in the mid 14th century (1347-51), with subsequent generational outbreaks up to the 17th century, forced municipalities to consider the hygiene of their cities

Table 4.5: *Renaissance City*				
	I	It	We	Its
T	▓	▓	▓	
N	▓	▓		▓
B	▓		▓	
P	▓	▓	▓	▓

through enacted laws to modify human behaviours (e.g., London forbade garbage throwing into rivers and waters in 1388 (Mumford: 1989: 290)), but actual infrastructure improvements such as sewers did not emerge until the Renaissance (e.g., "English invention of the water closet in 1596" (Mumford, 1989: 291)).

The *Renaissance City* image continued to influence later urban endeavours, such as the replanning of Rome by Pope Sixtus V (1585-90). Here a system of radial avenues cut through the older chaotic grid and *organic* layouts, linking the seven most important Roman basilicas with other monuments and marking their junctions for pilgrims (Rykwert, 2000: 49; Moughtin, 1992: 78), (Figure 4.10). A rush of new military fortress towns during the expanding monarchies also drew on the Renaissance ideal city vision. Palmanova, supposedly designed by Vicenzo

Figure 4.10: Renaissance replanning of Rome by Pope Sixtus V (1585-90) (Moughtin, 1992: 78)

Scamozzi (being strongly influenced by the writings of Alberti (1485)), followed the *cosmic* pattern of radial symmetry. Scamozzi, with the aid of military genius Sebastian Le

Prestre de Vauban, built Neuf-Brisach, Montdauphin, Colmar, Longwry and Saarlouis, always as grid layouts within the polygon (Rykwert, 2000: 46-7).

Tommaso Campanella's *City of the Sun* (1623) is a clear example of the restatement of the *Cosmic City* archetype within the historic context of renaissance thought and the scientific revolution. Campanella's vision is "of a unified Christian theocracy implementing the advances of knowledge, especially science" (Holis, 1998: 38). Campanella, perhaps influenced by Alberti's (1485) early environmental determinism, described a utopian city where its architecture, through its symbolism, was instrumental in social and scientific education. He expressed the belief that, "the mechanistic universe ensured that everything, including humans, served a precise and complementary purpose (Hollis, 1998: 39). The *City in the Sun* vision demonstrates clearly the aspects of the *Cosmic City* archetype, namely a sacred centre seeking harmony with the cosmos, and a hierarchical, geometric layout. Campanella's image resembles that of Plato's *Atlantis* from antiquity, which is most likely not coincidental due to the period's rediscovery of classical thought and Plato's popularity amongst Renaissance scholars. Preceding and in contrast to the *City in the Sun,* another vision of the ideal city emerged from Thomas More's (1478-1535) *Utopia* (1516), that relates to the resurging *Mechanistic City* archetype.

4.3.3 Emergent, mechanistic *Amaurote* (capital of Mores' Utopia)

Thomas More's (1516) 'Amaurote', capital of the island of *Utopia*, was a model of authoritarian rule and rational regimentation to control human actions. "Utopians practiced communism, which virtually eliminated the lust for materialism and possessions" (Holis, 1998: 254). Contrary to Holis's (1998) claim that *Utopia* lacked any ingredients from the Arcadian vision/ideals (i.e., self moderation, the work ethic, productive city gardens and compulsory agricultural service for all citizens), it certainly drew on aspects of Arcadia and the rural idyllic tradition of living in harmony with nature.

Amaurote, situated in the centre of the Island of Utopia, is one of 54 cities, none of which is less than 24 miles from the next, […]. [a days journey by foot] Amaurote itself, the capital, is four square in plan […]. The streets, twenty feet wide, 'are well laid out both for traffic and to avoid the winds', and every house has both a street door and a garden door; indeed their zeel for gardening 'is increased not merely by the pleasure afforded them, but by the keen competition between streets, which shall have the best gardens.' This outer green belt and this spaciousness are re-enforced by two years of country living, mandatory under law, for every inhabitant. Thus More makes sure of his garden city by educating garden-citizens. Each Utopian city is divided into four quarters. In the middle of each quarter is a market place, with shops and stores about it. But the more intimate organisation, the neighbourhood, is based on the family (Mumford, [1961] 1989: 325 cites More, 1516).

Mumford (1961) argues that More's cities transcended the medieval pedestrian scale and order that he was accustomed to and anticipated the monotonous urban transformations of modernity caused by industrialisation. His cities, being geometrically square, were uniform in their design, each supporting 6000 households. Amaurote's standardisation and regimentation of grided urban development recalls the Roman Empire's planning approach to city colonisation.

Amaurote's image critiqued all four levels of urban reality of the *Medieval City* (see Table 4.6). First, it advocated a settlement pattern of rectanguler uniform cities compared to the cramped quarters of the medieval town and second, these were separated by productive countryside. Third, it espoused an Arcadian ethic of modest living, symbolised by urban community food gardens. Amaurote's social organisation and representative government is based on neighbourhoods of 30 families focussed around the common dining hall and child care centre. In contrast to the medieval town, it mandated an equitable economy of abundance with full labour participation; and of physical and cognitive leisure to cultivate the human mind. Fourth, More (1516) critiqued ostentatious religious devotion, typical of the late medieval city, by removing it from his Utopia. In contrast, rather simple community service in Amaurote was seen as sacred action. Yet institutional suffering and violence were still

Table 4.6: *Amaurote*				
	I	It	We	Its
T	▓	▓	▓	
N	▓	▓	▓	▓
B	▓	▓	▓	
P	▓	▓	▓	▓

part of Amaurote. Overall, the idea of healthy cities through good planning/design was an advance on the *Medieval City* image.

Mumford claims that the image of Amaurote, with its wide streets and spaciousness, was repeated in, "the large blocks provided by William Penn's plan for Philadelphia in 1688" (1989: 327). Penn migrated from England in 1681 to establish a Quaker colony at Philadelphia (city of 'brotherly love'), the land being given to him by the King of England in payment of political debt. "William Penn became the first great real estate agent of the new world, marketing Philadelphia and Pennsylvania throughout Europe" (Lew, 2002). By 1760, Philadelphia had surpassed Boston as the largest city in the English colonies. And by 1774, Philadelphia had become the second largest English-speaking city in the world, after London. It was also the principal port of entry for most new arrivals to the colonies until 1820. As a result the 'Philadelphia Plan' (Figure 4.11) became a model for city planning and was soon replicated in settlements further to the west (Lew, 2002). No doubt the re-emphasis of the grid by Thomas More reminded urban speculators that it allows for rapid development and easy exchange of land.
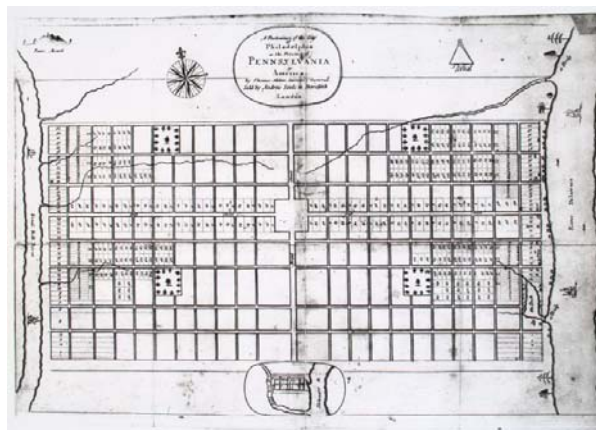
Figure 4.11: William Penn's plan for Philadelphia in 1688, mechanistic form (Penn, 1688 in Lew, 2002)

Though similarities exist between Campanella's *City of the Sun* and More's Amaurote, "both were isolated from the real world on islands and were centred in carefully planned cities" (Holis, 1998: 40). They represent divergent images of the city of the future with different socio-spatial archetypes informing their organisation. During the Renaissance, treatises about ideal city form reinterpreted two typologies. The archaic *Cosmic City* archetype expressed by the *Temple City* image and the *Mechanistic City* archetype expressed by the *Imperial colony* image. History reveals that the *mechanistic* typology triumphed during the scientific revolution, which ushered modernity and the industrial age. The main reason for this predominance is that the standardised urban development afforded by the grid was more expedient, useful and extendable than comprehensive master planning for an esoteric, divine order with absolute boundaries.

4.4 Modern city visions

This section examines the main city visions from the peak of industrial modernity (early 20th century), being the *cosmic City Beautiful* movement, the *organic Garden/Social City* and two contrary *mechanistic* images, *Broadacre City* and *Radiant City*. The latter visions are considered as the dominant image of modernity, the *City Beautiful* as alternative, whilst the *Garden/Social City* as the emergent vision (refer to Figure 4.12). The historical state of Western cities in the late 19th century, particularly in the U.K. and U.S.A., provided the social impetuous for the emergence of city planning as a professional discipline. The burgeoning industrial cities were overcrowded, unhealthy (due to pollution and poor sanitation), socially inequitable, and blighted with poverty (Hall, 1996). The main responses to these urban problems can be discussed using the various visions of the city that arose in order to provide a better quality of urban life.
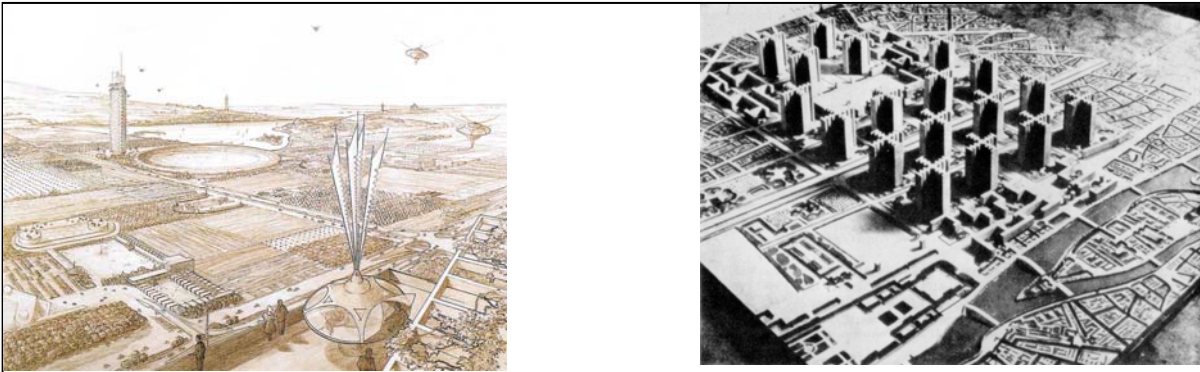
Broadacre City   Mechanistic City[1]   Radiant City

Modernity
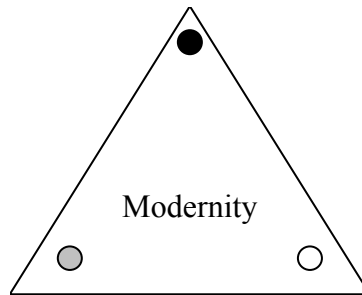
Garden/Social City[3]   City Beautiful[2]
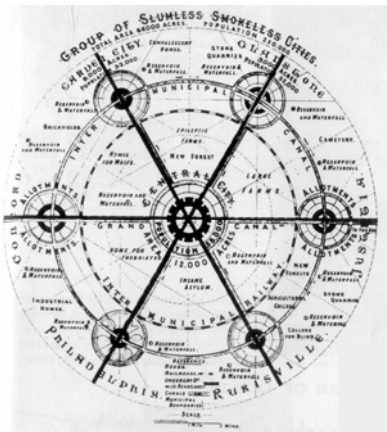
○   Emerging image

●   Dominant image

○   Alternative image
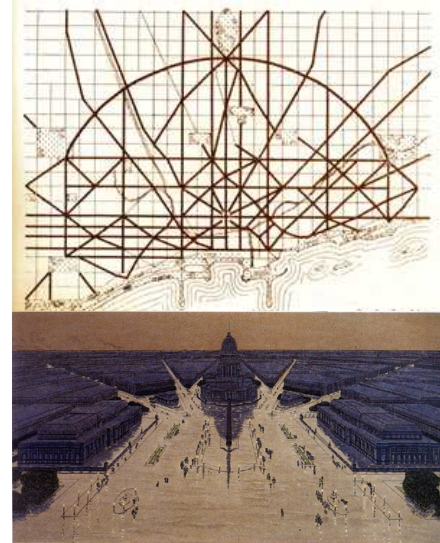
Figure 4.12: Modern City visions
(*1*. Broadacre City, refer Figure 4.17; Radiant City,
refer Figure 4.19;
2. 1901 Chicago Plan, accessed from
www.vivercidades.org.br, and Chicago Centre,
www.en.wikipedia.org, July 2006;
3. Garden/Social City, refer Figure 4.13)

4.4.1   Emergent, organic *Garden/Social City*

Howard's ([1898] 1902) vision of the *Garden/Social City* movement aimed to
progressively reconstruct capitalist society towards self-governing co-operative

communities. Raymond Unwin and Barry Parker first implemented Howard's *Garden/Social City* vision at Letchworth, U.K. An incorporated body of like-minded people, who obtained capital from industrialists, created Letchworth true to the anarchist-cooperative ideal. Using SC-V theory, an alliance of Egalitarians and Individualists formed to create new towns, as Howard was highly critical of the involvement of government. The main characteristics of the *Garden/Social City* aimed to combine the best qualities of town life and rural life. Firstly, it included moderate decentralisation of the Victorian industrial metropolis into a polycentric settlement pattern of towns serviced by rail and separated by countryside/nature. Secondly, the development of this new environment would set the stage for social revolution, superseding Capitalism by creating a civilisation based on cooperation (Fishman, 1982: 24). Thirdly, governance of the *Garden City* was based on community ownership of land and public services via fixed-profit corporations and voluntary public participation in decision-making. Each town was seen as a local welfare state responsible to local citizens and to the local management of utilities. In this sense *Garden Cities* reinterpreted the image of the *Greek Polis* as an urban community.

The image of *Garden/Social City* relates to the *organic* socio-spatial archetype. Parker and Unwin, architects of the first garden city, sought to raise the art of civic design. Hall (1996) explains that William Morris's arts and craft movement influenced both, and Fishman (1982) argues that as a result Unwin and Parker developed an architecture symbolising cooperation for Letchworth. They added to Howard's rational symmetry of the polycentric network their own "vision [of the city greatly beautiful] derived from the medieval village as seen through the eyes of William Morris" (Fishman, 1982: 67). This quality they called *organic unity*, which used principles from traditional village architecture, "to express the unity
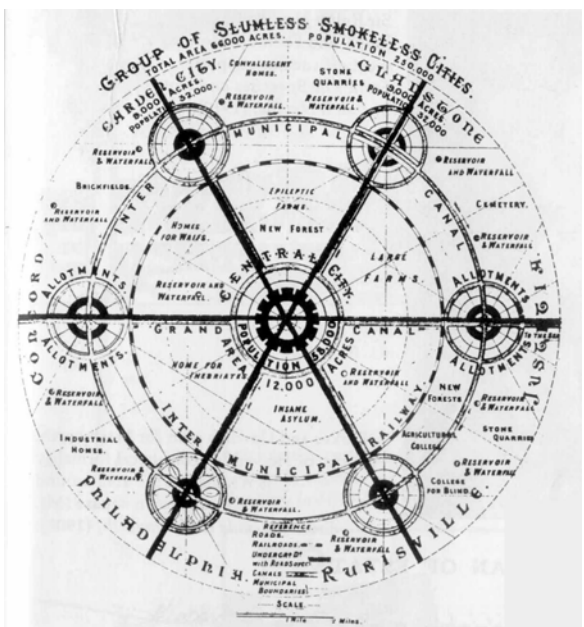
Figure 4.13: Howard's (1898) Garden/Social City Vision (Fishman, 1982)

of a cooperatively organised community of equals" (Fishman, 1982: 69). In the historical context of the congested, polluted and unhealthy industrial cities of Parker and Unwin's time, "their designs for Letchworth stood for cleanliness, simplicity, and the honest use of materials" (Fishman, 1982: 69). The picturesque home with a garden plot formed the basic unit within the neighbourhood cell of 5000 people, which combined with others to form the town within the greater regional whole of the polycentric *Social City* (see Figure 4.13). *The Garden/Social City* form as manifested at Letchworth and Welwyn (Figure 4.14) fits the *Organic City* archetype; whilst Howard's geometrical diagrams (which he argued should only be interpreted as such) are divorced from geographical context. They embody a hybrid quality of *cosmic* and *mechanistic* city archetypes.
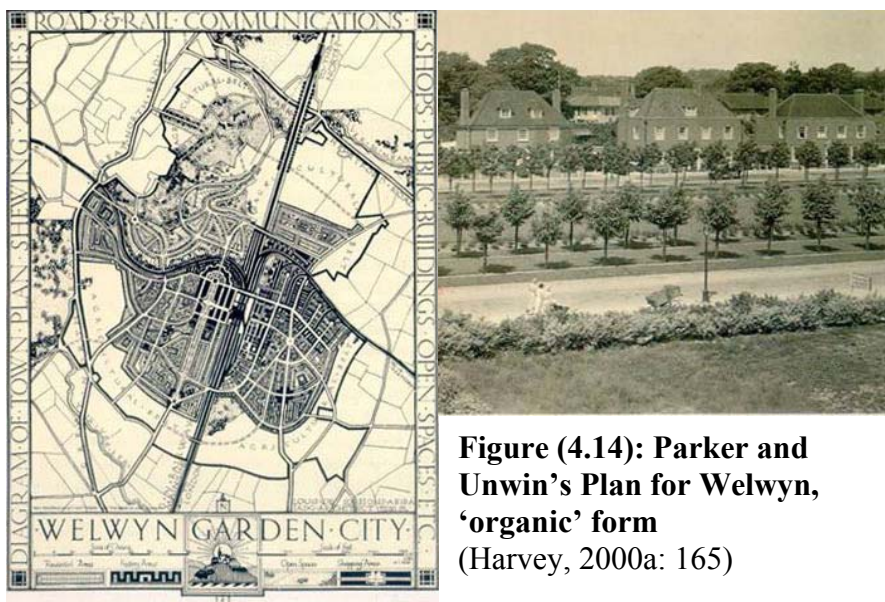
Figure (4.14): Parker and Unwin's Plan for Welwyn, 'organic' form
(Harvey, 2000a: 165)

The *Garden/Social City* image affected the construction of all four levels of urban reality, namely material, ecological, social and metaphysical (see Table 4.7). Significant advances were made in the city qualities of a humane, healthy habitat, moral aesthetics and social justice compared to urban development in past eras. The garden towns of Letchworth and Welwyn socially achieved in the early 20th century what Thomas More could only imagine in his vision of Amaurote during the early 16th century.

Table 4.7: *Garden/ Social City*

	I	It	We	Its
T	■	■	■	
N	■	■	■	■
B	■	■	■	
P	■	■	■	■

In Europe, between the World Wars, the *Garden City* vision was implemented not by cooperatives, but by Municipalities in the firm control of the State. When the vision crossed the Atlantic to the U.S.A. it was implemented by Tugwell's Federal Resettlement Program (Hall, 1996: 130). Using SC-V theory, Hierarchists (the federal government) controlled and provided the capital to build the Egalitarian vision of garden towns. This program also provided the model for the development of post-WWII new towns in the U.K. State-controlled public corporations were the means of quickly and efficiently developing the infrastructure and housing required for the growing population. At that time bureaucratic municipalities were seen as inefficient and were taken out of the process. The U.K. Labour Government absorbed the national planning of new *Garden City* towns and countryside as an important part of its ideology (Hall, 1996: 134) and built eight new towns between 1946 and 1950 to house 400,000 people. The top down hierarchical approach of building the *Garden/Social City* ideal had usurped the vision's social purpose of nurturing the bottom up anarchist, communitarian approach.

During the 20th century Howard's *Garden/Social City* vision degenerated from the original comprehensive plan for human development and social reform and became consumed by the practical concerns of urban planning. Others note (Hall, 1996; Holis, 1998 cites Creese, 1966) that the U.K.'s Town Planning Act of 1909 featured some technical objectives of the *Garden City* vision but lacked Howard's emphasis on fraternity and cooperation. What followed as expedient planning practice in the U.K. and U.S.A. (to cater for the rapid urban population growth) was the easier path of building garden suburbs connected by tram or rail to the existing metropolis, rather than giving power to the people to cooperatively plan and build a polycentric regional network of new garden cities that decentralised urbanisation.

4.4.2   Alternative, cosmic *City Beautiful*

An alternative approach to the mounting urban social problems of the late 19th century was manifested in the *City Beautiful* movement, which sought to displace the areas of urban blight. Firstly, the *City Beautiful* image of the future returned to the outward cosmetic display of prosperity and power of the Renaissance and Baroque periods. The *City Beautiful* movement can be described as being motivated by Sorokin's *cynical*

sensate cultural paradigm. Secondly, its advocates held the deterministic belief that the beautification of the city (i.e., restoring visual aesthetic and order), is required for the emergence of a harmonious, hegemonic social order (Hall, 1996: 179). Convenient for the moral/social aspirations of the upper and middle class plan-makers, new radial boulevards and grand parks tended to displace the poor in their slums. As a result of these two factors, the *City Beautiful* image relates to the *cosmic* socio-spatial archetype.

The *City Beautiful* image affected mainly the construction of the material, ecological and psychosocial levels of urban reality (Table 4.8), focusing on the cities' architectural beauty and symbolic meaning, commercial convenience, and spatial comfort for the middle and upper classes. Missing from this image of the future are concerns for personal space and desires, sacred personal and collective spaces, healthy humane habitat, and intercultural spaces, in favour of a homogenous identity. In summary, it is an image that marginalises personal and cultural disadvantage or diversity. Its 20th century manifestation in the early to mid-1900s drew its origins from Haussmann's reconstruction of Paris under Napoleon III and the construction of the Vienna Ringstrasse (Hall, 1996: 175).

Table 4.8: *City Beautiful*				
	I	It	We	Its
T				
N		▓		▓
B	▓		▓	
P		▓	▓	▓

The movement gained significance in specific historic contexts for different reasons and three cases stand out. Firstly, its vision was implemented under the advocacy of architect and city planner Daniel Burnham (1846–1912), in the growing commercial cities of the middle and western U.S.A. His greatest expression of this vision is seen in the Chicago Plan of 1909 (see Figure 4.15), which was later attacked by critics for ignoring housing, schools and sanitation (Hall, 1996:182). His method overlaid a costly centrocentric pattern of radial streets on the existing rectangular grid in order to focus attention on the business core, without much regard for functional land use or development needs. Secondly, the *City Beautiful* vision was implemented in newly designated capitals of the British Empire, by civil servants who, "commissioned plans that would express imperial dominance and racial exclusiveness" (Hall, 1996: 175). Examples of this approach include the Lutyens-Baker 1913 plan for New Delhi (India), the construction of city centres in Harare, Kusaka, Nairobi and Kampa (South and East Africa) and the Griffin-

Mahoney 1912 prize-winning city plan for Canberra (Australia, refer to Figure 4.16). Thirdly, the vision was implemented by the totalitarian dictators Hitler and Stalin in Europe in the 1930s, to impose an image of national pride and glory on their respective capitals, Berlin and Moscow.

> The odd fact then is that there is no single easy explanation for the phenomenon of the City Beautiful. It manifested itself, over a forty year period, in a great variety of different economic, social, political and cultural circumstances: as a handmaiden of finance capitalism, as an agent of imperialism, as an instrument of personal totalitarianism of both the right and left varieties, so long as those labels have meaning. What these manifestations had in common, with some qualifications and exceptions, was a total concentration on the monumental and on the superficial, on architecture as symbol of power; and, correspondingly, an almost complete lack of interest in the wider social purposes of [city] planning (Hall, 1996: 202).

By reframing the *City Beautiful* phenomenon using SC-V theory, these historical urban manifestations clearly have a common psychosocial driver deeper than the material characteristics. The driving social cause is the Hierarchist*'s* absolutist, order-making worldview. Similarly, the City of Towers phenomenon birthed by Le Corbusier's *Contemporary/Radiant City* vision shares the same motivating worldview. Hall postulates that Le Corbusier was the last of the *City Beautiful* planners because of his care for monumentalism and visual symbolism (Hall, 1996: 215). The current campaign for *Urban Quality* within cities that began in the 1990s is an echo of the *City Beautiful* movement. Hall points out that the urban design/quality campaign focus on aesthetic appearance between cities in a competitive global market place, whilst ignoring structural unemployment and the rise of a disadvantaged underclass (1996: 415), is the shared trait that links it back to the *City Beautiful* movement. The Hierarchist's purposeful order is resurging within the Individualist's world of competitiveness.
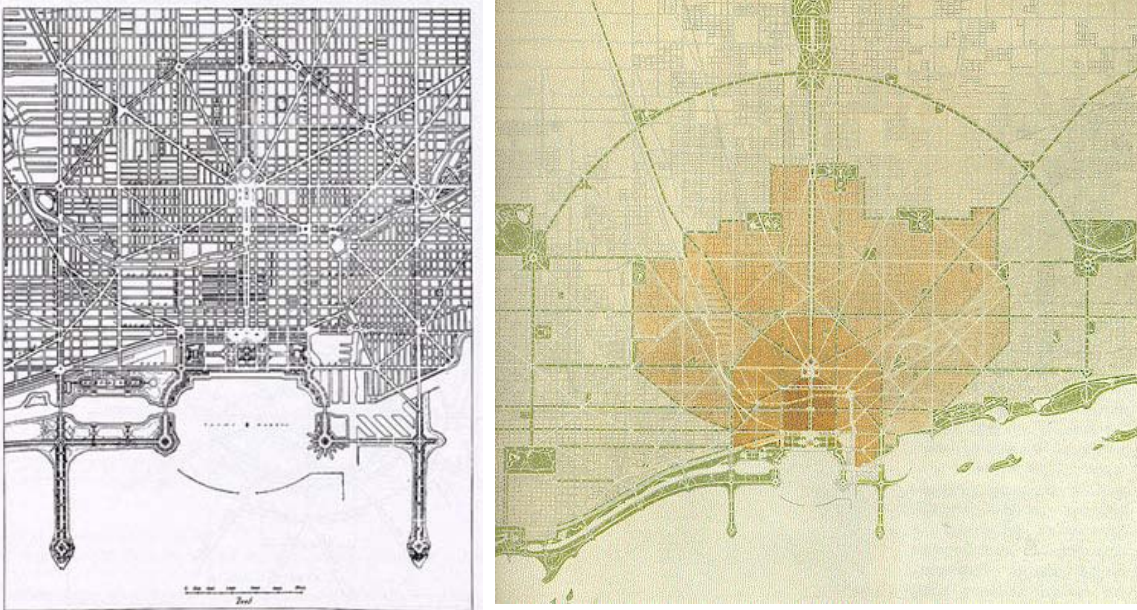
Figure 4.15: Chicago Plan 1909, 'cosmic' example of City Beautiful image (http://en.wikipedia.org, 2005)
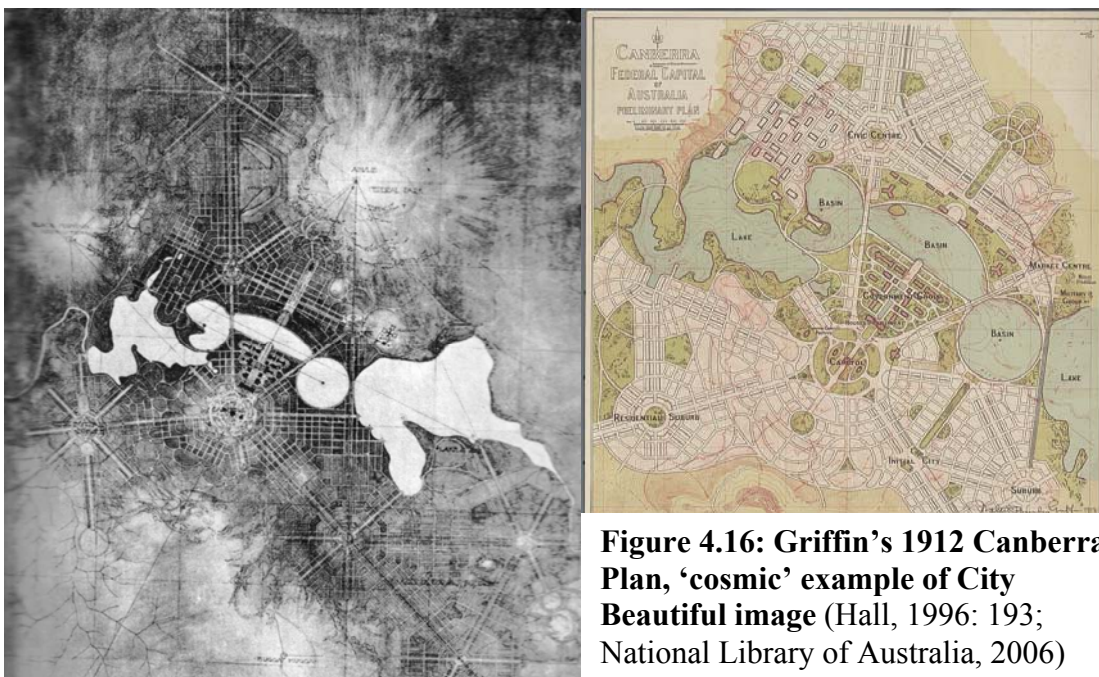
Figure 4.16: Griffin's 1912 Canberra Plan, 'cosmic' example of City Beautiful image (Hall, 1996: 193; National Library of Australia, 2006)

4.4.3   Two contrary mechanistic images: *Broadacre City* and *Radiant City*

4.4.3.1   Broadacre City

For Wright (1935), the urban problem was that the form of existing cities were "no longer modern" (contemporary) due to three inventions: (1) the automobile and associated

mobilisation of individuals; (2) telecommunications technology (the radio, telephone and telegraph); and (3) standardised machine shop production (Wright, [1935], 2000: 345). Hall (1996) explains that Wright was also influenced by the historic context of farm foreclosures of the 1930s and the subsequent rural migration, and the failure of Tugwell's (1935-8) Federal Government Resettlement program to build 'Greenbelt Towns'. These events both disturbed Wright's value system, which was based on Emersonian and Jeffersonian virtues of self-reliance and freedom. As such, Wright's belief in the social right to 'live off the land' was threatened and government policy failures exacerbated his aversion to bureaucratic collectivist control/democracy. In response, Wright conceived *Broadarce City* that reasserts self-reliance and freedom:

> Borrowing an idea from the Russian anarchist philosopher Kropotkin (*Fields, Factories, and Workshops*, 1899), Wright believed that the citizens of Broadacre would pursue a combination of manual and intellectual work every day, thus achieving a human wholeness that modern society and the modern city had destroyed. He also believed that a system of personal freedom and dignity through land ownership was the way to guarantee social harmony and avoid class struggle.

The 1935 *Broadacre City* image of the future was a decentralised habitat in which Americans would re-inhabit the rural landscape, connected through telecommunications and personal transportation (the automobile) to achieve a sense of dignified freedom, self-reliance and community. The main characteristics of this image were based on technology to liberate mobility, access to land to build a nation of individual enterprises, and prefabricated materials/kit modules for homeowners to build with, thereby transforming the labour market of the industrial economy. Secondly, *Broadacre City* embodied small government and local, classless democracy. In this scenario all had rights to property and freedom to express individual creativity.

Thirdly, the *Broadacre City* vision of environment removed the former, historic urban-rural distinction. "One can look at Wright's model of Broadacres, however, and not see a city at all. There is no recognisable centre, no point at which the natural world gives way to an environment dominated by man" (Fishman, 1982: 92). The architecture of *Broadacre City* seeks diversity in unity, to reintegrate all units into one fabric. This process Wright calls *organic architecture*. Unity is achieved through the design process, which relates to landscape, climate, resources and function (Wright, [1935], 2000: 348,

346). Though Wright espouses an *organic architecture*, the proposed *Broadacre City* form actually relates to the *Mechanistic City* archetype, where the classical grid is employed to colonise the regional landscape with a network of superhighways (Figure 4.17).
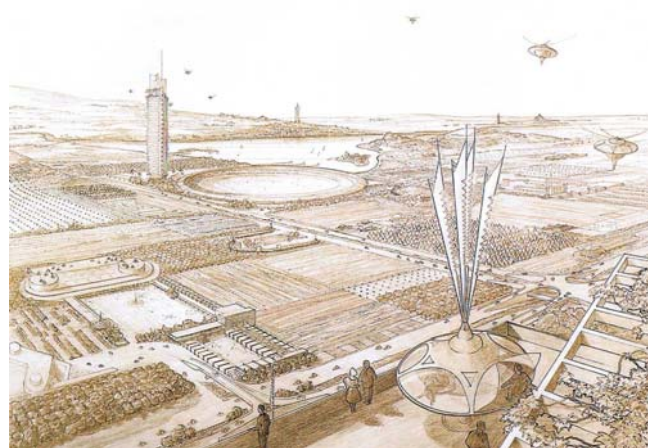
Figure (4.17): Wright's 1934 Broadacre City, mechanistic form
(FLLW Foundation, 1988)

The *Broadacre City* image affected the construction of all four levels of urban reality, namely material, ecological, social and metaphysical (Table 4.9). Significant advances were made in terms of the qualities of personal space and desires (compared to the crowded tenements of industrial cities), and space for personal opportunity/enterprise, reclaiming the benefits of the mixed-use family workshop. Wright's holistic moral aesthetics, grounded in the process of *organic architecture*, reinterpreted the anarchist tradition within America. He also redefined the concept of schools, community centres, and of religion and cathedrals as universal spaces and places to embody and celebrate society's deepest values, essentially "the union of individual man with his fellow and the harmony of the whole society with nature" (Fishman, 1982: 141). However the *Broadacre City* vision lacks an awareness of the ecological impact of the radical decentralisation of cities.

Table 4.9: *Broadacre City*				
	I	It	We	Its
T	■	■	■	
N	■	■	■	■
B	■	■	■	
P	■	■	■	

Wright's *Broadacre City* vision influenced the most urbanised society in the Western world, the U.S.A. From the perspective of SC-V theory, the *Individualistic* worldview that formed this image of the future, resonated and drove urban development for an expanding post-WWII population past suburbia to 'exurbia', and further to the emergence of 'technoburbia' (Fishman, 1987). This became the dominant vision for suburbanisation during modernity and post-modernity. Significant parallels can be made between Wright's (1935) *Broadarce city* and subsequent urban formulations, such as Fishman's

(1987) description of the new emerging technoburbs and Webber's (1968) prediction of a 'post-urban age' consisting of trans-territorial non-places. *Broadacre City* is still under construction, and may be partially realised during the 21st century's information age, supported by telecommunications infrastructure linking the U.S.A.'s vast landscapes of urban sprawl. However, the driving forces of globalisation and the informational mode of development are too strong to let the city centre be de-capitalised and depopulated in accordance with Wright's vision.

Finally, two criticisms of the image remain. Firstly, Hall (1996) suggests that the model is not so democratic when implemented by the guiding hand of the County Architect in accordance with the aesthetics of Wright's modern Arcadian vision. Secondly, Hall (1996) argues that Wright proved to be visionary by anticipating the American suburban sprawl future, but it was divorced from the economic and social order that Wright envisioned, he states, "America got the [Broadacre] shell without the substance" (Hall, 1996: 291). *Broadacre City's* substantial manifestation would require the following preconditions: (1) existing suburbs would need urban intervention and improvement to reclaim land for agriculture or permaculture; (2) improved equitable access to transportation and telecommunications infrastructure; and (3) the transformation of regional governance.

4.4.3.2   Radiant City

Le Corbusier shared the same perception with Wright and Howard, which was essentially that the 19th century metropolis was unsuitable for the development of humanity and civilisation, as it was "so bound up with an unjust social order" (Fishman, 1982: 265). Le Corbusier's densification model contrasted Howard's moderate decentralisation and Wright's radical decentralisation urban models. He explored a new socio-spatial form for society within the city that would express the new technic order, by reconstructing the historic congested centre. He released two visions of the modern ideal city, *Contemporary City for Three Million People* developed during 1922-25, and then a revision of his construct published as *The Radiant City* (*La ville radieuse*) in 1935. For this exercise both will be synthesised as one vision.

Le Corbusier was introduced to architectural rationalisation as a young architect by Auguste Perret, and was then influenced by Tony Garnier's (1904) machine vision of *Cité Industrielle*, displayed at the Lyon 1914 planning exhibition. Tony Garnier's city proposal was inspired by Amis d'Emile Zola's book *Work* about, "the foundation of a cooperative manufacturing town by a Fourierist[2] and engineer-architect" (Rykwert, 2000: 166). The *Cité Industrielle* was a linear grid city, powered by clean energy (hydro-electric) with its landuses segregated along the main street's electric street car line. Garnier's (1904) *Cité Industrielle* images (refer Figure 4.18) of machine-like gridiron order, efficient mobility and modern Mediterranean flat-roofed architecture can be seen in Le Corbusier's images of the future city.

Figure 4.18: 1904 Cité Industrielle by Garnier
1. Grid Plan, accessed from http://transstudio.com/infratecture/Images, Aug 2006;
2. Perspective, accessed from www2.todoarquitectura.net , Aug 2006
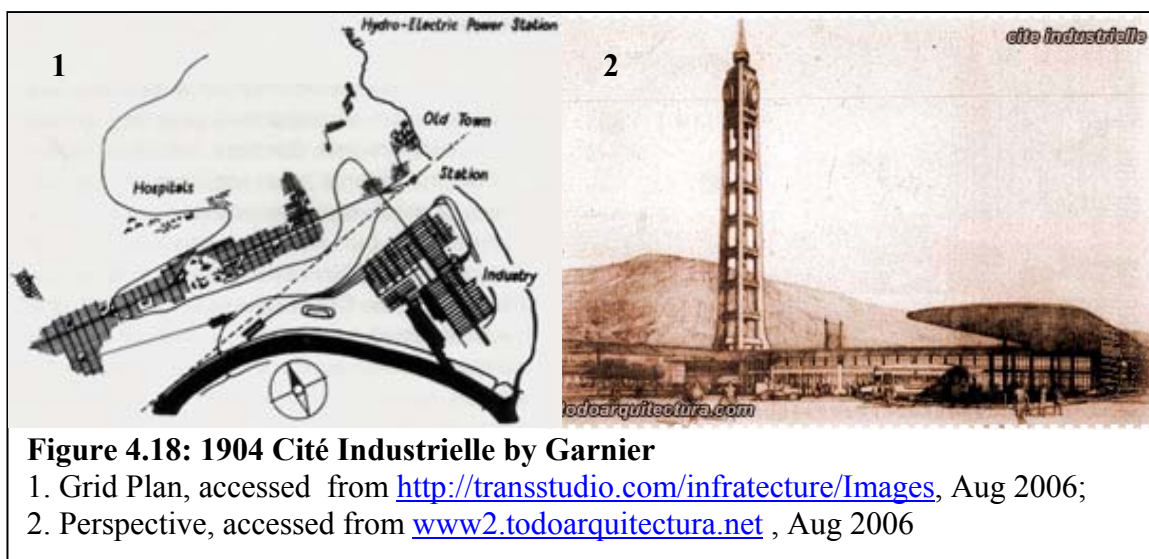
The decongested *Radiant City* image of the future sought to express harmony (order) between humanity, nature and machine by celebrating the city as a machine for living in. Specifically, the image that emerges is that of a centralised, hierarchical secular society coordinated by an expert bureaucracy (technocracy), separated from politics valuing the reconciliation of the individual with the collective and with nature using the technological power of the machine. According to this image technology could segregate and improve the speed and efficiency of all modes of mobility, increase inner city residential densities within apartment towers, and increase parks and open spaces (Le Corbusier, [1929], 2000: 340). There were four main characteristics of this image. Firstly, it emphasised the rational, geometric city plan (Figure 4.19), as the ultimate collective expression of creative modern art. Its architecture had no need of historic decoration. Secondly, modern architecture's mass production of materials, steel, glass and concrete enabled Le

Corbusier's vision of skyscraper city in the park, where mathematical standardisation could express perfect form. Thirdly, the spatial form of the built environment was multi-layered, organising the city functions (industry, housing, offices) within vertical towers (up to 60 stories high). The towers were classified and separated within a rational geometric layout amongst garden landscapes (figure 4.20). Surrounding the city was the protected zone of woods and green fields. Further beyond were Howard's *Garden City* settlements, linked by rail. Fourthly, Le Corbusier designed his city plan according to the principle, "a city made for speed is made for success" ([1929], 2000: 343). Speed equated to freedom to meet, coordinate, exchange ideas and experiences, and trade.
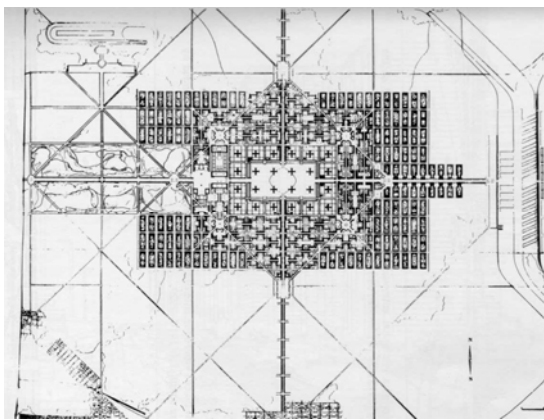
Figure (4.19): Le Corbusier's 1929 Contemporary City, 'mechanistic' vision (Fishman, 1982)

Figure (4.20): Le Corbusier's 1925 Plan Voisin (Fishman, 1982)

Both visions of *Contemporary* and *Radiant City* relate to the socio-spatial form of the *Mechanistic City* archetype. Fishman's (1982) explanation of their administrative and geometric order, however, shows a relationship to the *Cosmic City* archetype, "in the Radiant City, therefore, the planner plays the role of philosopher-king. Only he can bring society that healthy social equilibrium which Le Corbusier called harmony and Plato called justice" (Fishman, 1982: 263).

The *Radiant City* image and the *Contemporary City* vision for Paris (*Plan Voisin*, 1925) created powerful modernist images for the future that have influenced the development of most Western cities. Both expressed rational functionalism, which affected the construction of all four levels of urban reality (material, ecological, social and metaphysical, see Table 4.10). Significant advances were made to the standardised, efficient production of space, the segregation of transport modes and the idea of the landscaped, 'green' cities of 'leisure' and 'meditation' (Fishman, 1982: 202-4). The *Radiant City's* agenda also challenged Capitalism and sought to build an economy of the socialist welfare state. The ideal city is defined and implemented according to one rational plan to consciously harness the industrial power and processes of the machine age. "This plan replaces the [capitalist] marketplace with total administration; experts match society's needs to its productive capacities" (Fishman, 1982: 227). In the *Contemporary City* Le Corbusier relied on syndicalism to moderate industrial Capitalism, but the *Radiant City* relied on greater authoritarianism.

Table 4.10: *Radiant City*				
	I	It	We	Its
T	▓	▓	▓	
N	▓	▓	▓	▓
B	▓	▓	▓	
P	▓	▓	▓	▓

However, the *Radiant City* image of the future also created significant urban problems and conflicts. One of these was the decline of pedestrian streets because of rational functionalism's segregation of land uses and activities, and priority movement for cars. Jacobs ([1961] 1992) and Jacobs and Appleyard ([1987] 2000) blame Le Corbusier for the town planning approach across Western cities throughout the world that resulted in the destruction of: (1) the pedestrian-scaled street by traffic; and (2) the eradication of cultural heritage of inner city neighbourhoods by monolithic urban renewal. The depersonalisation of individual homes within apartment towers and public territory is also an issue due to poorly designed open spaces surrounding the towers. Hall (1996) describes the negative social impacts of Le Corbusier's design influence on large-scale public housing in the U.S.A. and U.K.

Thirdly, Le Corbusier's city visions epitomised modernity's planning epistemology of expert elitism. Politics (unproductive conflict in Le Corbusier's mind) and popular opinion is subordinated to empirical truth. For Le Corbusier, Parliamentary democracy is

not capable of creating or running the *Radiant City* (Fishman, 1982: 239). Instead, the rational and imaginative planner takes pride of place as technocrat within the centralised bureaucracies, in order to design and build the ideal city and realise social harmony. There is no place for the people as a whole to participate in decision-making, except within the realm of their inner being and family domain of their own home. As a result, his prolific writings and seductive images converted many professionals, who contributed to the alienation of the citizen from the planning process. From the perspective of SC-V theory, Le Corbusier's ideal city is the conception and domain of Hierarchists.

Le Corbusier's work influenced the International Congress of Modern Architecture and hence it's *Athen's Charter* (1941), which consolidated his earlier work in the *Contemporary City* and the *Radiant City* visions. His images of the future city emerged as a contrasting *mechanistic* model to Wright's *Broadacre City*, and became the dominant image for the modern industrial city centre, as it served the market's symbolic and actual accumulation of capital. His ideas shaped the architecture of the 20th century mega-scale city and continue to shape the post-industrial, post-modern city.

4.5   Post-modern city visions

This section examines the main city visions from post-modernity (second half of the 20th century), being the *cosmic Arcology*, the *organic Eco-city* and the *mechanistic Technocity* images. The latter vision is considered as the dominant image of post-modernity, the *Arcology* as alternative, whilst the *Eco-city* is the emergent vision. A number of hybrid images of the preferred city have also enter the urban discourse. *Ecumenopolis*, the inevitable city, is a mix of the *cosmic* and *organic* city archetypes. The *Cultural Heritage City*, the *Creative Learning City* and *Cosmopolis* (the intercultural city) represent a combination of the *organic* and *mechanistic* city archetypes. The *Global Networked City* is a combination of the *mechanistic* and *cosmic* city archetypes (Figure 4.21).

Figure 4.21: City visions of Post-modernity
(*1*. Chicago 2035 in IRobot;
2. Pearl River Delta Metroplotian region, Graham and Marvin, 2001: 348;
3. Arcosanti 5000 accessed from www.arcosanti.org, 2005;
4. Ecocity accessed from www.bikesacrossborders.org/art;
5. Prague, Daffara, 2002)
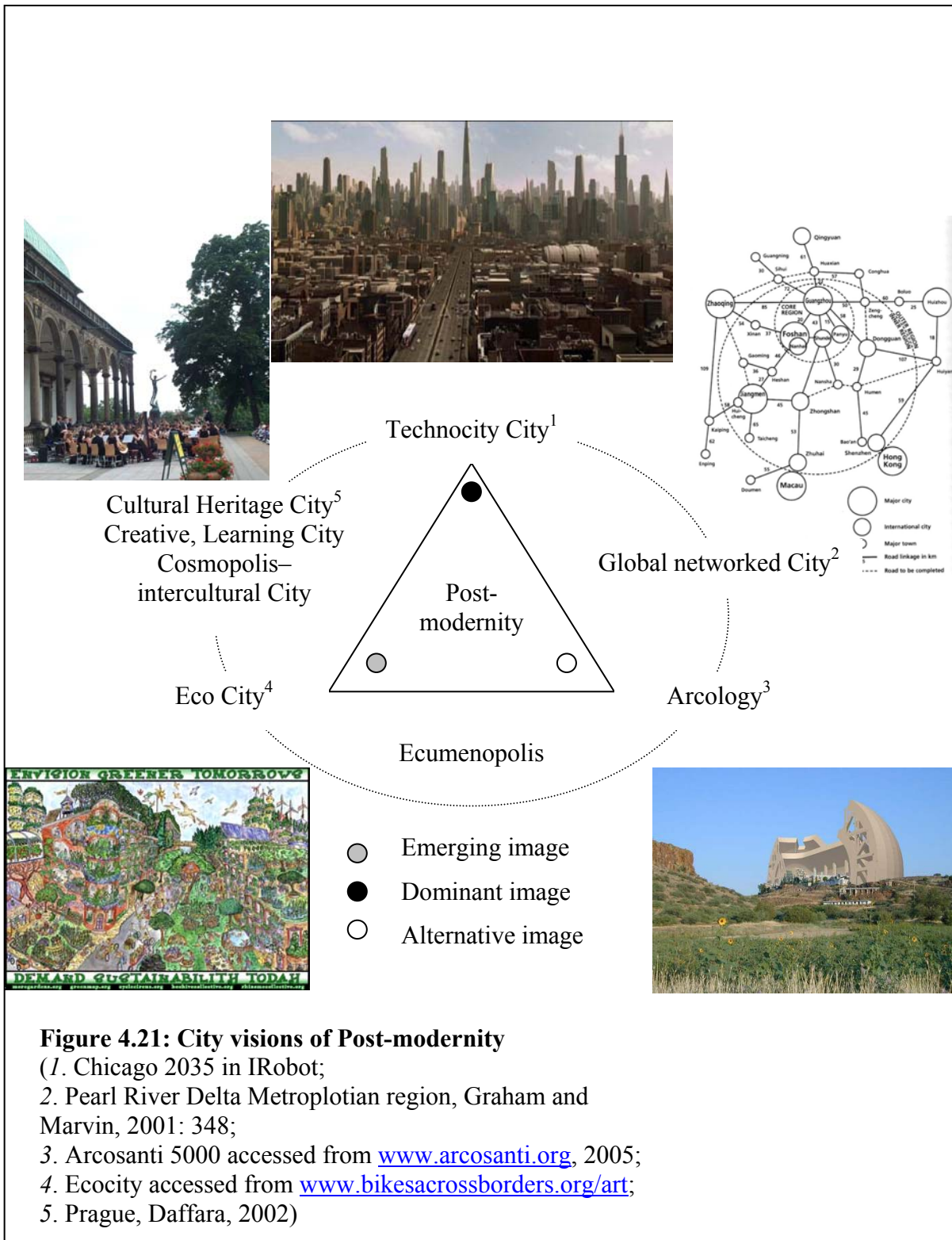
Post-modernity may have critiqued the utopian ideals and visions of the city, particularly their positivistic contribution to modernity's project of progress, but it did not stem the flow of different urban images of the future from arising to challenge the former. The growing concerns within post-industrial cities and urban studies, as a result of praxis

informed by modernity's planning and design epistemology, were varied. They included the environmental, social and aesthetic impacts of unlimited growth of amorphous sprawl, road infrastructure, technological change, and market driven urban redevelopment of city centres amid global economic restructuring. Rising urban poverty, marginalisation of the disadvantaged, and the myth of planning for the homogenous 'public interest' also shattered the image of the expert city planner/architect. Almost as many images of the city emerged in the second half of the 20th century as did during the former two and a half millennia of human history, which could be interpreted as another indicator of the emerging information age. To keep this section concise, these post-modern images of the future city will not be described to the same extent as the former images. They will also be presented in groups based on the city archetype they relate to.

4.5.1 Emergent, organic Eco-city/Green City

In reaction to the industrial era and the birth pangs of the post-industrial age, the emergence of the environmental movement in the 1960s generated a vision of "reduced and controlled growth designed to protect and conserve the Earth's ecological balance" (Hollis, 1998: 57). As a result, alternative visions of the city (compared to a techno-dominate urban future) entered the discourse. Hollis argues that many descriptions of the 1970's *ecotopia* genre revive anarchism and refer back to the writings of the Russian anarchist Peter Kropotkin, especially his *Fields, Factories, and Workshops* (1899). As documented by others (Welter, 2002; Fishman, 1987), Kropotkin's work on cooperative civilisation also strongly influenced Howard's (1902) *Garden/Social City* vision and Geddes' (1949) 'Notation of Life', and 'valley section' concept of the city in the region.

The *Eco-city*, as described by Register (1987), is a restoration project whereby architecture of peace reconciles humanity coexisting with itself and with nature, mapping a transformation process from a war economy to a peace economy. He states that, "an eco-city is an ecologically healthy city. No such city exists" (Register, 1987: 3). His assertion continues to hold true. Only fragments of the *Eco-city* exist, scattered in space (cities or regions) and time (history). The *Eco-city* as an image of a preferred urban future is essentially the same as the 'Green city' or Agenda 21's 'Sustainable city'.

The *Eco-city* image of the future, advocated by eco-anarchists, is based on the myth that *small is beautiful* (Schumacher, 1973). Using SC-V theory, it is the preferred image and domain of *Egalitarians*, a cooperative, equitable society that values a way of life that develops creative fulfilment in all areas and is non-destructive to the planet. The four main characteristics of this image are as follows. Firstly, it espouses a material

Figure (4.22): The 'organic' Eco-city vision
(Register, 1987: 4)

economy that accounts for the true environmental and social costs of human exchange and development, whilst 'optimising exchange efficiency' (Engwicht, 1992: 128). Secondly, it promotes the containment of urban development into a higher density polycentric settlement pattern separated by nature corridors, in contrast to the metropolitan urban sprawl across a region. Biodiversity within the region and city is thus sustained. Within settlements, nature coexists with the built in the form of urban food forests and gardens, vegetated waterways and rooftop gardens (Figure 4.22). The latter serves to reduce the 'heat sink' effect of built environments. Thirdly, the social purpose of *Eco-city* is a place of mutual human development and enrichment (Engwicht, 1992: 17). A necessary cultural precondition for the *Eco-city* is, "people caring about the future and in many cases, working for it" (Register, 1987: 3). As a result, 'eco-relational thinking' (Engwicht, 1992) as the dominant paradigm shapes technology and the form of the city. City planning and design that applies eco-relational principles of holism, dynamic systems, uncertainty and chaos generates the socio-spatial pattern of the *Organic City* archetype. Fourthly, this image advocates the expanding metaphysical awareness of deep ecology that "recognises the intrinsic value of all living beings and views humans as just one particular strand in the web of life" (Capra, 1996: 7). *Deep ecology* transforms human consciousness and behaviour away from an anthropocentric worldview of nature and its value towards an eco-centric perception of reality.

The *Eco-city* image of the future challenges and seeks to reconstruct all four levels of urban reality (see Table 4.11). Significant advances are argued for in the qualities of eco-efficient production and use of energy, space and materials (*Factor Four*, Lovins and von Weizsacker, *et al.*, 1988; *Natural Capitalism*, Hawken, *et al.*, 1999; *Cradle to Cradle*, McDonough and Braungart, 2002). The city as healthy habitat for all living entities is a new concept that enters the formulation, whilst moral aesthetics are grounded in the practice of green architecture or ESD. Concepts of 'human eco-rights'

Table 4.11: *Eco-city*				
	I	It	We	Its
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N				
B				
P				

(Engwicht, 1992: 88) emphasise social justice, interactive communities and participatory democracy to provide equal opportunities for personal and group action (*Agenda 21*, 1992; *The Habitat Agenda*, 1996a; Moughtin, 1996; and Hall and Pfeiffer, 2000). Register's (1987) concept of the *Eco-city* as the ideal city of peace and reconciliation reconnects the city's role to the utopian, trans-societal narrative of collective bliss.

The impact and legitimacy of the *Eco-city* vision has been growing since its co-emergence in the 1960s with postmodernism and the environmental movement. It has inspired international action in the form of: (1) *Agenda 21* (1992); (2) the Charter of the *Congress of New Urbanism*; (3) the *Smart Growth* set of planning strategies; (4) *Urban Future 21's* sustainable city goal, (Hall and
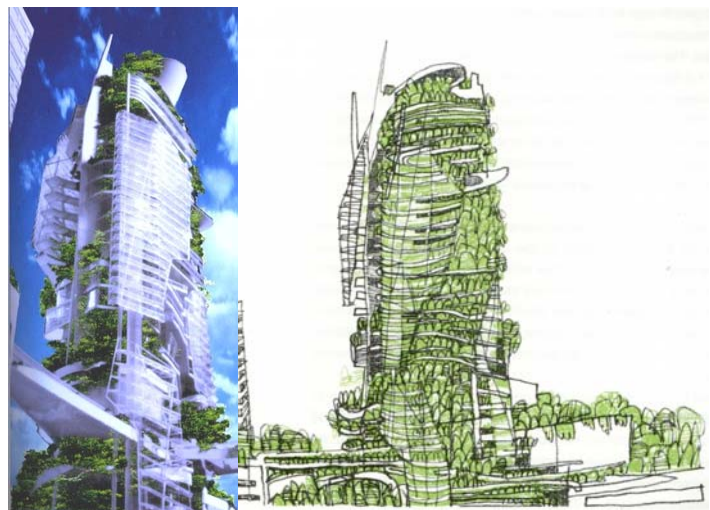
Figure (4.23): Yeang's *Bioclimatic* architecture or Eco-skyscraper – EDITT Tower (Yeang, 2000; Gerada in Johnson, 2003: 111)

Pfeiffer, 2000); and (5) inspired the formulation of ecological sustainable design (ESD) or 'bio-climatic design principles' (Yeang, 2000) within the field of architecture (Figure 4.23). For example, cities in Germany and Switzerland, as well as the cities Singapore, Tokyo, New York City and Toronto have introduced a 'Green Roofs Policy' to achieve urban heat reduction, air cleaning, water management and increased biodiversity within

their cities. An internet search identified a number of city/local governments that have incorporated the image of the *Eco-city* into their policy objectives (Appendix C). Gleeson et al. (2004) state that a study of Metropolitan Plans both in Australia and globally demonstrates that sustainability and urban 'greening' are recurring issues. Likewise, other researchers argue that the quest for the sustainable city continues to grow (Clark, 1996; Mayor and Binde, 2001; Castells, [1999], 2002: 402 cites Capra, 1996). The key to the sustainable development of cities lies in the transformation of human minds and social institutions, not the environment. Echoing Arne Naess's argument (in Capra, 1996) for the ecological expansion of self, Ress (1998) concludes:

> […]we do not have an ecological crisis, the ecosphere has a human crisis. Our 'story' about our place in the scheme of things has somehow gone awry in the industrial age. For sustainable development, therefore, the need is more appropriate philosophy than for appropriate technology. If we tend to ourselves, nature will take care of itself (Rees, 1998 in Hamm and Muttagi, 1998: 39).

The *Eco-city* vision is arguably still in the emergence or adoption phase of transforming the cultural paradigms informing current urban development practice. On the margins of the grassroots environmental movement lies Soleri's (1969) *Arcology*, an alternative, ideal vision of an ecologically sacred and sustainable urban future, which is now examined.

4.5.2   Alternative, cosmic *Arcology*

Soleri was influenced by Teilhard de Chardin's (*The Phenomenon of Man*, 1961) evolutionary macrohistory that sought a synthesis between matter and spirit. Teilhard de Chardin's (1961) proposition that the evolutionary process of civilisation tends towards greater socialisation, complexification (synthesis) and centricity (convergence) is clearly expressed in Soleri's ([1969] 1977, 1985) urban proposals. Teilhard de Chardin also believed that evolution is converging towards the spirit, towards pure radial energy (love or the 'Omega point'). He recognised the continual tension of the universe with its increasing entropy (disorder) within his model, and noted that at times the socialisation process (noogenesis) is counter-evolutionary. When this happens, society succumbs to entropy, individualism and depersonalisation, and falls away from the spiritual. On this basis, Soleri draws the conclusion that urban sprawl is a manifestation of counter-

evolutionary social progression (civilisation). As a result, Soleri (1969) saw the 'flat gigantism' or sprawl of Western cities as the antithesis of the appropriate habitat for the complex life of society. He critiqued Doxiadis' (1968) urban forecast of *Ecumenopolis* (Section 4.5.4) as the planetary "map of despair" (Soleri, [1969] 1977: 2). He argued that the megalopolis is inefficient, a major producer of entropy (ecological disorder) and provides a blighted physical, physiological and sacred environment. This claim has now been substantiated by the research of urban ecologists and urban sociologists (Dekay and O'Brien, 2001; Putman, 2000). Soleri formulated his *Arcology* theory as an alternative urban development model in an age of environmental crisis. He proposed that society needed to 'construct the city in the image of man', the human body being the natural vessel or framework for the spirit (1977: 13). Thus Soleri's concept of the ideal city is that of a structure called an *Arcology*, or ecological architecture, which is the neo-natural habitat for civilisation, a livelier container for the social, cultural and spiritual evolution of humankind (1977: 18-20, 26, 31).

To achieve this, Soleri argued that *Arcologies* would need to be dense, three dimensionally compact, fully walkable, car free and reliant on renewable energy resources. He states that they would also have a definite urban boundary and population within nature, and have the functional fullness of an organism designed for the care of many, if not most of culture's needs. The main characteristic of the image of *Arcology* relies on the convergence of two phenomena, namely complexity (ecological and social) and the miniaturisation of urban sprawl. "The complexification and miniaturisation of the city enables radical conservation of land, energy and resources" (Soleri, 2005). Contrary to the dictum advocated by the eco-anarchists, that *small is beautiful* (Schumacher, 1973), Soleri's mega-structures rely on the eco-efficiencies gained through the principle that synergy is beautiful. Secondly, the compact form of *Arcology* provides citizens immediate low-impact access to surrounding nature reserves and agricultural production, "maximising the logistical efficiency of food distribution systems" (Soleri, 2005). Thirdly, the economy of *Arcology* embodies more frugal, efficient and intelligent city design, a "'lean alternative' to hyper consumption and wastefulness" (Soleri, 2005). As a result, *Arcology* as a socio-spatial form relates to the *Cosmic City* archetype, an ecological reinterpretation of the comprehensively conceived *Renaissance City* of order and human consciousness. The expression of Soleri's Italian cultural heritage is evident within the vision of *Arcology*.

Like the *Eco-city* vision, the *Arcology* image of the future challenges and seeks to reconstruct all four levels of urban reality (Table 4.12). The material qualities of the city are re-constructed by technology to achieve the metabolic (flow of matter and energy) wholeness of a biological organism. The social objectives of *Arcology* theory reconstruct reality at the next two dimensions. Firstly, it defends the ecology of the planet from the human species, by miniaturising urban sprawl into sustainable human habitats. Secondly, it seeks to restore civic consciousness,

Table 4.12: *Arcology*				
	I	It	We	Its
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capacity and unity of purpose, which are currently fragmented due to the social polarisation impacts of urban development. "A city is an ultra complex superorganism of many thousands of minds" (Soleri, 1977: 12). Soleri explained that the social 'time-waste' brought about by urban 'space-waste' (functional and structural) by force of physical laws (including fatigue) results in 'cultural pauperism' (1977: 15). Soleri anticipated the late 20th century debate that social capital is a dependent variable of urban form. This relationship has been substantiated by Putnam's (2000) research showing that the dispersion of suburbia (space-waste) has contributed directly to the fall in social capital in the U.S.A.

The *Arcology* vision's metaphysical construction of the city is conceived as one and the same city building project, one structural container for society and the intrinsically sacred noosphere. To clarify this point, Soleri argued that the, "passenger liner is the closest technological ancestor of arcology" (2000: 543). As such the liner provides a metaphor for *Arcology*, where the holistic city extends the reaching power of community and makes the evolutionary journey of human consciousness free from physical constraints. That is, cities ought to free humanity to engage with the 'reality' of the universe in a co-mutual process of becoming, travelling towards Teilhard's (1961) 'Omega point' – the future fulfilment of the cosmos. Holis (1998) comments that the vision of *Arcology* does not impose an economic system and socio-political superstructure on the city, rather it emphasises an aesthetic order. Holis' observation affirms Soleri's intent to integrate the city's morphology with the cosmic evolutionary process to open the possible futures for the city's organisational development.

Soleri's influence on cities has been marginal. The only real *Arcology* under construction is *Arcosanti* (see Figure 4.24) in the Arizona desert, which is governed and financed by the Consanti Foundation and built by Poalo Soleri himself with the help of architectural students and devotees of the vision. *Arcosanti* is intended to support 5000 residents within a four hectare development area on a 352 hectare site. Sir Norman Foster's proposal for the '*Millenium Tower*', a vertical city within Tokyo bay, is an *Arcology* as Foster shares
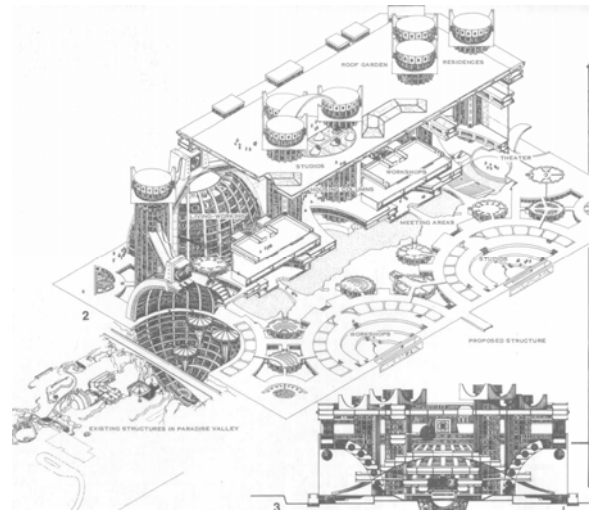
Figure (4.24): Soleri's Arcosanti, an example of a 'cosmic' Arcology
(Soleri, 1977: 119)

Soleri's vision that a megastructure can contain fully functioning communities. This building, at 800 metres and 170 stories, is almost twice the height of the Sears building in Chicago, and would have a resident population of 52,000. The tower was the victim of the bursting of the real-estate bubble in Japan in the 1990s, but the Foster and Partners group maintain that they still hope to build a version of this building. Foster, working with the Obayashi Corporation, was able to demonstrate that the vertical city would be able to be self-sufficient and even process its own waste. Soleri's vision of *Arcology* also entered into popular culture in the 1990s through the computer simulation game *Sim City*, as a form of urban development in the overall design of the city. Soleri's work may be seen as a counter posing action, not only to Wright's *Broadacre City* vision, (with which he became familiar with when apprenticed to Frank Lloyd Wright at Taliesin West in Arizona between 1947 and 1948), but also to the dominant urban development paradigm underpinning the *Technocity* image of the future.

4.5.3 Dominant, mechanistic non-place: *Technocity /Informational City*

The diffusion of the traditional city core was predicted by H.G. Wells in his 1900 Essay "The Probable diffusion of Great Cities" and reiterated by Frank Lloyd Wright's *Broadacre City* vision in the late 1920s early 1930s. "Wright, like Wells, argued that 'the great city was no longer modern' and that it is destined to be replaced by a decentralised society" (Fishman [1987], 2000: 80).

In the historic context of post-WWII population growth and an expanding Los Angeles (U.S.A.), Webber (1968) argued that former spatial settlements are dissolving, and will continue to disperse as a result of the telecommunications/mobility revolutions. Webber argued that a new kind of large-scale urban society is emerging that is increasingly independent of the geographic city. This means that citizens are not defining their being around place-defined communities, as once they did when face-to-face exchange required concentrated population and proximity. "Our compact, physical city layouts directly mirror the more primitive technologies in use at the time these were built" (Webber, [1968], 2000: 539). He postulated that the place-defined community is in decline due to technology, compared to the attention-hungry interest-based communities. Webber's (1968) technological image of 'non-place' and its emerging dichotomy of communities preceded Castell's (1989, 2000) *Dual City* argument and its divide between the space of places and the space of information flows.

The decentralised image of *Technocity* is encapsulated by Fishman (1987). He argues that it is characterised by the technoburb, a new dominant reality that can no longer be considered as suburbia in the traditional sense envisioned by the *Garden City* and *Garden Suburb* vision. Technoburbs are viable socio-economic units, no longer dormant residential suburbs.

> Spread out along its highway growth corridors are shopping malls, industrial parks, campus like office complexes, hospitals, schools and a whole range of housing types. Its residents look to their immediate surroundings rather than the city [centre] for their jobs

and other needs; and its industries find not only the employees they need but also the specialised services" (Fishman [1987], 2000: 79).

Silicon Valley in the San Francisco Bay Area is an example of such a technoburb (see Figure 4.25). By *Technocity* Fishman means, "the whole metropolitan region, which has been transformed by the coming of the technoburb. […] The techno-city is truly multi-centred, along the pattern that Los Angeles first created" ([1987], 2000: 79). A technocity's regional economy, social life and urban form no longer have a direct dependence on the traditional city core.

Related visions of a decentralised urban world enabled by embedded technologies include Alvin Toffler's (1980) *Telecottages* and William Mitchell's (1999) *E-topia*. These visions hope for a more ecologically sustainable urban form than the current development of technoburbia. Mitchell recognises the sustainability revolution as an urban driver, as well as Agenda 21, and uses these to

Figure 4.25: Silicon Valley, an example of 'mechanistic' Technocity
(http://www.nearon.com/imgs/paloalto_big.jpg July 2006)

direct technological advances and the digital revolution to transform urban settlement patterns. His urban vision is to "create E-topia – lean green cities that work smarter, not harder" (Mitchell, 1999: 147). In contrast to Fishman (1987) and Webber (1968), Mitchell (1999) argues that electronic telecommunication will not replace face-to-face interaction in the urban future. Rather, he emphasises that within the new economy of presence, cities will offer choices between "the means to interact with one both locally and remotely, both synchronously and asynchronously, and in all possible combinations of these" (Mitchell, 1999: 135). Within E-topia, "the power of place will still prevail" (Mitchell, 1999: 155) but civilised urbanity is grounded on diversity of choice. "Sometimes we will use networks to avoid going places. But sometimes, still, we will go places to network" (155).

Drawing on Webber's sprawling non-place, Castells' informational networked city, and Mitchell's E-topia, the *Technocity* image of the future relates to the *Mechanistic City* archetype, because its functional and technical efficacy for economic advantage are the

main drivers of urban change. Since its development is most responsive to the market economy's aspirations of individualism and profit, it has become the dominant image of the city's future.

The *Technocity*, Fishman concludes, "is still under construction both physically and culturally" ([1987], 2000: 85). How *Technocities* will evolve is unclear and Legates and Stout (2000: 78) believe that "the jury is still out on whether technoburbia will ultimately be judged as an advance over earlier urban forms". However, the *integral* city framework clearly shows that urban qualities have regressed because of the *Technocity* image's reconstruction all four levels of urban reality (refer to Table 4.13). Fishman ([1987], 2000: 85) also provides a strong indictment of technoburbs. His criticisms are related to each aspect of the city next. Firstly, at the material reality, technoburbs consist of an unplanned jumble of discordant elements and land uses, they are dependent on highway systems which are in a state of chronic chaos, and their low, sprawling residential densities make public transport inefficient. The cultural importance of public place is carefully managed within privatised domains and the gated homogeneous community provides defensible space. Secondly, at the ecological reality, they waste land, energy and destroy ecosystems. Thirdly, at the

Table 4.13: *Technocity*				
	I	It	We	Its
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psychosocial reality, *Technocities* have no proper geo-political boundaries, which makes meaningful region wide planning virtually impossible. Fishman ([1987], 2000) also claims that technoburbs have re-segregated American society into an affluent outer city and an indignant inner city. This assertion was validated by Castells' (1989) research into social polarisation in cities, caused by economic restructuring based on the informational mode of development. As such, decentralisation has been interpreted as a cultural disaster. Finally, at the metaphysical reality, the *Technocity* image of the future offers little collective hope for a peaceful city, as it has lost its traditional links of meaning to preceding historical utopias. Moreover, "where other modern Utopias have been collectivist, suburbia [and technoburbia from which it has evolved] has built its vision of community on the primacy of private property and the individual family" (Fishman, [1987], 2000: 77). Fishman's point aligns with Castells' ([1999], 2002) proposition discussing the increasing social trend towards homecenteredness. The likely impact of

this trend is that the home becomes the primary sacred space within an individualised world.

Fishman ([1987], 2000) argues that the deficiencies of *Technocity* are in large part the early awkwardness of a new urban type. He looks to Frank Lloyd Wright's *Broadacre City* vision as an example of how urban planners may yet devise strategies to improve the quality of life of technoburbia. In contrast, Graham and Marvin (1996) postulate that telematics and the information society will bring about, "a new type of urban world, not a post urban world" in which the new urban form will be an amalgam of urban places and electronic (virtual) spaces (2000: 574). In the context of this new form they discredit the utopian dreams of some new technological rural idyll (i.e., *Broadacre City*) and argue that rural terrains and lifestyles are being drawn into an urban realm. This process is enabled by the time-space compression and transcendence capabilities of telecommunications and fast transportation within a globally networked world. They therefore foresee the redefinition of rural ways of life as they are incorporated into a 'super-urban' global civilisation. "We live in a fundamentally urban civilisation: cities as 'places' still matter and will continue to matter. Urban places remain the unique arenas which bring together the webs of relations and externalities that sustain global capitalism" (Graham and Marvin, 1996: 574).

4.5.4   Eclectic-hybrid City visions

The final set of city visions to be examined is determined by the common theme that each of these visions is related to eclectic or hybrid archetypes. The central idea of each vision is shaped by the combination of two various socio-spatial archetypes. These are as follows.

- *Global City/World City* (Castells, 1996; Sassen, 1991)
- *Cultural Heritage City* (Rossi, 1966)
- *Creative, Learning City* (Landry, 2000)
- *Cosmopolis (intercultural city)* (Sandercock, 1998, 2004)
- *Ecumenopolis* (Doxiadis, 1968, 1974)

The *Global City* and *Ecumenopolis* images rely on technical and urban restructuring and are discussed first, followed by the three remaining images, which share a cultural emphasis.

The *Global City* image is a combination of the *mechanistic* and *cosmic* archetypes and is considered the emergent alternative image of the future. The socio-spatial form of the *Global City* as an ordered planetary network (geographic and virtual) expresses fractal geometry that is reminiscent of the nature of the interconnected cosmos. This image of the city emerged during the late 1980s during the rise of the global informational age (or knowledge economy). It expresses the power of technological imperialism to dominate and shape societies, cultures and cities. As previously stated, Castells (1996) argues that the *Global City* is one city – the entire global urban network as reliant on the information/ telecommunications infrastructure.

Sassen (1991), in contrast, argues that the *Global City* is a vital hub/node of exchange and knowledge production within the global networked society. According to Sassen it acts as knowledge and financial command centre, centralising and coordinating information and processes to and from geographically decentralised service provision and manufacturing clusters in the pan-regional economies of the world. By their controlling and concentrating nature and power, such *Global Cities* are few in number within the globalised economy. The *Global City* has similar social, cultural and economic power in contemporary history to Rome's *Imperial City* status in ancient times. Techno-imperialism enables and centralises the world city network, and this phenomenon is unlikely to dissipate during the 21st century's knowledge revolution.

Ecumenopolis, Doxiadis' image of the inevitable city, combines elements of the *organic* and *cosmic* archetypes and is considered the long-term alternative of the future. Doxiadis's (1968, 1974) vision for the city of the future (23rd century) is a stable, global network or fractal pattern of communities. This fractal *organic* pattern is based on the human dimension, as opposed to information infrastructure, and begins with walkable, human-scaled communities embedded within successively larger centres that form megalopolises, then continuous urbanised regions and ultimately urbanised continents, interrupted only by nature (Ecumenokepos) bridges. These nature bridges link global nature and wildlife reserves (Figure 4.26).

Figure 4.26: Ecumenopolis, an example of a hybrid image of global urbanisation
(Doxiades (1969) in Papaionnou, 1995: 179, 191)
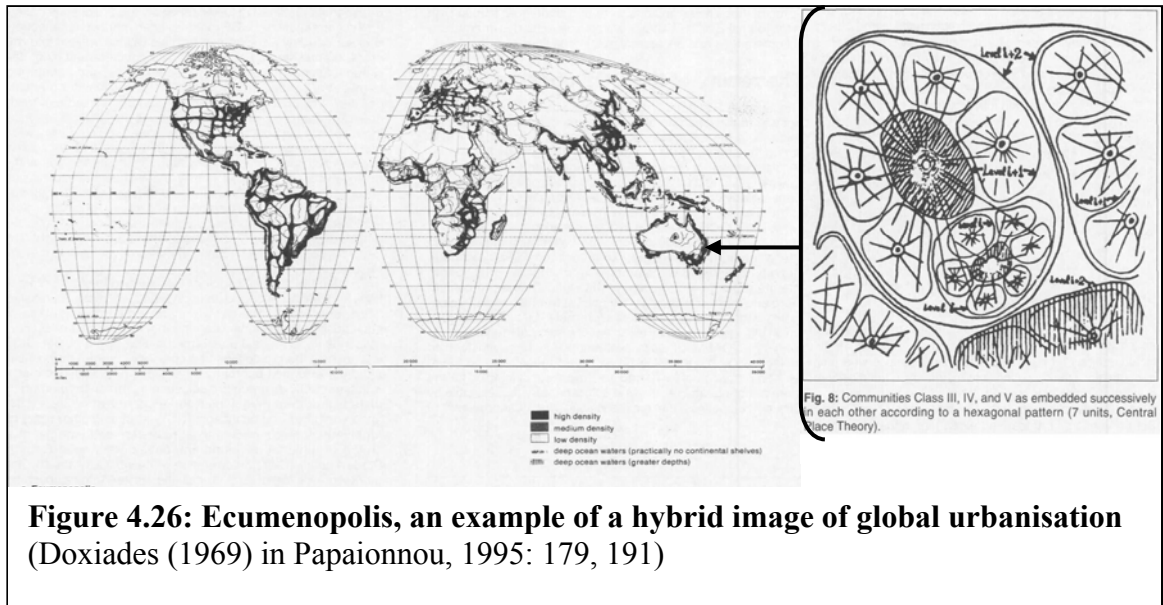
One way to understand *Ecumenopolis* is to view it as an organising strategy and maturation point for the expansive urban phenomenon of Fishman's *Technocity* or Castell's *Global City*. However, the evolutionary process is dependent on the transformation of the *Mechanistic City* archetype at the local scale to the *Organic City* archetype at the global scale. A concomitant shift away from technological fixes towards deeper changes in consciousness (values) is also required. This point leads to a discussion of the hybrid images of the future of the city that are shaped by cultural factors.

The combination of the *organic* and the *mechanistic* socio-spatial archetypes are presented in mainstream alternatives, the *Cultural Heritage City*, and the *Creative/Learning City;* and the marginal alternative city, *Cosmopolis*. The image of the *Cultural Heritage City* critiques the modernist images of technological progression promoted by the *Radiant City* or *Technocity* visions, which disregard the city's historical processes.

Aldo Rossi, in *The Architecture of the City* ([1966] 1982), began the post-modern search for a city theory based on the relationship between historical processes and architectural typologies. For him, urban structure was understood more clearly using urban history than any other form of research on the city. Rossi (1966) defines the city as not only spatial architecture, but also temporal architecture. Architecture as "the construction of the city over time […] as a creation inseparable from civilised life and the society in which it is

manifested" (1966: 21). He argues that architecture is a universal and necessary artefact of the city, shaped by complex historical processes of transformation and permanence.

Rossi (1966) also argues that the image of the city, its individuality or 'soul' is created by the city itself through its political institutions. "Athens, Rome, and Paris are the form of their politics, the signs of their collective will" (Rossi, 1966: 162). It follows from Rossi's proposition that the *Cultural Heritage City* essentially 'chooses to be so'. This choice is observable in a range of political phenomena such as the Brussell's Declaration (1978), the *Slow Cities* (1999) movement, and participation in UNESCO's World Heritage Convention (1972).

Architects under the auspice of the Archives d'Architecture Moderne (AAM) discussed and declared an anti-modernist statement (*Brussell's Declaration*, 1978) that argues for the reconstruction and repair of the European city. By this they mean the integration of history in urban practice, such that building heritage is not only protected in historic centres, but that traditional methods of design and construction are also conserved. The rejection of modernist urban planning tools was made plain, including mono-functional zones, motorways, and functionalist architecture. The AAM's main international advocates were Leon Krier and Maurice Culot (Jencks and Kropf, 2001: 176). In 1988 HRH the Prince of Wales commissioned Leon Krier to advise him on the design and construction of a new traditional 'English' town (Poundbury), whilst Andres Duany (a *new urbanism* architect from the U.S.A.) provided the building code. The shared vision for urbanism to be embedded in historical analysis and the reconstruction of traditional forms of human habitation between the European traditionalists, the British Urban Villages Group, and the American New Urbanists, gained momentum in the 1990s.

The image of the *Cultural Heritage City* is characterised by the following. Firstly, the heritage conservation of a city's built environment for social, environmental and economic benefits (see Figure 4.27 for an example). Secondly, there is an emphasis on

Figure 4.27: Florence, an example of a Cultural Heritage City

cultural tourism and the preservation of lifestyle values and local eco-production methods rooted in culture and tradition, as espoused by the Slow Cities movement. Thirdly, there is recognition that the city is a historical process always developing and changing, and the architecture of the city is grounded in historical analysis, adding to its collective memory and the transmission of ideas and values.

The *Cultural Heritage City* can be seen as a subset of the *Creative, Learning City*, as the latter often values cultural heritage as a creative resource for urban innovations.

> Culture, therefore, should shape the technicalities of urban planning rather than be seen as a marginal add-on to be considered once the important planning questions of housing, transport and land-use have been dealt with. By contrast a culturally informed perspective should condition how planning as well as economic development or social affairs should be addressed (Landry, 2000:7).

In response to the enormous environmental, social and economic/infrastructural challenges that cities face in the 21st century, the need for cities to think and act creatively is being emphasised by diverse stakeholders. 'Urban innovation' is the mandate for survival and the *Creative, Learning City* is the visionary clarion call (Landry, 2000). Landry (2000) argues that culture, understood as a resource and mindset of cities, needs to move centre stage and drive an integrated approach to problem-solving urban issues. As a result, cultural development and sensitivity is focussed to improve the capacity of people, a community or an organisation to think, learn, generate ideas and create change. "Changing a mindset – so that we grasp the need to address urban problems in an integrated way – can be worth a thousand persuasive reports so often seen gathering dust" (Landry, 2000:5).

Landry (2000) proposes that urban or community visioning is a city level technique to generate civic creativity and social capital. He defines civic creativity as, "imaginative problem-solving applied to public good objectives" (Landry, 2000: 190). He also links the rise of urban visioning by cities worldwide as a response to, "a new spirit of collaborative, democratic leadership" (Landry, 2000: 186). Urban visioning is based on the idea of scaling up the business plan to the level of the urban area or city. Its success relies on the

degree of collaboration, co-learning and collective action embodied in the process. Steven Ames, long-range strategic planner defines urban or community visioning as,

> a process by which a community envisions the future it wants, and plans how to achieve it. It brings people together to develop a shared image of what they want their community to become. Once a community has envisioned where it wants to go, it can consciously work toward that goal (Ames, 1998: 7).

The *Creative, Learning City* is recognised by the use of community visioning or similar forms of collaborative leadership and learning to build civic creativity, social capital and ultimately, solutions to urban problems.

Sandercock (1998) argues for a similar integrated process to address urban problems through navigating political shifts, as opposed to the modernist emphasis on technical capability and plan making. She articulates the need for a paradigm shift from *Metropolis* to *Cosmopolis* within the urban planning field. Each label represents a vision and a way of thinking about and operating within the city (refer to Table 4.14).

The values that underpin Sandercock's vision of *Cosmopolis* are "social justice, a politics of difference, new concepts of citizenship and community, and a civic culture formed out of multiple publics" (1998: 199). For her, *Cosmopolis* is a post-modern utopia (or mental construction site), one that is essential to guide cities out of the multi-dimensional crises they face, but a state that can never be realised and always remains in the making (1998: 199). She proposes that the process of making *Cosmopolis* is reliant on the resolution of four major challenges of 21st century urban planning.

This planning method focuses on generating a political process able to navigate a journey of social/cultural transformation using a range of tools (i.e., plans, policies, programmes). Firstly, the way towards *Cosmopolis* requires an integrated epistemology that respects different ways of knowing and seeks to integrate these into solutions. A range of technical, analytical, multicultural, ecological and design-based skills are needed, however knowledge ought not to be reduced to a set of measurable skills. Secondly, *Cosmopolis* questions the effectiveness of urban planning programmes and policies to avoid ossification and planning's purpose being made redundant. Thirdly, *Cosmopolis* is dependent on the breakdown of boundaries around professional identity, which prevents a

truly interdisciplinary practice. Fourthly, *Cosmopolis* focuses on questions of meaning, of community values, and of the spirit, and asks how these influence alternative futures. This questioning seeks to embody ideals of social justice in the process as well as in the environment (Sandercock, 1998: 6-8).

The power and impact of the image of *Cosmopolis* has the potential to reconstruct all four levels of urban reality and reshape the object of urban planning. Likewise, it also incorporates the images of the *Cultural Heritage City* and the *Creative, Learning City* into the process of city building, as it draws on the city of memory (past and present) to appreciate diverse ways of knowing to enable community-directed futures.

Table 4.14: A Paradigm shift from Metropolis to Cosmopolis (Sandercock, 1998: 204-6)	
Metropolis: Old modern planning model	**Cosmopolis: Alternative Model**
Rational public decisions with a technical (means-ends) emphasis	Communicative rationality focussing on the formation of goals
Comprehensiveness (integrated and hierarchical)	Negotiated, political and focussed planning more interactive and centred on people
Planning knowledge and expertise grounded in positivist science	New epistemologies and ways of knowing
State-directed futures (modernisation project)	Community-based planning, empowerment and community-directed futures
Planning for the 'public interest' (mythical homogeneity)	Planning for 'multiple publics' or for a heterogeneous public
Object of planning = construction of rational city	Object of planning = art of city building synthesising the rational city; city of desire, city of memory and city of spirit.

4.6   Interplay of city forces

This section of the chapter examines the dialectic of urban weights (being the accumulated social phenomena of perhaps thousands of years of human history and consequently most difficult to change), drivers of urban change (measurable empirical trends recognised within the urban planning practice discourse), and city visions. The discussion is structured into themes using the levels of reality (physis, bios, nous and

theos). Within each level of urban reality the implications for city futures are highlighted by drawing out their current systemic tensions or contradictions. The findings of this section inform the genealogical analysis of city visions, by summarising which images of city futures constitute the present and privilege the future.

4.6.1   The material construction of the city: City futures visions/images and urban dilemmas

The spatial future of cities, whilst being weighed down by the technical inertia of urban sprawl and its infrastructure (produced by the free market economy), is experiencing change driven by increased demand for private mobility, technological revolutions (particularly telematics) and the need to be healthier and ecologically sustainable. The *mechanistic* images of the *Radiant City* (Le Corbusier, 1929), *Broadacre City* (Wright, 1935), and *Technocity's* technoburbs (Fishman, 1987) continue to dominate city planning policy and development, particularly its spatial production. Seeking to usurp these images are the *organic* or hybrid images of the *Garden City* (Howard, [1898], 1902), *Ecological City* (Geddes, 1915) and *Cosmopolis* (Sandercock, 1998). The latter city visions are more critical of the economic, materialistic primacy of the role of the city, and therefore are not as attractive to urban managers focussed on economic development. They do, however, offer more in regard to the creation of culturally meaningful public space and built environments – an urban aspect experiencing stress due to rising cultural imperialism, fabrication and desertification due to globalising corporations, and fear of the other between clashing subcultures.

From this milieu, urban dilemmas arise to seek the attention of urban policy makers and the budgets of city governments. At the core is the issue of cities sharing planetary resources fairly. Current resource use is not only unsustainable but also inequitable, where the industrialisation of developing regions threatens the quality of life in developed regions. Twenty percent of the world's population, most of which live in developed, mature cities, use 80% of the world's resources (UN- Habitat, 1996b, 2004). In contrast, the majority of the population, who are becoming urbanised in rapidly developing cities, require access to more than their current 20% resource share. Linked to this is the tension between the regulated formal economy and the booming informal economy, whether it be

the building of shanty towns, the exchange of goods or the provision of cheap labour. Many city authorities are constantly managing tight fiscal budgets and are caught between two basic mindsets, namely city funding for cars versus city funding for people. This is demonstrated by the infrastructure debate over funding for highways versus public transport designed to maximise human exchanges and minimise travel/movement (Engwicht, 1992; Newman and Kenworthy, 1999). Underpinning all these dilemmas and the mode to resolve them is a basic paradigm choice that is in itself a dilemma of consciousness. That is, are the contradictions of the city to be resolved using rational, reductionist planning/design for order, or irrational planning/design for conflict, complexity and spontaneity (Engwicht, 1992; Sandercock, 1998)?

4.6.2 The biological/ecological construction of the city: City futures visions/images and urban dilemmas

The ecological futures of cities are being weighed down by urbanisation and urban sprawl. Nevertheless, they continue to experience change due to an increased focus on (1) high quality urban design; (2) legitimacy for ecological sustainable design; and (3) continued development of an ontology of *good* city form. The green *Eco-city* vision is the prime image of urban futures at the biological/ecological level of reality. It motivates stakeholders to take action to make beautiful, comfortable, healthy places in harmony with nature's laws and limits. The counter posing images of the future ecological city are urban distopias such as Fritz Lang' *Metropolis* ([1926], 1927), Ridley Scott's *Blade Runner* (1982), Mike Davis' *City of Quartz* (1990) which depicts a fortress Los Angeles walled off "from the new cultural politics and the most insightful feminist, postcolonial,

and postmodern critiques" (Soja, 2000: 303 in Miles and Hall, 2003: 50), Davis' *Ecology of Fear* (1998) where a sprawling metropolis faces cataclysmic failure, and the real images of New Orleans' (2005) destruction and collapse due to Hurricane Katrina (Figure 4.28). The assumption that underpins most urban distopias is that the preceding

Figure 4.28: New Orleans after Hurriane Katrina, 2005 (accessed from www.katrinatruth.info/Assets, Aug 2006)

phase before collapse is characterised by the image of an expanding metropolis, too fragmented to maintain social cohesion or eco-efficiency. This image matches that of the *Technocity*.

The urban dilemmas that materialise in this plane include cities that provide urban health versus urban *dis-ease*, and cities that destroy the biosphere's life support systems versus cities that are one with ecology and adding to its fecundity (McDonough and Braungart, 2002). Both of these contradictions within the urban system are inseparable from their defining worldviews, namely Materialism (growth advocates) versus *deep ecology* (conserver advocates) (Dator, 1978 and Capra, 1996), which operate at the psychosocial level of reality. The dialectic between reductionism and synthesis – different ways for processing knowledge – is also relevant to the construction of the *Eco-city* in the real world. The aptitude for synergy, designing for complexity, seeing interconnections across boundaries and synthesising disparate parts into new wholes, is essential for city development (Fuller, 1969; Engwicht, 1992; Sandercock, 1998), let alone developing alternative city futures. The benefits of reductionism are limited when applied to holistic city development.

4.6.3 The psychosocial/cultural construction of the city: City futures visions/images and urban dilemmas

The psychosocial futures of cities are weighed down by social polarisation and the unjust access to opportunity, due to the informational mode of development, urbanisation and urban sprawl. Conversely, cities are experiencing change due to the: (1) international movements for greater gender equity; (2) the demographic aging of urban populations; and (3) cultural identity struggles between universal cultural imperialism and desertification versus local cultural diversity. Underlying these tensions are the deeper cultural paradigms of free market economic progression and consumerism versus greener ways of life. The following summarises the forces of change operating in the psychosocial reality that are determining a set of urban contradictions.

The city as a locus of personal dreams and expectations is shaped by the *Broadacre City* and *Technocity's* modernist vision of personal and social progress through economic and

technological means. Modernity's promise of a better way of life within cities is a continuing factor for driving (forecasted) urban migrations. However, the dream is tainted for many, when the impacts of free market economics manifest in urban apartheid, socio-spatial and cultural polarisation and marginalisation. These social consequences oppress the city's potential in being the locus for personal agency, opportunity and dignity, regardless of gender, age, ethnicity or other difference. At both personal and collective levels the city as psychosocial and physical terrain for diverse cultural politics is shaped by the vision for *Cosmopolis* (Sandercock, 1998). This terrain values difference and conflict rather than cultural hegemony whitewashing the notion of a singular public. The tension between universal cultural imperialism and cultural diversity on the one hand, and inter-vision contradictions between stakeholders on the other, is real within the city. Grounded in *Cosmopolis'* collective paradigm of multiple publics is the concept of the city as a nexus for purposive-rational communication and collective activity. The visions of *Eco-city* and *Cosmopolis* support a form of city governance that is inclusive, empowers citizen engagement, solidarity and subsidiarity. Local power and purposive civil action is more effective across the multiple levels of reality (*physis, bios, nous and theos*) than centralised delivery of services and power via the privileged networks of the *Global City/Informational City*. A major urban contradiction arises within the technological revolutions of the network society with respect to power and governance. Decisions are made in the space of information flows (virtual net) whilst people live in the space of places (geographic net). Furthermore, this dichotomy may relate to the schism between urban theory and practice (Section 1.2.1.1). The schism between urban theory and practice is an urban weight that colours the way urban problems are interpreted, and how solutions are planned. Also related to the space of flows versus places dichotomy is the ideal concept of the active, civil society (city) versus the real, passive serviced society (city).

Connected to the concept of the city as the locus of knowledge and purposive activity is the sustainability agenda and the associated reinvigorated urban social contract. How can the city thrive and avoid ecological collapse without a collective awareness of its metabolic resource cycles and its impacts on nature's limits? The collective will to survive as a species may reunite the polarised city to work together as citizens. In contrast, socially fragmented cities reduced to behaviours of autonomous individualism and consumerism may hasten the ecological overshoot of cities and their collapse. Good

city governance implies creative, learning organisational forms with a green ethic. The psychosocial tension between the cultural paradigms of the *Imperial City's* materialism (growth) versus the *Eco-city's deep ecology* (conservation) may only be reconciled within *Cosmopolis'* pluralism and genuine politics of difference accommodating diverse ways of life.

4.6.4 The metaphysical construction of the city: City futures visions/images and urban dilemmas

In the arena of city visions, the metaphysical dimension of the city is explored more freely. The visions of *Eco-city*, *Cosmopolis*, and Geddes' *Biopolis* (spiritual city) all acknowledge the importance of making the city of spirit – one that inspires/intensifies what Alexander (2004) refers to as awe. Sandercock (2003) writes that the language of planning needs to expand to understand the city of spirit. She refers to other cosmologies (Australian Aboriginal, European Medieval) that influence the perception and meaning of space (landscape) though she adds that these ought not to be appropriated by secular Western cultures. Rather, Sandercock suggests that, "if we look at cities as centres of spontaneous creativity and festival, then we come closer to an appreciation of the presence of spirit around us" (Sandercock, 2003: 226). She also cites exemplar projects that involve either the identification of sacred places in the urban landscape or the creation of new sacred spaces in collaboration with artists, historians and architects. These inquiries are pragmatic ways to push urban planning beyond the modernist paradigm towards *Cosmopolis* in search of the *city's songlines* (pathways that are life sustaining). However, they do not match the breadth and depth of Alexander's proposed cosmology. Nor does Sandercock (2003) propose a normative model for the *city's songlines*, beyond city of memory, city of desire and city of spirit. In contrast, the *integral* meta-framework's aspects of the city provide multi-dimensional meta-criteria for its development. As such, these meta-criteria lay out the *city's songlines* – pathways for sustaining life and creating meaning – and the possible resurgence of a *Temple City* image of the future.

The urban dilemma that manifests at the metaphysical level of reality, mentioned by both Alexander (2004) and Sandercock (2003), is the spiritual bereft-ness within the planning

and design of cities, caused by the *mechanistic*, modernist paradigm. Urban transformations of the 20th century were largely the result of positivist technological change. Based on analysis of the forces of change and urban tensions influencing city futures, it is apparent that technological change has not necessarily improved the human, urban condition. The alternative is to improve the human urban condition by transforming individuals' values and consciousness, through the lens of a more *integral* (holistic) cosmology. This urban tension may be the most profound in reshaping future conceptions of human nature, particularly in light of the forecast technological spike (convergence) of quantum computing, nanotechnology and biotechnology (Kaku, 1997). The extreme pathways are city transformation by technological change, versus city transformation by changing values and consciousness (Daffara, 2004b). However, a third way is possible, city transformation by congruent consciousness and technological change. Subsequent chapters will focus on the concomitant relationship between the development of cities with that of human consciousness.

4.7   Overview: Genealogy of city visions

The power of human aspirations, ethics and wisdom to shape the future of the city is established. Earlier in this chapter, visions of the city were shown to embody different ideologies and worldviews. Each vision inspires and attracts its own advocates and different groups of stakeholders in creating the city.

The exploration of the genealogy of city visions and archetypes reveals their cyclic development. Key visionary ideas and themes tend to re-emerge over time and be redeveloped within their historical and epistemological contexts. The genealogical analysis uses Lynch's (1981) city archetypes to map which past visions have been victorious in constituting the present (Inayatullah, 2002) and influencing the future. These archetypes – *Cosmic City*, *Machine City* and *Organic City* – have proven to be useful cultural markers for analysis. As stated earlier in this chapter, they are sets of general relationships between the spatial form of a city and the ideology, episteme and social values of its inhabitants drawn from the historical evolution of cities. The genealogical classification of *City Visions* reveals four threads (Table 4.15).

Firstly, that the *Organic City* archetype emerges with the historical development of the *Greek Polis* and re-emerges/evolves with the images of the *Medieval City, Garden/Social City*, and *Eco-city*. Secondly, that the *Mechanistic City* archetype historically emerges with the Hellenistic then Roman *Imperial City*, and re-emerges/evolves with *Amaurote* (Capital of *Utopia*), *Cité Industrielle, Broadacre City, Radiant City* and *Technocity*. Thirdly, that the *Cosmic City* archetype historically emerges with the *Temple City* image and re-emerges/evolves with the myth of *Atlantis* and subsequent images of the *Renaissance City*, *City of the Sun*, the *City Beautiful* movement and contemporary urban monumentality, and *Arcology*. Fourthly, the natural tendency for, or complexification of hybrid and eclectic city visions in history correlates with the understanding of the city's nature as increasingly multi-dimensional and complex. The result of this process is most evident within the episteme of post-modernity.

Table 4.15: Genealogical Classification of City Visions				
City Visions	**Episteme**			
City Archetype	**Antiquity**	**Pre-Modern**	**Modern**	**Post-modern**
Cosmic	Temple City; Atlantis	Renaissance City City of the Sun	City Beautiful	New urban monumentality
Organic	Greek Polis	Medieval City	Garden/social city; Biopolis; Arcology	Eco-city (*Ecotopia*) Green City
Mechanistic	Imperial City	*Amaurote* (Capital of Utopia)	*Cité Industielle Broadacre City*; Garden suburbs; *Radiant City*	Non-place; *Technoburbia & Technocity*
Eclectic Hybrid				Cultural Heritage City; Global City/ Informational City; Creative/Learning City; Cosmopolis – intercultural City; Ecumenopolis

From the genealogy of city visions a question emerges, namely why do archetypal city visions re-emerge in history? This question is explored in detail in the next two chapters using cultural change models to relate the development of cities with that of human

consciousness. However, in the current section the application of the CCM offers the following explanations. City visions throughout history related to the *cosmic* socio-spatial archetype appeal to and are conceptualised by Hierarchists and their *ideational* cultural paradigm. City visions related to the *organic* socio-spatial archetype appeal to and are conceptualised by both Egalitarians and Hierarchists and their mixed *idealistic* cultural paradigm. City visions related to the *Mechanistic City* metaphor appeal to and are conceptualised by Individualists and their *sensate* cultural paradigm. Finally, hybrid city visions are a product of a mix of cultural paradigms. For example, the *Ecumenopolis* and *Global City* as images of the future appeal to and are constructed by a partnership of Hierarchists and Individualists. In contrast, visions of the *Creative, Learning City* or *Cosmopolis* are products of mixed perspectives between Hierarchists, Egalitarians and Individualists.

The genealogical analysis reveals that in antiquity the dominant image of the city was provided by the *Temple City*, which influenced subsequent forms, whilst the *Greek Polis* image evolved in history as an alternative urban vision, preceding the emergent vision of the *Imperial City*. During pre-modernity, the dominant image of the city was of the *Medieval town/commune*, whilst the *Renaissance City* image, with its aristocratic patronage, arose as the alternative image. Both were then critiqued by More's Utopian and emergent vision of Amaurote that influenced modern and post-modern images of the city. During modernity, the dominant images of city futures were provided by the counter posing proposals of *Broadacre City* that drove decentralisation and suburbanisation, and *Radiant City* that drove city centre consolidation and renewal. The *City Beautiful* image arose as the alternative proposition in superficially masking urban and social blight, whilst the *Garden/Social City* vision emerged as a significant advancement in influencing regional metropolitan planning and town development. Post-modern thinking in urban planning challenges the modernist projects of both *Broadacre City* and *Radiant City*, which have evolved into the globally ubiquitous *Technocity* and its technoburbs. The vision of *Arcology* critiques both the probable futures of a 'splintering urbanism' (Graham and Marvin, 2001), manifested by the informational, networked society's *Global City* image or the planetary megalopolis forecast by the vision of *Ecumenopolis*. It remains an alternative image of city futures on the margins. Emerging as the more achievable and preferred image of the city is that offered by *Eco-city/Green City*.

The genealogical analysis reveals that the current dominant urban paradigm is characterised by the *Mechanistic City* archetype, underpinning the *Technocity* vision. Even though the urban discourse argues for a transformation towards the *organic Eco-city* vision, no such city yet exists. This thesis questions whether the technological advancements needed to drive this evolution would be enough to transform *Technocity* into an ecologically sustainable habitat. The research suggests that a cultural paradigm shift is needed as well as a deeper spiritual or consciousness alteration. If this is the case the disturbing dilemma that emerges is that the planning discourse does not address this point in any real way. An eutopian vision for the spiritual city is far from planners' or designers' agenda or skills set.

4.8   Conclusion

Chapter Four presents a genealogy of Western city visions to reveal their confrontations, rise and fall, as well as their relation to a pattern of recurring socio-spatial archetypes. It also demonstrates that the proposed cultural change model explains the recursive or cyclic emergence of city archetypes couched within specific (historic) city visions. Since these urban revolutions are also the products of culture, the CCM is able to offer a social perspective of the relations between visions, archetypal city metaphors and underlying cultural paradigms.

4.8.1   Next steps for the research

The rationale for using the futures triangle in regard to the city is to demonstrate how vision-orientated planning provides opportunity for the transformation of the way in which present cities are viewed and responses planned. The process of envisioning the future becomes a liberating tool from the weight that binds the present. A city vision as a cultural product is a holon within a wider system of multi-dimensional interdependencies. A key proposition of this thesis is that visions are dependent on social and technical systems, cultural paradigms, values and metaphors. The success of vision implementation is therefore reliant on concurrent consciousness and metaphysical transformation, if these dimensions are incongruent with the vision. A multi-dimensional futures process that examines these levels of reality is more likely to succeed in developing policy actions to

improve current cities and create sustainable city futures. In particular, a process is needed which transforms the dominant urban paradigm offered by the *mechanistic Technocity* vision towards the emerging preferred future offered by the *organic Eco-city* vision. This proposition will be investigated further in Chapter Six using Causal Layered Analysis.

In the present chapter another question arose during the exploration of the genealogy of city visions and their archetypes. That is, do cultural change theories explain the recursive or cyclic emergence of city archetypes couched within historical city visions? The application of the CCM offers propositions about urban visions and their correlating cultural paradigms. The key proposal is that *Technocity* is the manifestation of Individualists, *Eco-city* is the manifestation of Hierarchists, Egalitarians and Individualists in partnership, and *Arcology* is the manifestation of Hierarchists. The possibility of testing these qualitative relationships will be examined in the next chapter.

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[1] The first cities:

- Were more densely populated than any previous settlements with the rise of specialists in the new economy (craft clans, guilds, emancipated from kinship), and society was reorganised to accommodate and protect them;
- Had different social composition and functions compared to any village (Childe, [1950], 2000: 28), with the rise of the priesthood as civil servants, administering their divine master's earthly estates;
- Concentrated surplus (capital) collected as a tithe or tax paid by each primary producer to a deity or divine king and stored in his granary;
- Had truly monumental public building, not only to distinguish each known city from any village, but also to symbolise the concentration of the social surplus (e.g., Sumerian cities, Harappa - Indus valley, Maya cities);
- Formed a ruling class of priests, civil and military leaders and officials who absorbed a major share of the concentrated surplus and thus, "unlike a palaeolithic magician or a Neolithic chief, they were, as an Egyptian scribe actually put it, 'exempt from all manual tasks.' […] The ruling classes did confer substantial benefits upon their subjects in the way of planning and organisation" (Childe, [1950], 2000: 29);
- Invented systems of recording and numerical notation to aid the administration of the social surplus;
- Were cultures of innovation that developed through the priestly scribes, linguistic scripts and elaborated exact and predictive sciences: arithmetic, geometry and astronomy. The creation of the calender enabled rulers to successfully regulate the cycle of agricultural operations with seasonal ceremonies;
- Gave new direction to artistic expression by artist-craftsmen (specialists) supported by the concentrated social surplus. Sculptors, painters and seal engravers served the production of cultural symbols;
- Were dependent on long distance trade for vital materials as no Neolithic village ever was. These materials were paid for by a further part of the concentrated social surplus;
- Were based on residence of skilled labour rather than kinship, so itinerancy was no longer obligatory. The city was a community to which a craftsman could belong politically as well as economically (Childe, [1950], 2000: 29).

[2] A Fourierist can be defined as a follower of the system of social reform propounded by the French socialist F.M. Charles Fourier, (1772-1837), according to which society was to be organised into associations or communities called phalanxes, each large enough to be economically and socially self-sufficient.

5 Survey results: Glo-cal city futures and their cultural paradigms
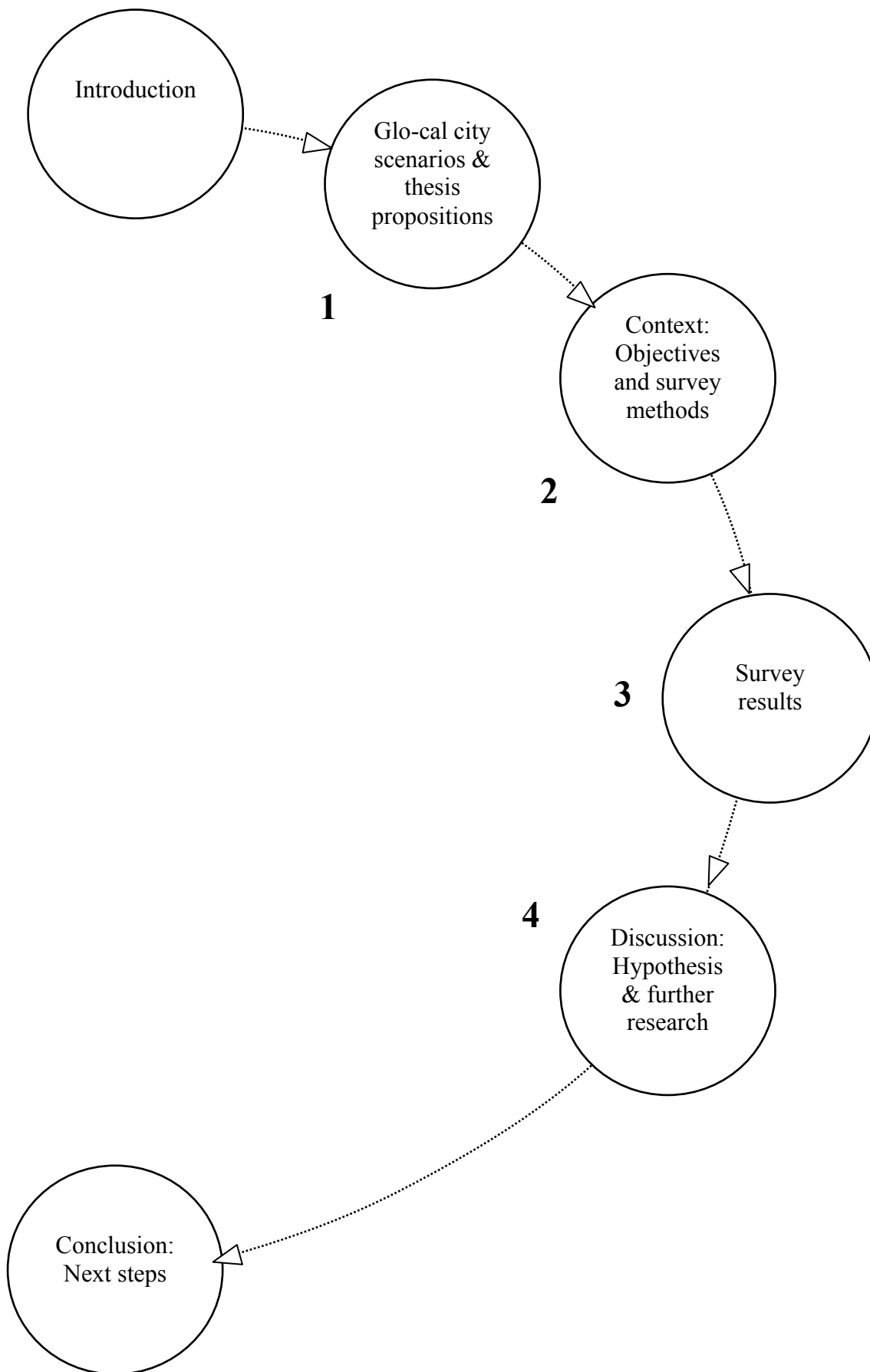
Figure (5.1): Chapter Five Roadmap

5.1 Introduction

The last chapter proposed relations between city visions and cultural paradigms using the CCM. Chapter Five examines research objective three, to design and consider research methods which quantitatively measure the effects of worldviews/cultural paradigms on preferred visions of human habitation. This chapter is presented in four parts (Figure 5.1) and the current section explains the purpose of the chapter in the framework of the thesis. In the first part, five scenarios for the future 'glo-cal' city (global and local) are generated and their defining cultural paradigms are speculated using the CCM. The thesis propositions generated by this process are set up for use using different forms of survey pre-testing, namely by self-completion, workshops and phone interviews. The second section explains these rudimentary survey methods and justifies their use in the context of the research objective, to identify a means of quantitatively analysing relations between images of the future city and worldviews/cultural paradigms. In the third part the local and global survey results are summarised and compared to give the statistical preferences for visions of the future of the city. The fourth section discusses and interprets both the local and global survey results, speculating on their implications for the CCM's thesis propositions through explanations and deductions. The shortcomings of the survey process are made clear, with suggestions for further research. This chapter's conclusion draws from the survey analysis the wider relevant links to the thesis research framework, particularly the CCM, and establishes the next steps. Note that most of the figures in this chapter are placed at the end of each relevant section.

5.2 Glo-cal city scenarios and thesis propositions

In this section glo-cal city scenarios are generated using a FS method and then compared using the cultural change model outlined previously. Sorokin's cultural paradigms, Thompson et al's social groups and Lynch's city archetypes are used to understand the competing visions and images of the city of the future. The purpose of scenario generation is to anticipate city futures in order to build capacities for social foresight. The chosen method to generate meaningful scenarios is the *Double Variable Method*. Here the relationships between two major variables that disturb the future of the city are extrapolated to generate five alternative scenarios (see Figure 5.2). The dynamics of 'Governance and Urban Policy' (GUP) and the 'Urban Development Industry's (UDI)

market-led urbanisation approach' are mapped because of their glo-cal significance to the future of cities as major forces of change (Sections 1.2.1.1-2). This relationship was driven by a third major variable, being the level of social adoption of sustainable practices and technologies within the culture of the region (Table 5.1). The scenarios were given depth by describing their differences through a set of attributes. These attributes were based on social, technological, economic, environmental and political (STEEP) factors. CLA was also used to map the *litany*, *system's perspective*, *worldview*, *myth/metaphor* for each scenario, to ensure their characteristics were logically consistent. This technique generated further attributes that were then used to develop narratives for each city futures scenario. The scenario generation method then created stories of future cities that conveyed a range of possible outcomes. These were communicated within the survey instruments (Appendices A and B). The *Collapse* scenario was excluded from the survey method because of its dystopian nature and participants were instead asked for their preferred vision of habitat futures.

The four scenarios that emerged are applicable both globally and locally; however their labels were modified to be more meaningful to participants' geographic context/scale (Table 5.1). Locally, the scenarios are labelled:

SCENARIO 1: South East Queensland Super City (Sunshine Coast suburbs expand);

SCENARIO 2: Diverse Sunshine Coast towns;

SCENARIO 3: Sunshine Coast Arcologies (town consolidation); and

SCENARIO 4: Sunshine Coast Bio City (High Tech sustainable habitat).

Whereas globally, they are labelled:

SCENARIO 1: *Techno City* (Hyper-Sprawl);

SCENARIO 2: *Smart City*;

SCENARIO 3: *Eco City*; and
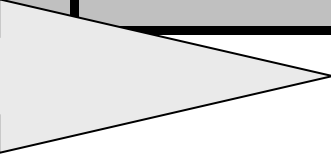
SCENARIO 4: *Gaian City*.
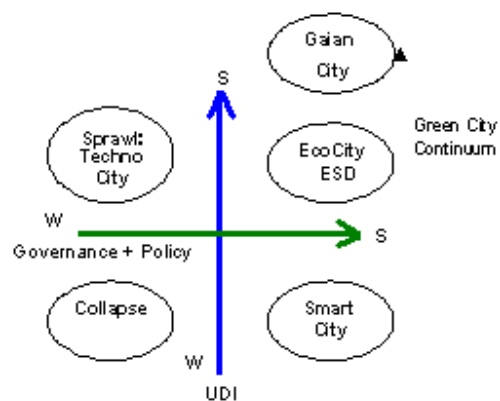
ESD = Ecological Sustainable Development
S = Strong
W = Weak

Figure 5.2: Glo-cal City Scenarios

TABLE 5.1: GLO-CAL SCENARIOS				
SCENARIO	**1**	**2**	**3**	**4**
IN: LOCAL SUNSHINE COAST HABITAT FUTURES SURVEY	**Amorphous Suburbs in South East Queensland Super City**	**Diverse Sunshine Coast Towns**	**Sunshine Coast Arcologies (Town Consolidation)**	**Sunshine Coast Bio-City**
IN: GLOBAL CITY FUTURES SURVEY	**Techno City**	**Smart City**	**Eco City**	**Gaian City**
DRIVER	DEGREE OF DIFFUSION OF SUSTAINABILITY & SUSTAINABLE TECHOLOGIES WITHIN REGION			
	INNOVATION REJECTED	UPTO 50% ADOPTION	75 % ADOPTION	SATURATION
GOVERNANCE & POLICY	Weak regional advocacy & Policy	Strong regional protectionist advocacy and policy	Strong regional Advocacy & Policy	Community self governance & democracy
URBAN DEVELOPMENT INDUSTRY (UDI)	Dominant strong stakeholder driven by market demand.	UDI driven by Policy & Community's desired quality of life. Eventual displacement elsewhere as urban development is limited.	UDI partners with Government & Community to recreate urban environments to increase sustainability.	Plausible collapse and re-invention of UDI, as social constructs of personal & company capital and wealth are transformed.
CAUSAL LAYERED ANALYSIS				
LITANY	SPRAWL	GROWTH MANAGEMENT	SUSTAINABLE DEVELOPMENT	"DARE TO DREAM"
SYSTEMS PERSPECTIVE	CONTINUED GROWTH	SMART GROWTH & BACK TO PAST	ZERO GROWTH & DEVELOPMENT	CIVILISATIONAL TRANSFORMATION
WORLDVIEW	EGOCENTRIC	ETHNOCENTRIC	WORLDCENTRIC	HOLISTIC & TRANSPERSONAL
MYTH/METAPHOR	PROGENITOR	GARDEN CITY UTOPIA	SPACESHIP EARTH	GAIA

An explicit evolutionary progression from scenario one to four is evident (Table 5.1) on two grounds, first in regard to the degree of diffusion of sustainable practices within the culture, and second in terms of the cycle from materialistic to spiritual cultural paradigm. The forthcoming data analyses refer to the above concept of progressive change or revolutionary path from scenario one to four as either the evolution of visions or visionary scale.

The driving social value within the *Techno City* scenario is egocentric, where home ownership and the private domain is valued as more important than the creation of community capital. From Sorokin's perspective, the *Techno City* is the product of a *sensate* or *materialistic* cultural paradigm, which sees nature as benign and human nature as self-seeking. This scenario is isomorphic to the image of the *Technocity* (Fishman, 1987) discussed in the previous chapter's genealogy of city visions (Section 4.5.3).

In contrast, the *Smart City* is ethno-centric, where the driving social value is that people value traditional community benefits and liveability equally with the desire for technology, home ownership and accumulation of personal capital. The *Smart City* is the product of an eclectic or mixed cultural paradigm that is s*ensate* tending towards *idealistic*, which sees nature as bountiful within limits and human nature as needing good governance/institutions to guide it. This scenario is similar to the images of the *Creative, Learning City* and *Cultural Heritage City* discussed in the genealogy of city visions.

Further along the revolutionary path is the *Eco City* scenario. The *Eco City* is world-centric, where the driving social value within this scenario is that people cooperate creatively to meet the local challenge of transforming their habitat and culture towards sustainability, liveability and viability. The *Eco City* is the product of an integrated, *idealistic* cultural paradigm with *ideational* thinking tending to emerge, which sees nature as fragile and strictly accountable, and human nature as good but corruptible by institutions. This scenario is isomorphic to the *Eco-city* image of the future discussed in the genealogy of city visions.

Finally, the *Gaian City* is holistic, a symbiosis of the built and natural environments where the driving social value is a respect for ecology and the land. This is essentially a belief that 'we are a part of the land and do not own it'. The sustainable journey of life is

valued more than the collection of assets. From Sorokin's perspective, the *Gaian City* is the product of an *ideational* or *spiritual* cultural paradigm, which sees nature as ephemeral and strictly accountable, and human nature one with nature. This scenario is similar to the sustainable and intercultural image of *Cosmopolis* (Sandercock, 1988, 2004) discussed previously.

The continued development of civilisations and their cities will necessitate the resolution of current urban contradictions and problems, but based on what cultural paradigms? Using Sorokin's super-rhythm, will society continue on the *sensate* trajectory towards a hyper-*sensate* cultural phase manifesting *Techno City* (*Mechanistic City* archetype), where technology attempts to solve urban problems? Or will there be a shift towards the *idealistic/integrated* cultural phase to manifest the *Smart City* (*Organic City* archetype) where technological solutions and traditional values are in dialectic tension? Further along the *idealistic* to *ideational* phase lies the potential for the creation of the *Eco City*, a truly sustainable zero waste human habitat that is realisable only with a cultural paradigm shift in human values and behaviour. Further into the future on the spiral of human development lies the possibility of an eco-efficient (McDonough and Braungart, 2002) civilisation with an *ideational/spiritual* consciousness based on scientific cosmology that manifests in the *Gaian City*.

It is evident from the scenario analysis that the green city model is a continuum, ranging along the sustainability vector from *Smart City*, to *Eco City*, to the symbiosis of culture and ecology in *Gaian City*. Therefore, the path to sustainability correlates with the developmental path of human consciousness (values and cultural paradigms). This relationship is expected within the survey analysis. By implication, cities' cultures need to facilitate a continuum or developmental pathway from *sensate* to *idealistic* to *ideational* worldviews and onwards.

S-CV theory also reveals which social solidarity (Figure 5.3) is likely to be peaking (or in power) within each city scenario's cultural dynamics. Applying the CCM to the glo-cal city scenarios the following propositions can be generated. The Individualists have succeeded in exerting their influence in the *Techno City* and may be held accountable in any *Collapse Scenario*. The Hierarchists rule within the *Smart City,* with some support from Egalitarians, whilst the *Eco City* is the result of a tripartite alliance between the

Hierarchists and Egalitarians to mobilise the innovating capacity of the Individualists. The *Egalitarians* may finally win out in the *Gaian City*, but only for a season, as S-CV theory demands a continual dynamic, discounting any final end state. In summary, the CCM's proposed relationships between glo-cal city visions, Sorokin's cultural paradigms, SC-V theory's social solidarities and their worldviews are illustrated in Table 5.2. The purpose of the local and global surveys is to assess whether it is possible to test the model's validity.
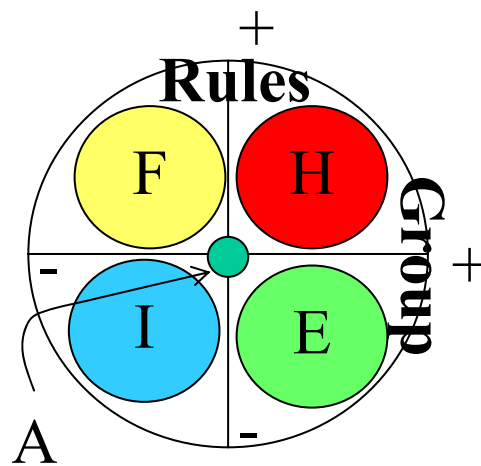
Figure 5.3: SC-V Theory's social groups (Thompson *et al.*, 1990)

Table (5.2): Thesis model - changing cultural paradigms and emerging city futures				
Scenario 2100	**Techno City**	**Smart City**	**Eco City**	**Gaian City**
Image				
Values Systems				
Sorokin's Cultural Paradigms	Sensate: Materialistic ←	Sensate to Integrated →	Integrated to Spiritual →	Ideational: Spiritual →
Thompson et al's Socio-Cultural Viability Theory	Individualists	Hierarchists + Egalitarians	Hierarchists + Others in partnership	Egalitarians
World-view	**Egocentric**	**Ethnocentric**	**World-centric**	**Holistic**

5.3 Context: objectives, survey methods and justification

This section provides background information about the testing of the CCM. The empirical research objectives are outlined, which inform the survey design and methods. The research questions and their relevance to the thesis are then clarified. The local Sunshine Coast sample is described and justified, followed by the global sample.

5.3.1 Survey goals and four research questions

The design of the surveys and the qualitative and quantitative analysis of the survey data aimed to discover whether relationships exist between the local and global respondents' preferred images of human habitation hoped for in 2100, and their underlying cultural paradigms. The analysis examines not only the primary research objective, namely the identification of civilisational worldviews and cultural paradigms influencing Western city visions (Section 1.2.2), but also whether it is possible to test these relations using quantitative survey methods. The subsequent survey goals are to:

- Raise the awareness of alternative habitat scenarios within the survey sample;
- Collect quantitative data on the sample group's preferred scenario of the future urban habitat, described by alternative stories and diagrams; and
- Collect quantitative data on the sample group's preferred qualities that create their preferred future habitat. This data seeks to reveal the underlying values for the preferred future habitat (vision) and to enable their cross-validation.

From the above research objectives and survey goals, four research questions arise.

Research Question A: What relationships exist between the urban/city vision and demographic factors, such as gender, age and place of residency? Regardless of the outcome of these analyses, this question is important as the answer may explain the survey results, rather than the CCM relationships being tested.

Research Question B: What relationships exist between the urban/city visions and cultural paradigms? The CCM anticipates that: (1) Individualists enable the *Techno City*; (2) Hierarchists and Egalitarians enable the *Smart City*; (3) Hierarchists in partnership with

Egalitarians and Individualists enable the *Eco City*; (4) Egalitarians and Hermits enable the spiritual *Gaian City*; and (5) Fatalists and Individualists enable the *Collapse Scenario*.

Research Question C: What relationships exist between the urban/city vision and the method/type of participant questioning with their different awareness-raising capacities? Particularly, do interactive workshops and self-completion surveys (which provide multiple ways of learning for participants and offer more time for reflection), generate support for grander visions or a more radical change agenda compared to other forms of questioning with lessor awareness raising capacity (e.g., phone survey and online internet surveys). To critically investigate this possible relationship, each method of questioning generated its own separate sub-sample, identifiable by a source code. A relationship was predicted to exist between the survey method and participant's preferred vision.

Research Question D: What relationships exist between the urban/city vision and the qualities of the environment, society and economy that shape it? The surveys were designed with the intent of cross-validating the preferred vision with the preferred environmental, social and economic qualities of the urban future. As such, it is anticipated that: (1) as environmental and social qualities dominate, so too do the *Eco* and *Gaian City* visions; (2) as economic qualities dominate, so too does the *Techno City* vision; and (3) an integration of environmental and economic qualities tend to be associated with the *Smart City* vision.

Two major survey data samples were collected (Figure 5.4). The first was a local sample collected in the Sunshine Coast region of South East Queensland. It was also pragmatic to further differentiate this sample into sub-samples based on the type of data collection (method of questioning the future), to examine

Figure 5.4: Main Survey Data Samples

its effect on respondents' preferred visions. The second was a global sample promoted mainly on the Internet and collected online. Some Australian participants completed this survey using a hardcopy form instead of the online form.

Tables 5.3 and 5.4 depict the relationships between the above research questions and the local and global surveys' questions. The specific variables collected and tested to measure their effects on the respondents' 2100 vision for human habitation were as follows.

A. Demographic – gender, age, locality; and lifestyle place only for the local sample.

B. Cultural Paradigms – worldview/cultural perspective and governance model for the global sample.

C. Method of question – source of data.

D. Qualities of the future – environmental quality, community/cultural quality, and economic quality for both local and global samples.

Table 5.3: Local habitat futures survey logic		
Question Number	What type of information	Purpose of question or relation to research question
	Introduction and purpose of survey	Context
	Alternative urban habitat scenarios presented in table and images	Describe characteristics of the alternative city futures scenarios
1.	Exclusive choice: Preferred 2100 city vision	Primary research question
2.	Preferential choice: environmental quality of the preferred future	Research question C: Basic scale of qualities to cross-validate vision; and test values and cultural paradigms
3.	Preferential choice: social/community quality of the preferred future	Research question C: Basic scale of qualities to cross-validate vision; and test values and cultural paradigms
4.	Preferential choice: economic quality of the preferred future	Research question C: Basic scale of qualities to cross-validate vision; and test values and cultural paradigms
5.	Demographic	If gender influences preferred city image
6.	Demographic	If age influences preferred city image
7.	Demographic	If length of residency affects preferred city image
8.	Demographic	If place of residency affects preferred city image

Table 5.4: Global city futures survey logic		
Question Number	What type of information	Purpose of question or relation to research question
	Introduction and purpose of survey including Sorokin's cultural paradigms	Context and build futures literacy
	Alternative city futures scenarios presented as narratives	Describe characteristics of the alternative city futures scenarios
1.	Exclusive choice: Preferred 2100 city vision	Primary research question
2.	Preferential choice: environmental quality of the preferred future	Research question C: Basic scale of qualities to cross-validate vision; and test values and cultural paradigms
3.	Preferential choice: social/community quality of the preferred future	Research question C: Basic scale of qualities to cross-validate vision; and test values and cultural paradigms
4.	Exclusive choice: Vision implementation – governance	Preferred system of governance for 2100
5.	Preferential choice: economic quality of the preferred future	Research question C: Basic scale of qualities to cross-validate vision; and test values and cultural paradigms
6.	Demographic	If gender influences preferred city image
7.	Demographic	If age influences preferred city image
8.	Demographic	If place of residency/region affects preferred city image
9.	Psychographic	Research Question A: Main cultural paradigm affecting worldviews of humanity and Nature. Test if these relate to city visions

5.3.2 Justification of survey methods and samples

This section describes the various survey methods used in the current research and explains how their design sought to test the research propositions and questions outlined in the previous sections. The parameters of the local and global samples are discussed in turn.

5.3.2.1 Survey methods

The time span for questioning city futures within the survey instruments is approximately one hundred years. Asking participants about their 2100 urban/habitat vision is so far

removed from their individual circle of influence or concern that it reveals more clearly the aspirations of the sample groups.

The survey design is based on the assumption that visioning city futures allows communities to debate and select their desired multi-dimensional habitat. It creates a 'pull' towards the preferred future. It is clear that cities are human habitats, but evidence shows that they are far from being humane (UN-HABITAT, 1996b). The surveys sought to engage participants in various methods in order to clarify the glo-cal human aspirations for the future city (urban habitat) of 2100. The survey methods also aimed to collect data on the efficacy of anticipatory action learning about city futures in constructing a bridge towards a humane habitat. This is specifically relevant for the workshop methods, which also explored the idea that the city (as municipality) has agency in creating alternatives to the probable future, through intervention at all levels of reality.

Four survey methods were trialled during the research. Two were self-completion surveys, one being presented locally in hardcopy format and the other was a web-based global survey. The global survey was also available in hardcopy format during two relevant conferences for their delegates to participate. The third survey method extended the local Sunshine Coast visioning process in the form of a telephone questionnaire. The fourth survey method likewise focussed on the local visioning process but in the form of interactive workshops. All four survey methods followed the same logic (see Tables 5.3 and 5.4), first providing the purpose of the survey and introductory information, then describing the alternative city futures scenarios, thirdly seeking preferred city visions and qualities of the future, and finally collecting demographic and psychographic data.

The main difference in method for the local sample lies in the way the scenarios were communicated. The participants of the hardcopy local survey were given a table of characteristics for each scenario (labelled A to D) and a graphic image representing same, from which to choose their preferred future (Appendix A, 8.8.8). In contrast the participants of the phone survey relied on the narratives for each scenario including the scenario label to aid comprehension. Participants of the staff visioning workshops completed as individuals the same hardcopy survey available to residents, before discussing their choices in group work. The data for the research extracted from the workshop sub-group is based only on the individual survey responses.

It is significant to note that the local Sunshine Coast visioning methods were designed and conducted (2001-2) prior to the formulation of the research framework's CCM, due to research funding being available from Maroochy Shire Council (MSC) in that financial year. As such, these surveys did not include psychographic questions to examine participant's cultural paradigms (either based on Sorokin's model or SC-V theory's social groups). Moreover, the local case study was conducted first to inform the development of the global survey. As such, the worldviews of the local survey participants may only be inferred from their preferences for future habitat qualities. The design assumed that a scale of qualities can be proposed which relate to worldviews, and it was intended to explore this relationship with the global survey. However, insufficient data was collected using the online sample to enable testing of this assumption. The question about worldviews/cultural perspectives in the online form was not properly linked to the access database on the ISP server and consequently this data set was not retrievable. However the global survey was also promoted and made available in hardcopy format to delegates at two separate National conferences in Australia. As such, 16.4% of respondents (18 out of 110) who filled out hardcopy forms and returned them by mail (instead of online) provided data about their worldview/cultural paradigm during the global survey. This technical error means that the global sample has limitations when testing the relations between vision and cultural paradigms presented in research proposition B.

The global survey participants were presented with Sorokin's ([1957] 1970) macrohistory of change and cultural paradigms in conjunction with the city futures scenarios. This presentation was given for three reasons. Firstly, it is an alternative to the Marxist macrohistorical model[13] (means-modes of production [techno-economic motor] driving the socio-political system and social consciousness), which is the dominant theoretical perspective (or paradigm) in urban planning theory and practice. By explicitly using an alternative historical perspective, the participants' mental patterns about these issues may be temporarily disrupted, thus perhaps leading to reflective responses as opposed to habitual responses. Secondly, Sorokin's work is unfamiliar to most citizens living in cities (the target group for the survey is not limited to peer experts), yet easy to quickly understand, so it is a model that lends itself to anticipatory action learning for participants

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[13] The Marxist macrohistorical model sees the means-modes of production (techno-economic motor) driving the socio-political system and social consciousness.

in questioning alternative futures for the city. Thirdly, Sorokin's cultural mentalities are in effect 'paradigms' (Kuhn, 1970) and thus the current research proposed that these paradigms can be used to indicate or explain shifts in the development of the urban system (or city) and the articulation of its problems.

5.3.2.2   Local survey sample

In late 2001 and early 2002 a local community survey was conducted. This research had the support of MSC, and aimed to find out the preferred vision for human habitation in the year 2100 as described by Sunshine Coast residents. MSC supported the survey because it recognised that local government is a major stakeholder in the process of managing urban development and enhancing the quality of life of its citizens. Understanding people's preferred image and qualities of the distant future satisfied the research aims, and also provided the MSC with information for long range strategic planning for human habitation and urban policy in the Shire. For the local survey, two different sample groups were targeted, comprising MSC leaders and Strategic Planning staff, and residents of the Sunshine Coast. The local survey is presented in Appendix A.

The means of targeting the local survey sample groups included the following.

- A visioning workshop with MSC Manager's and Team Leaders at Strategic Forum No.3.
- Notification to Maroochy Shire rate payers through the "Maroochy in Focus" Newspaper (70,000+ distribution to resident ratepayers and 30,000 non-resident ratepayers). Surveys were available at all MSC Libraries and Customer Service Centres.
- The Community Survey was also available on MSC's internet home page to download and print, to be returned to MSC Libraries.
- A Sunshine Coast phone survey was conducted by independent market researchers Market Facts (Qld) Ltd. Market Fact's role was limited to sourcing and interviewing participants (a random sample of 300 residents, which were obtained from the electronic White Pages from the localities of Caloundra, Maroochy and Noosa Shires), and data collection and entry. The analyses were done by the author. A total of 1296 telephone numbers were dialled and 747 connected calls were made to achieve the 300 finalised surveys, with 100 responses from each locality.

The local survey process used three different methods of asking the same questions, which generated three samples that could be analysed separately or as an aggregated sample. These different sources included a self-completion survey with explanatory notes for residents and MSC employees, visioning workshops with MSC senior staff (e.g., managers and team leaders), and a random telephone survey of residents in Maroochy, Caloundra and Noosa. A total of 467 responses were collected, of which 300 (64.2%) were sourced by the random telephone survey, 102 (21.8%) were conducted in visioning workshops with MSC staff, and 65 (13.9%) were sourced by self-completion survey available at MSC public libraries (Figure 5.5). This method allowed exploration of the effect of the type of futures questioning on the preferred visions.

The local sample represents an approximate gender balance with 51% males and 49% females, and the age profile of the respondents was representative for the region (Figure 5.6). Similarly, the sample represents an approximate spread by location (Shire and lifestyle place) when compared to residential population of the Sunshine Coast (Figure 5.7). Half of the respondents lived in the coastal urban strip, whilst nearly a third lived in the rural hinterland's country towns and 18% lived in semi-rural residential or other areas. The frequency of responses by lifestyle place is therefore proportionate to the population spread on the Sunshine Coast.
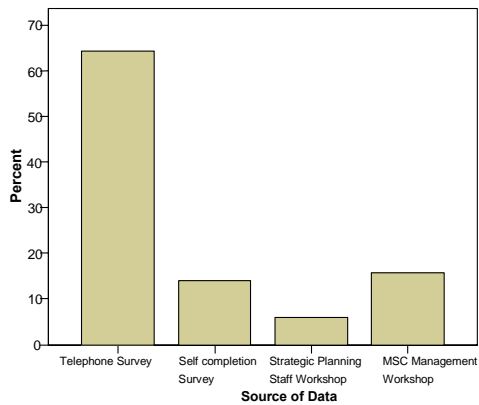
Figure 5.5: Local Sample's Method of Questioning
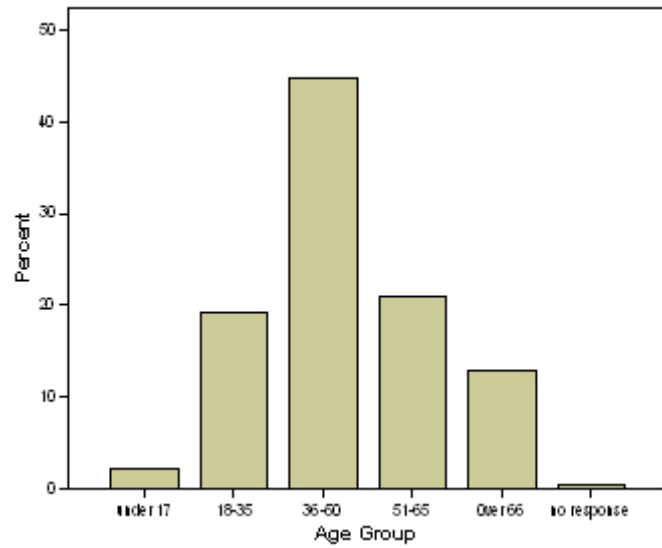
Figure 5.6: Local Sample's Age Profile

Figure 5.7: Local Sample's spread by Place (Location)

5.3.2.3   Global survey sample

Between mid-2003 and mid-2004, the global internet survey targeted international non-government organisations, municipal government networks and organisations, business organisations and multi-national companies that have a stake in the quality of the city. The term 'global' is used for three reasons: (1) the participants for the survey were sought worldwide; (2) the scale and type of urban/city future scenarios are based on archetypes that may be applicable to a high number of societies worldwide; and (3) the urban/city future scenarios recognise the worldwide interconnectedness and planetary impacts of urbanisation. The global survey is available in Appendix B.

Focus groups targeted for the global survey sample include the following.

- Online communities and peak organisations that have a stake in urban futures (Appendix B, Table B.1). The online survey was published in English and Spanish and was promoted over a two-year period from July 2002 to August 2004. Thirty-three organisations and forty-two academics/champions were invited to participate and promote the online survey.
- Participants at the XXI World Congress of Architecture, Berlin 2002 through awareness by presentation of a paper.
- Participants at the National Australian Architecture Conference, Sydney 2003, through conference announcement and inclusion of hardcopy self-completion surveys in Conference Packs.
- Participants at the National Sea-change Summit, Coolum 2004, using self-completion hardcopy surveys.

The global sample represents an approximate gender balance with 38.2% males, 44.5% females (with 17.3% declining to answer that question), and consists of a range of age groups that approximates the world's population (Figure 5.8). The sample's median age is approximately 42 years of age, compared to the median age of 26.4 for the world population. Since most respondents were from developed regions of the world, the sample more closely coincides with the median age of 37.3 for the 'more developed regions' of the World in 2000 (UNPD, 2002: 15). In 2000, 59.9% of the world population was aged 15-59 (UNPD, 2002: 57). The global sample has a similar composition where 53.6% were

aged 18-50. In contrast, the sample represents a skewed spread by location (world region) when compared to global urban populations (Table 5.5). Higher responses from Australasia were observed than expected, with under representation, in descending order, for Asia, South America, Europe and Africa. The non-parametric chi-square, one sample test for goodness of fit between sample and global urban population rejected the null hypothesis ($p < .05$) that there was no effect of world region on number of respondents. As such, the global sample is representative (fit) enough for further examination.

Participants of the global survey were asked to select their preferred system of governance for their preferred future of 2100 (see frequency of responses in Figure 5.9). Most respondents (57.3%) chose 'planetary democracy with local community governance', followed by equal preferences (9.1%) for the options of 'status quo of Nation-state sovereignties' and 'local community governance aligned under trade blocks'. The least preferred system of governance was 'planetary democracy and governance' (7.3%). 17.3% of respondents indicated no response to this question.

Participants of the global survey were asked to select their dominant worldview/cultural perspective (see frequency of responses in Figure 5.10) As previously explained in Section 5.3.2.1, most of this data set is missing.

Table 5.5: Relation between global sample and global urban population					
	World Region				
Code	Category	Observed N	Expected N	Residual	Valid Percent
1	Africa	4	9.1	-5.1	3.6
2	Central Asia	0	43.7	-43.7	0
3	Australasia + Oceania	62	.9	61.1	56.4
4	Europe	10	17.3	-7.3	9.1
5	North America	11	7.3	3.7	10
6	South America	4	12.7	-8.7	3.6
7	No response/ missing	19	0	0	17.3
	Total	110	91	0	100
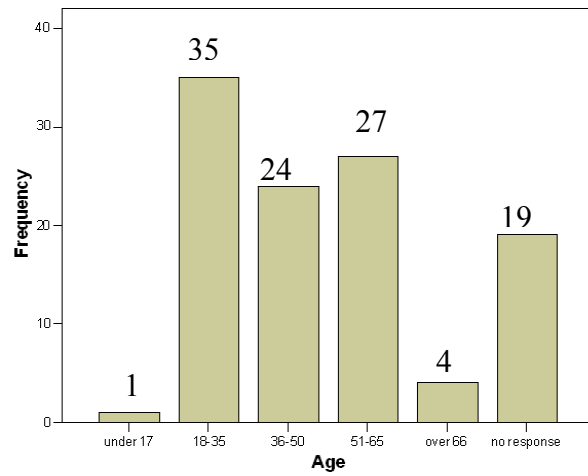
Figure 5.8: Global Sample's Age profile
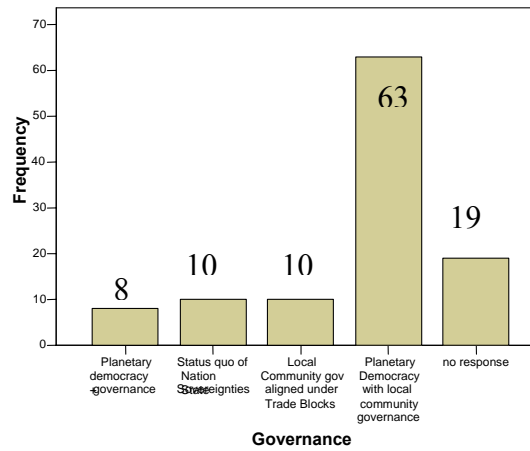
Figure 5.9: Global sample – Desired Governance in 2100
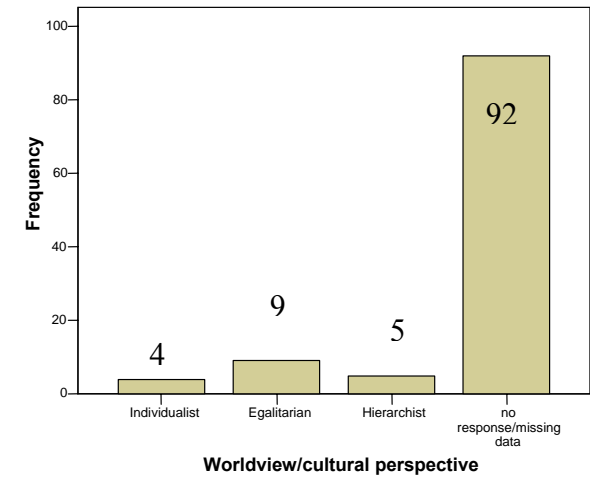
Figure 5.10: Global Sample - Worldview

5.4 Survey Results

This section presents the findings of the local and global survey samples' preferred images of future urban habitats or cities. The results of relationship testing between the categorical variables being examined are provided for both local and global samples.

5.4.1 Preferred city visions of the future

Table 5.6 presents the total frequency and percentage of responses for the preferred city visions for the local and global samples. Participants were presented with the scenario descriptions, and asked to exclusively select their preferred image/story of the future for the year 2100. The preferences were not based on responses to a set of other general questions (e.g., in terms of qualities of the future).

Table (5.6): Comparison of Local/Global Scenarios surveyed				
Scenario Labels	**In: Local urban futures survey (exclusive choice)**		**In: Global city futures survey (exclusive choice)**	
1	Amorphous Suburbs in SEQ SuperCity	$N = 24$; 5.1%	Techno City	$N = 2$; 1.8%
2	Diverse Sunshine Coast Towns	$N = 123$; 26.4%	Smart City	$N = 19$; 17.3%
3	Sunshine Coast Arcologies (Town Consolidation)	$N = 142$; 30.4%	Eco City	$N = 65$; 59.1%
4	The Sunshine Coast Bio-City (High Tech, Sustainable Habitat)	$N = 178$; 38.1%	Gaian City	$N = 24$; 21.8%
Total		$N = 467$; 100%		$N = 110$; 100%

The most preferred vision for human habitation on the Sunshine Coast was the *Bio-City*, exclusively chosen by 38.1% of respondents. This was followed by *Sunshine Coast arcologies (town consolidation)* with 30.4% of respondents nominating this scenario, then

Diverse Sunshine Coast Towns with 26.4%. The least preferred vision was that of the Sunshine Coast suburbs expanding as part of a *SEQ*[14] *Super-city*, with only 5.1% of respondents nominating this scenario (Figure 5.11).

The most preferred global vision for human habitation on the Earth as collected by the web-based survey is the *Eco City*, exclusively nominated by 59.1% of respondents. This was followed by *Gaian City* with 21.8% of respondents nominating this scenario, then *Smart City* with 17.3%. The least preferred vision was that of *Techno City*, with only 1.8% of respondents choosing this scenario (Figure 5.12).

Participants of the local and global samples were asked to select from three lists, the most important environmental, community and economic qualities for their preferred urban future. The preferential choices for the most important ('first') qualities of the desired 2100 Sunshine Coast habitat vision, in order of frequency (denoted as a percentage) were (Figure 5.13a-c) as follows.

- For the Environment: 56.1% Healthy, 11.3% Green, 10.5% Tranquil
- For the Community: 26.8% Interactive, 22.1% Wise (foresight), 15.4% Vibrant
- For the Economy: 30.8% Sustainable, 28.5% Prosperous, 13.9% Innovative

The desired future that is contingent on the preferred human habitat qualities above would emerge through consolidation and transformation of existing town centres to minimise the ecological impact of human habitation. The findings from the desired qualities section of the questionnaire are therefore consistent with the results for the preferred Sunshine Coast vision that likewise advocates a compact urban form.

The preferential choices from the global survey for the most important ('first') qualities of the desired 2100 city vision, in order of frequency were (Figure 5.14a-c) as follows.

- For the Environment: 51.8% Healthy, 23.6% Diverse, 8.2% Human scale.
- For the Community: 39.1% Fair/Just/Ethical, 17.3% Wise (foresight), 7.3% Interactive.
- For the Economy: 44.5% Sustainable, 20.0% Equitable access, 8.2% Prosperous.

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[14] SEQ refers to the region of South East Queensland.

The global survey respondents' preferred habitat qualities are also consistent with and contingent on the compact urban form of the desired Green/*Eco City* vision.

Comparing the findings of the local and global surveys reveals that the preferred 2100 image of the future for cities and human settlements are similar across the two sets of respondents. Most respondents desire healthier natural and built environments, more just, wise and interactive communities, and sustainable ways of life within cities. These qualities match the respondents' most preferred future images of the city, being the *Eco City* and *Gaian City*.

Figure 5.11: Sunshine Coast Habitat 2100 Visions
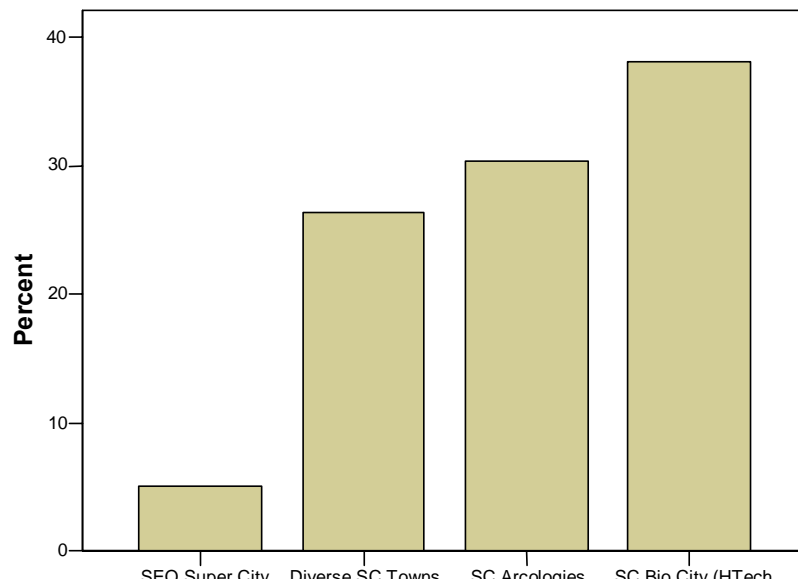
Figure 5.12: Global 2100 City Visions
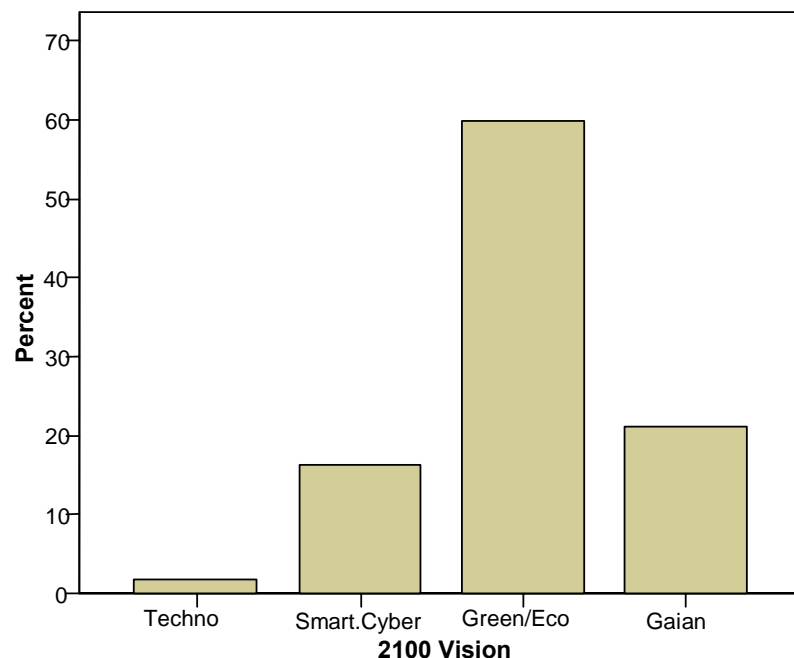
Figure 5.13a
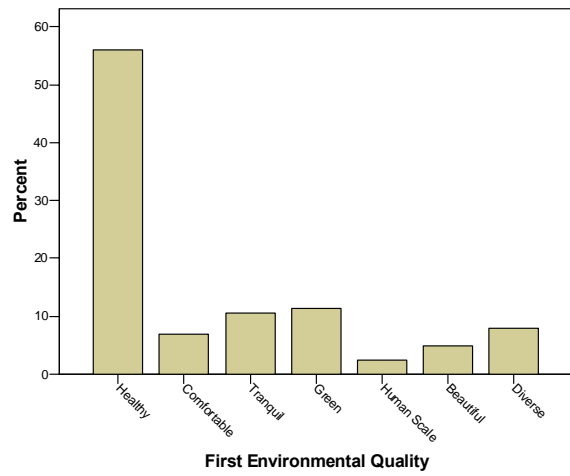
Figure 5.13b
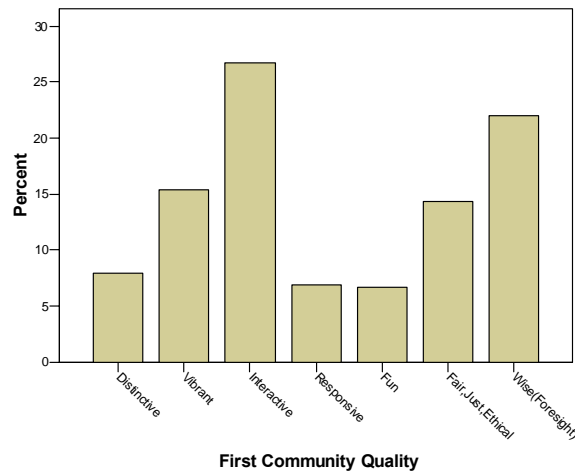
Figure 5.13c
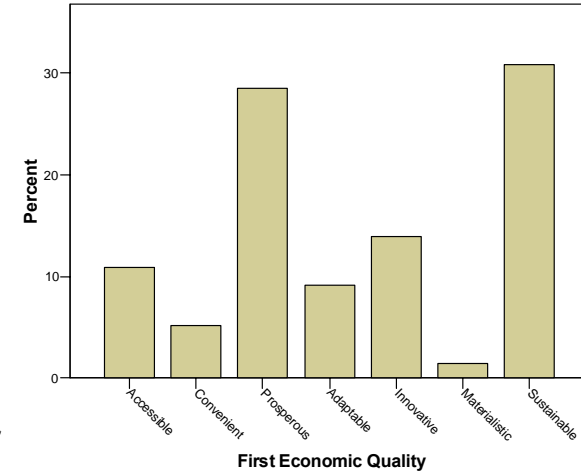
Figure 5.13a-c: Sunshine Coast Habitat 2100 Vision Qualities
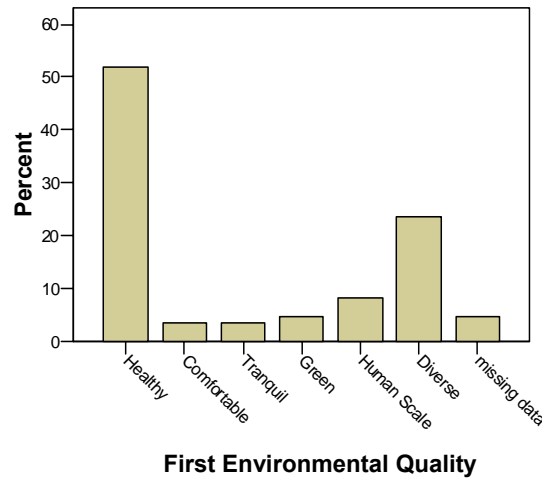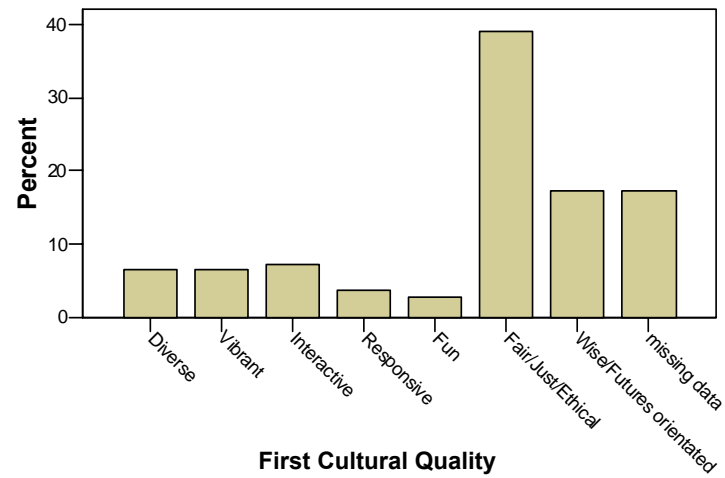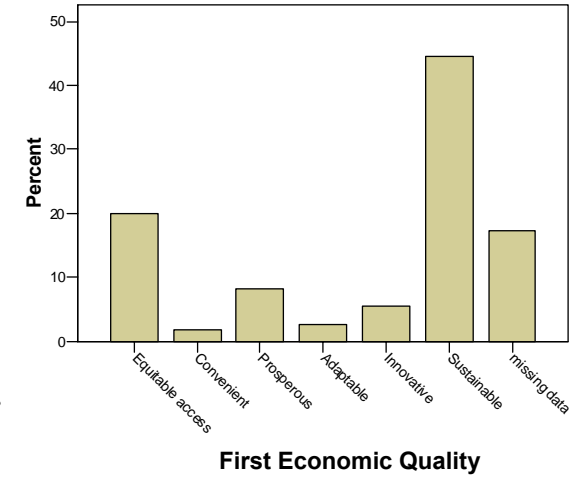
Figure 5.14a-c: Global City Futures 2100 Vision Qualities

5.4.2　Testing of relationships

Relationship testing between the 2100 *vision* selected by respondents and a host of other variables were conducted. These propositions are listed in Table 5.7 under 'Relationships'. The appropriate test for a relationship between two categorical variables is the non-parametric Pearson chi-square test for relatedness or dependence (note that this should not be confused with the chi-square test for goodness of fit which applies to the analysis of a single categorical variable). For both local and global samples, two tests were conducted for each analysis between variables. Firstly, the chi-square test for relatedness was used to investigate significant relations (see overview in Table 5.7) and secondly, when these were found or not, cross tabulation tests were used to consider or interpret whether patterns of relations were observable and how they might be explained. However, only cross tabulations tests that have implications for research propositions A to D are discussed in this section. The global sample was analysed twice, first including all 110 cases and second using only the subset that had no missing data (18 cases). This second set of analyses must be viewed with caution due to the small sample size.

N.B. Shaded cells show significant relationships

Table 5.7: Summary of Survey Analysis –Testing Relationships				
Propositions	Relationships	Local Survey	Global Survey	
A: Demographic	2100 vision * Gender	$N = 467$ $\chi^2 = 6.532$ $df = 6$ $p = .366$	$N = 110$ $\chi^2 = 8.976$ $df = 6$ $p = .175$	-
	2100 vision * Age	$N = 467$ $\chi^2 = 6.713$ $df = 15$ $p = .965$	$N = 110$ $\chi^2 = 22.250$ $df = 15$ $p = .101$	-
	2100 vision * locality	$N = 393$ $\chi^2 = 24.589$ $df = 9$ $p = .003$	$N = 110$ $\chi^2 = 15.511$ $df = 15$ $p = .415$	-
	2100 vision * lifestyle place	$N = 393$ $\chi^2 = 36.754$ $df = 9$ $p < .001$	No data	No data
B: Cultural Paradigms	2100 vision * worldview/cultural perspective	No data	$N = 110$ $\chi^2 = 9.428$ $df = 9$ $p = .399$	$N = 18$ $\chi^2 = 6.592$ $df = 4$ $p = .159$
	2100 vision * governance	No data	$N = 110$ $\chi^2 = 18.805$ $df = 12$ $p = .093$	Not tested
	Worldview/cultural perspective * Governance	No data	$N = 110$ $\chi^2 = 25.549$ $df = 12$ $p = .012$	$N = 18$ $\chi^2 = 10.114$ $df = 4$ $p = .039$
C: Method of questioning	2100 vision * Source	$N = 467$ $\chi^2 = 93.721$ $df = 9$ $p < .001$	-	-
D: Qualities	2100 vision * 1st Environmental Quality	$N = 467$ $\chi^2 = 42.122$ $df = 18$ $p = .001$	$N = 110$ $\chi^2 = 28.717$ $df = 18$ $p = .052$	-
	2100 vision * 1st Cultural Quality	$N = 467$ $\chi^2 = 38.775$ $df = 18$ $p = .003$	$N = 110$ $\chi^2 = 47.387$ $df = 21$ $p = .001$	-
	2100 vision * 1st Economic Quality	$N = 467$ $\chi^2 = 46.914$ $df = 18$ $p < .001$	$N = 110$ $\chi^2 = 17.864$ $df = 18$ $p = .465$	-

5.4.2.1 Local survey data

The results of the local sample are now considered in terms of Research Proposition A. Results of chi-square analyses revealed no significant relationships between urban vision and gender or urban vision and age. However, there was a significant relationship between location and preferred 2100 vision (Table 5.7). This significance emerges firstly by Municipality and secondly, after recoding the locations by Municipality using postcodes to match lifestyle place. Four lifestyle place categories are used and coded to reflect the typical choices available in the Sunshine Coast region being: (a) coastal urban strip; (b) rural hinterland and country towns; (c) semi-rural residential and in-between areas; and (d) missing responses (of which there is only one).

The cross tabulation of the relationship between lifestyle place and 2100 vision enables further deliberations on their meaning (Figure 5.15). The preferred 2100 vision from respondents within the *coastal urban strip* sub-group is *Diverse towns*, followed closely by *Arcologies* and *Bio City*. This result may be a criticism of the urban sprawl in which these people live and a desire for a greater sense of belonging, social interaction and sustainability within the traditional walkable town. The preferred 2100 vision from respondents within the *rural hinterland and country town* sub-group is *Bio-City – High Tech sustainable habitat* followed by *Arcologies – town consolidation* and then *Diverse towns*. This result may be a reflection of the desire from these respondents to conserve and build upon what these people already partly experience in their place of residence outside of the coastal urban strip. Their vision of the future emphasises sustainability and town consolidation, which would enhance the quality of their own town and protect the rural hinterland from urban development/sprawl. The preferred 2100 vision from participants within the *semi-rural residential and in-between areas* is *Arcologies*. This result may again be explained as a clear desire to protect the respondent's current lifestyle place qualities. The people living in the in-between areas have the most to fear from urban sprawl or development that creates significant character change in their area. Hence the very clear preference for town consolidation, diverse activity centres and the containment of urban sprawl within this place-based subgroup.
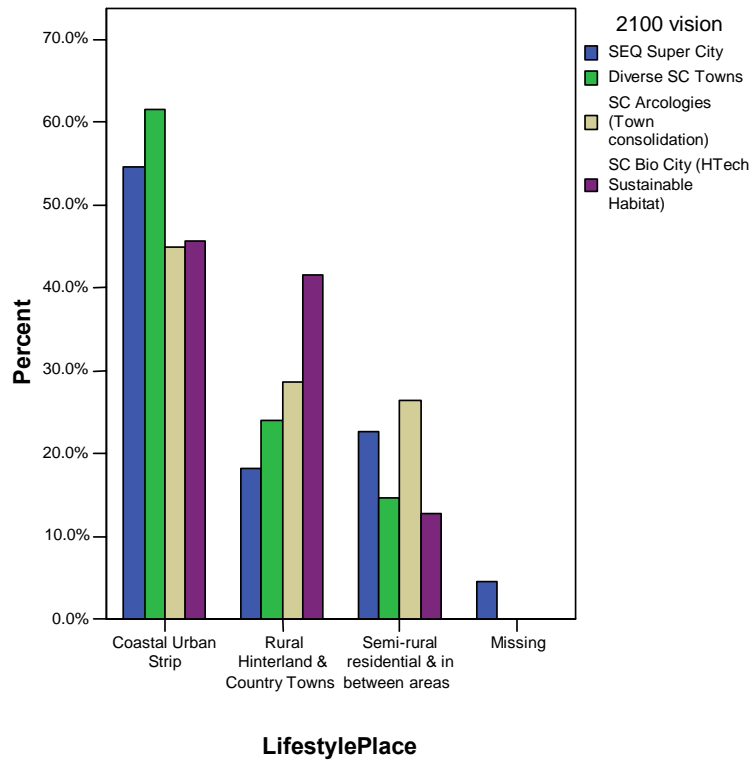
Figure 5.15: Sunshine Coast Survey – Place*2100 Vision

In regard to Research Proposition C, the survey results suggest that the city vision of the future is influenced by the method of futures questioning. The chi-square test between source of data and 2100 vision is significant (Table 5.7), suggesting that respondents' preferred 2100 vision differs over the different data collection types. Table 5.8 depicts the pattern of responses. Differences are evident in the preferred 2100 image of the Sunshine Coast between residents and MSC management and staff (Figure 5.16). For example, participants of the visioning workshops and self-completion survey were more confident about achieving a high-tech sustainable habitat than other participants. Of the participating group of Council managers and planning staff 67% (68 out of 102), and 63% (41 out of 65) of the self-completion survey respondents nominated *Sunshine Coast Bio-city* as their preferred vision for 2100 (Figure 5.17). In contrast, 70.6% (212 out of 300) of participants of the random telephone survey favoured the 2100 visions that focussed on distinct towns, whether conserved as is or consolidated over time. This is the more pragmatic option. One explanation for this might be that information provided via the phone interview, with associated time pressures for each call and therefore time pressures for participants to process the information, meant that participants supported the future that is most similar to the present (*Diverse Sunshine Coast Towns*). Participants of the

phone interviews also did not benefit from the diagrams that visually represented and differentiated the alternative scenarios, which other cohorts of the local survey used.

The fourth survey method of city visioning used in the research was the online global city futures survey. A total of 110 responses were sourced by this method. The global survey was accompanied by a web page that explained its research aims, theoretical context, future city scenarios and instructions. The information it contained was similar to the local Sunshine Coast Habitat Futures self-completion survey in regard to its participant literacy building capacity. The results revealed that 59.1% (65 out of 110) of online respondents preferred the *Green/Eco City* vision, which is described using almost the same words and values (except for the scenario label) as the local telephone survey's *Sunshine Coast Arcologies (town consolidation)* vision, of which only 34% (103 out of 300) of respondents preferred.

The above evidence suggests that the method of questioning and envisioning the future influences the level of understanding gained by participants about the urban possibilities and the challenge of realising a sustainable quality of life. In other words, the futures process influences the desired image of the future.

Table 5.8: Cross Tabulation Sunshine Coast Survey – 2100 Vision*Source (all cases)						
		Source				Total
		Telephone Survey	Self Completion Survey	Strategic Planning Staff Workshop	MSC Management Workshop	
2100 vision	SEQ Super City	19	3	0	2	24
	Diverse SC Towns	109	5	3	6	123
	SC Arcologies (Town consolidation)	103	16	10	13	142
	SC Bio City (HiTech Sustainable Habitat)	69	41	15	53	178
Total		300	65	28	74	467

Figure 5.16	Local Sample 2100 preferred scenario by survey method			
	Amorphous Suburbs	Diverse S.Coast Towns	S.C. Eco- Towns (Arcologies)	S.Coast Gaian Habitat
Survey Method				
Community Survey (N=300) Phone interviews	6.3%	36.3%	34.3%	23%
	A			
Visioning workshops with MSC management (N=74)	1.9%	8.8%	22.6%	66.7%
	B			
MSC Strategic Planning Staff (N=28)	0%	10.7%	35.7%	53.6%
	C			
Self completion community surveys with info kit and images (N=65)	4.6%	7.7%	24.6%	63.1%
	D			
Total (N=467)	5.1%	26.4%	30.4%	38.1%
	T			

**Figure 5.17: Sunshine Coast sample (all 467 cases) –
Cross Tabulation 2100 Vision*Source**
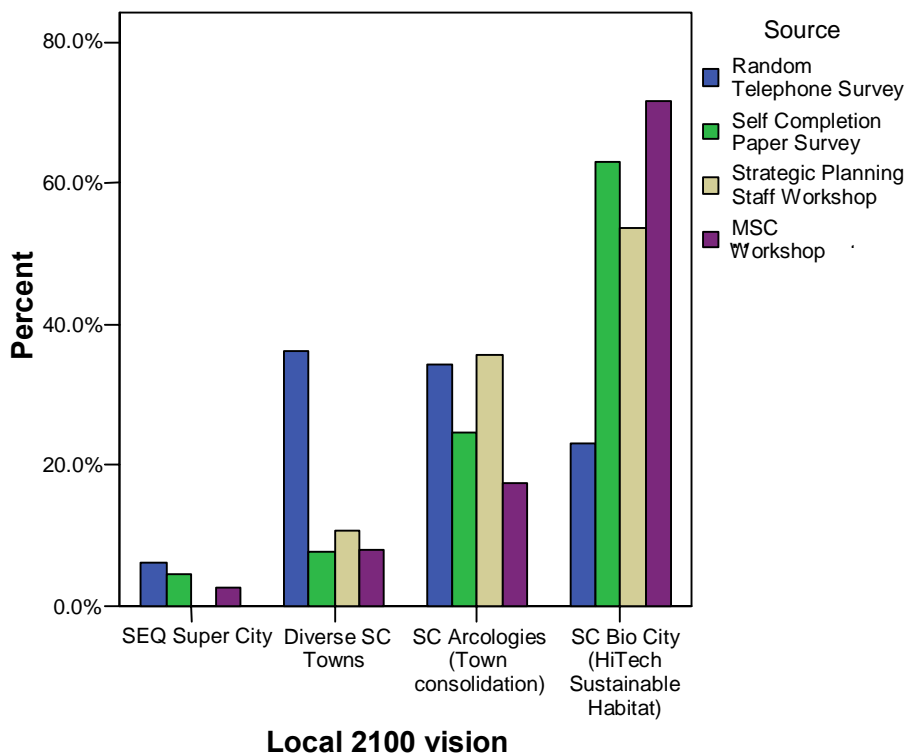
The local survey analyses seem to support research proposition D, that city visions are dependent on desired qualities of human habitation. It was predicted that a relationship exists between city visions and qualities of future habitation such that the qualities of the future are endogenous characteristics that shape the perceived future image of the city. As previously discussed, the preferred choice for the qualities of the desired Sunshine Coast future are a healthy environment, a sustainable economy and an interactive community (Section 5.4.1).

Pearson chi-square tests revealed significant relationships between each first preference quality (enviro-socio-econo) and the 2100 vision selected by respondents (Table 5.7). Cross tabulation of the variables reveals the following relational patterns. In regard to the primary environmental quality hoped for in 2100, the preference for a healthy environment is the highest across all visions and it also increases in line with the increase in sustainability defined within the scenarios (Figure 5.18). In regard to the primary

economic quality hoped for in 2100, the preference for a sustainable economy is the highest. The data shows that the desire for a sustainable and innovative economy increases in line with the evolution of visions from *Super City* to *Bio City*. Conversely, the desire for prosperity decreases in importance from *Diverse Towns* to *Bio City* as sustainability increases in importance (Figure 5.19). In regard to the primary cultural quality hoped for in 2100, the preference for an interactive community is the highest across all visions and it also increases in line with the increase in sustainability defined within the visions from *Super City* to *Bio City* (visionary scale). Both community vibrancy and foresight also increases in line with the visionary scale (Figure 5.20).

Figure 5.18: Cross Tabulation 2100 Vision*Enviro Qualities
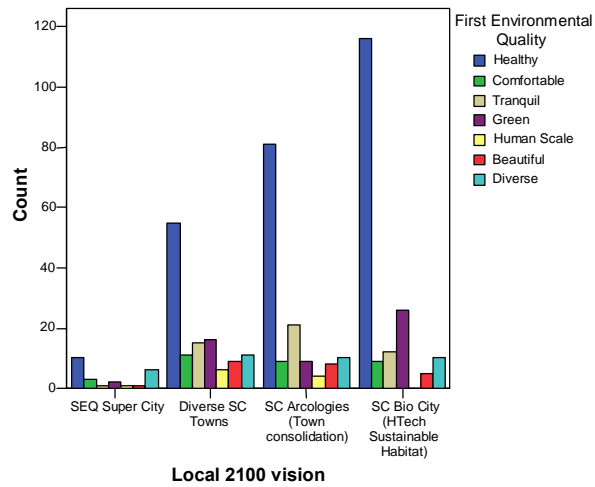
Figure 5.19: Cross Tabulations 2100 Vision*Econo Qualities
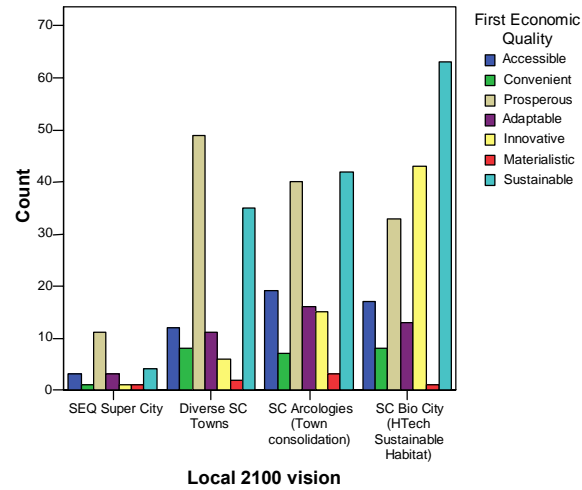
Figure 5.20: Cross Tabulations 2100 Vision*Cultural Qualities
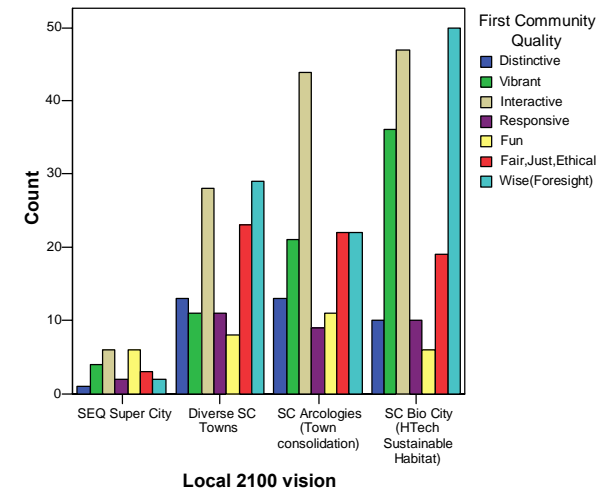
Figures 5.18 to 5.20: Sunshine Coast Survey – Cross Tabulations 2100 Vision*Qualities

5.4.2.2 Global survey data

The results clearly have implications for research proposition A, which states that relations may exist between demographic factors and city visions. The global survey sample (factoring in a 17.3% no response rate on the gender and age questions respectively), show no significant relationships between 2100 vision and gender or age. Pearson's chi-square test revealed a non-significant relationship between the world region of the respondents and their preferred 2100 vision (Table 5.7).

In regard to Research Proposition B, the global survey sought to investigate possible relations between vision and cultural paradigms, by asking participants to exclusively choose which statement best described their view of humanity's (the world's) relationship with the Earth and nature. These statements (Appendix B) were based on SC-V Theory's four social solidarities and their worldviews/cultural perspectives. As explained earlier (Section 5.3.2), the global sample is limited in examining the above question due to missing data for respondent's worldviews.

The global survey data is used to test the relatedness between the following variables using the Pearson chi-square test for relatedness or dependence:

- Worldview * 2100 vision
- 2100 vision * Governance
- Worldview * Governance

For:
- all cases ($N = 110$)
- cases where there is no missing data ($N = 18$)

For all analyses testing the relationship between respondents' 2100 vision and their worldview and governance the null hypothesis was accepted. That is, regardless of whether the large or small N was used, there was no significant relationship between the variables (Table 5.7). The missing worldview data may well account for the results of the first round of analyses (2100 vision * worldview; 2100 * governance). Closer examination of the data (see Figures 5.21, 5.22 and 5.23) (Appendix B, Tables 1-3) reveals interesting tendencies that are consistent with the thesis' CCM, and that warrant further research. These tendencies and what they mean for the CCM are explained in Section 5.5.

A significant relationship between worldview and governance was found when testing both the whole sample group (110 cases) and the no missing data sample (18 cases) (see Table 5.7). Examining the percentages provides insight into the patterns underlying this relationship (Figure 5.24) (Appendix B, Table 4). The relationship between worldview and governance observed in the global sample is based around three patterns. Firstly, all Individualists exclusively chose "Planetary Democracy with local community governance" as their preferred governance model for 2100. Secondly, most Egalitarians (88.9%) exclusively chose the same governance model. Thirdly, most Hierarchists (60%) exclusively chose "Local community governance aligned under Trade Blocks" as their preferred governance model for 2100. Overall, most respondents (57.3%) exclusively chose the glo-cal balance of planetary democracy with local community governance as their preferred future form of governance.
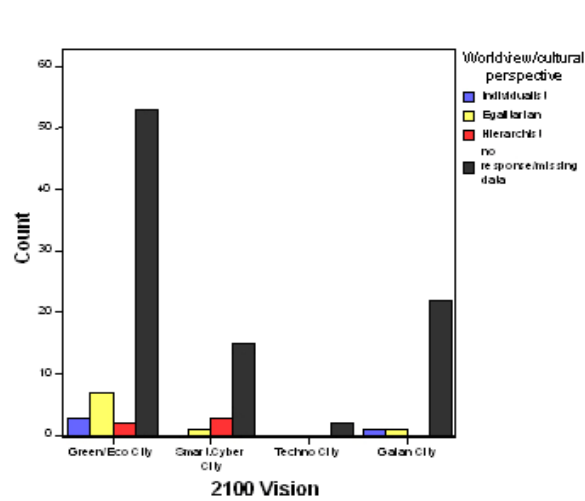
**Figure 5.21: Global Survey –
Cross Tabulation 2100 Vision *
Worldview/Cultural perspective
(110 cases)**
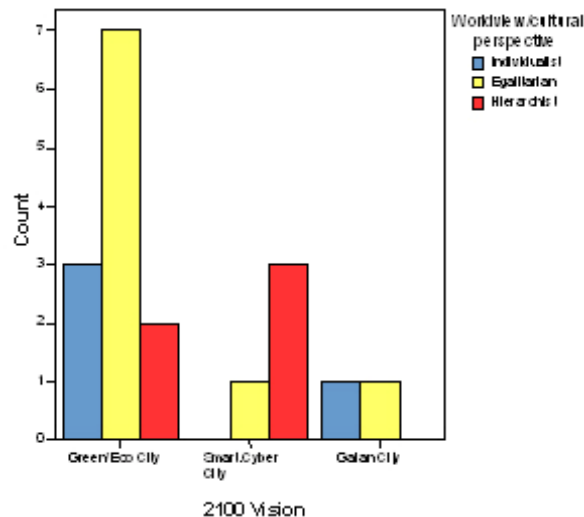
**Figure 5.22: Global Survey –
Cross Tabulation 2100 Vision *
Worldview/Cultural perspective
(18 cases)**
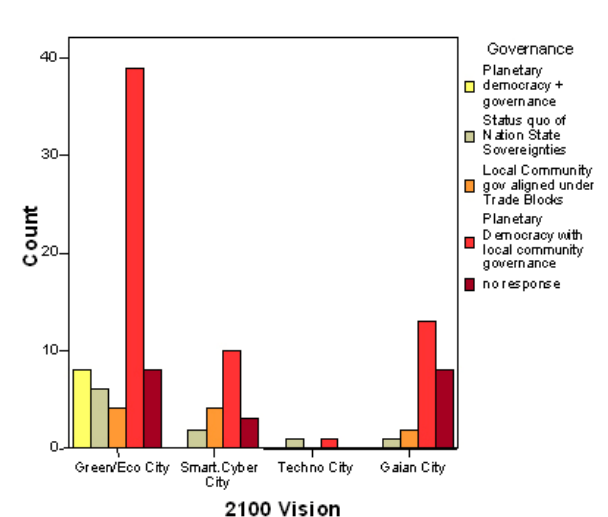
**Figure 5.23: Global Survey –
Cross Tabulation 2100 Vision *
Governance
(110 cases)**
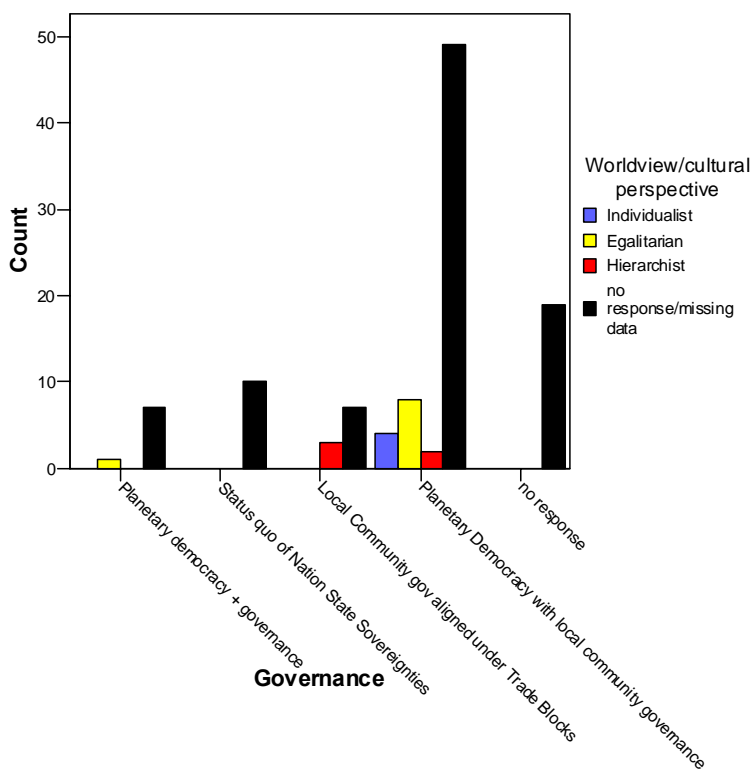
Figure 5.24: Global Survey –
Cross Tabulations Governance*Worldview/Cultural Perspective (110 cases)

Research proposition C asked whether the city vision of the future would be dependent on the method of futures questioning. The global survey method was not designed to separately explore this question but rather was considered in conjunction with the local sample when investigating this question (see Section 5.4.2.1).

Considered next are the global sample results in regard to research proposition D, that city visions are dependent on desired qualities of human habitation. As previously outlined, the global preferential first choices for the qualities of the desired city future are a healthy environment, a sustainable economy and a fair/just/ethical community (Section 5.4.1). Pearson chi-square tests were conducted using the global survey data ($N = 110$) between the variables of quality and vision. A significant relationship was only found between the first cultural quality and the 2100 vision (Table 5.7). This relationship is discussed by

presenting its cross tabulation before investigating any tendencies using the method for the environmental and economic qualities of global city futures.

In regard to community qualities, the cross tabulation (Figure 5.25) shows that the incidence of a "Fair/Just/Ethical community" quality related most to the *Green/Eco City* vision. The survey respondents' hope for "futures-orientated wisdom" within the community was also associated the most with the *Green/Eco City* vision, and secondly with the *Gaian City* vision. The hope for a "just" community increases in importance across the visionary scale from *Techno City* to *Green/Eco City* but drops for *Gaian City*.

In regard to the environmental and economic qualities hoped for within global 2100 visions, the cross tabulations (Figures 5.26 and 5.27) show similar patterns as the local survey results. The respondents' hope for a "healthy" environment is the highest preference for all visions except for *Techno City*. The preferences for a "healthy" and "diverse" environment likewise increase across the visionary scale from *Techno City* to *Green/Eco City*, except for *Gaian City* (Figure 5.26). The hope for a "sustainable" economy is the highest preference across all visions and also increases in importance across the visionary scale, except for *Gaian City* (Figure 5.27).

Finally, contrary to expectations, the consistent drop in relative importance of the primary qualities of the future (healthy environment, just community and sustainable economy) for the *Gaian City* remains an unexplained anomaly. It is possible that this 2100 vision was perceived by respondents as an utopian outlier (that thus could not be realistically attained), but this does not sufficiently explain this anomaly.
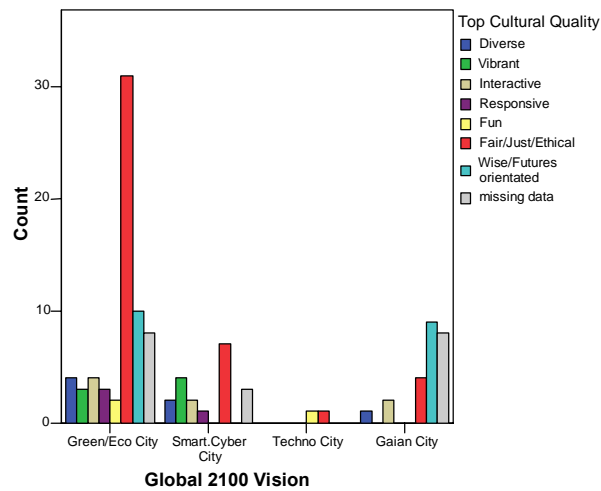
Figure 5.25: Global Survey – Cross Tabulations 2100 Vision*Cultural Qualities
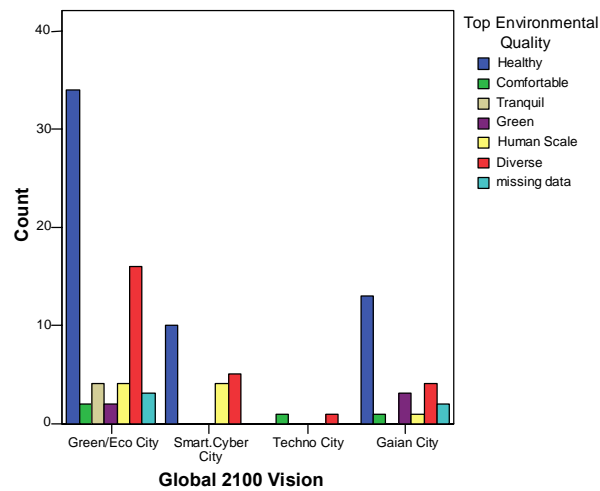
Figure 5.26: Global Survey – Cross Tabulations 2100 Vision*Enviro' Qualities
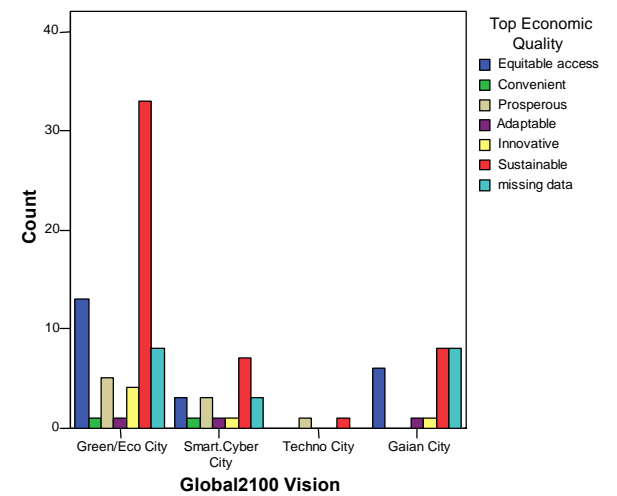
Figure 5.27: Global Survey – Cross Tabulations 2100 Vision*Econo' Qualities

5.4.2.3 Local and Global results compared

Research proposition A suggests that relationships may exist between 2100 vision and demographic parameters. The analyses offer two relevant findings. Firstly, the local and global survey data did not show a significant relationship between the gender or age of the respondents and their preferred 2100 vision. Secondly, there was a significant relationship in the local sample between respondents' current lifestyle place of residence and their 2100 vision. The rationale for this finding presented here relates participants' deeper fears and hopes about sense of place and the possibility of this place identity changing around them. However, this remains speculation as it cannot be substantiated using the survey data. Further research is required to examine the relationships between urban/city vision for the future and current lifestyle choice of residence, its sense of place and fears about its future quality.

The local data provides no evidence to support research proposition B, that city visions are dependent on worldviews and cultural paradigms. However, the global sample (even with its limitations) suggests otherwise. The global survey partially tested the CCM to examine the dynamics of social change on city visions. The evidence to support this relationship is discussed in the next section (Section 5.5).

The local and global survey data provides support for research proposition C, which states that preferred city visions are dependent on the method of futures questioning. Considering both survey samples, it is clear that the levels of literacy/awareness raising capacities that are offered by the different methods of participant questioning may influence the choice of preferred 2100 vision.

1. The visioning workshops comprehensively presented information that the degree of diffusion of sustainable practices within the region is a driver of the range of future scenarios. Scenarios were also described verbally, visually and by written attributes, with the opportunity for group discussion and reflection. As a result, visioning workshops tended to raise participants' awareness to choose the most sustainable 2100 vision, being *BioCity*, isomorphic to *Gaian City*.

2. The local self-completion survey method, with its visual and written depiction of the scenarios, also tended to raise the participant's awareness to choose more sustainable 2100 visions.

3. The global online self-completion survey was more technical and relied on contextual theory (Sorokin's model). It also provided a diagram illustrating the double variable method depicting how the scenarios were developed and how they differ, and narratives of each scenario without visual images. As a result, the most sustainable 2100 vision (*Gaian City*) appears as an outlier possibility – utopian – making the *Green/Eco City* vision more achievable (eutopia), as well as the participants' preferred urban future.

4. The random telephone survey provided the participants with the least opportunity for literacy building and reflection. Scenarios were narrated using a script that described key socio-political attributes, spatial form and driving cultural values. Sustainability as a driving factor for change was not made explicit. This method of auditory reliant learning tended to result in a more even distribution of preferences across the top three most sustainable futures. As sustainability diffusion increased within the narrated scenarios the preference rate dropped respectively from 36.3% (towns), 34.3% (arcologies) to 23% (biocity) (Figure 5.16). The telephone participants' preferred 2100 vision is therefore more conservative and aligned with conserving the past, compared to the other participants' more radical change agenda.

The survey data and analyses therefore suggest that relationships exist between the chosen urban/city vision and the method/type of participant questioning employed with their different literacy and awareness raising capacities. In particular, as the method of envisioning the future engages more human intelligences (intellectual, emotional, spiritual, creative) to provide multiple ways of learning for participants (visual, auditory, kinaesthetic), there is a greater likelihood for literacy and consciousness raising, with a concomitant increase in support for grander visions or radical change agendas.

In regard to research proposition D, analyses of the global and (particularly) the local survey data support the claim that relationships exist between the urban/city vision and the primary qualities of the environment, society and economy hoped for that shape it. The visionary scale of city futures (*Techno City* to *Gaian City*) is logically dependent on the ascendency of key value-latent, desired qualities of life. The results suggest the following dependencies relevant to the thesis argument that sustainable city futures are reliant on human consciousness development.

1. There is an increase in rated importance of environmental health and diversity across the visionary scale from scenario one to four.
2. There is an increase in ratings of importance of social justice and foresight across the visionary scale from scenario one to four.
3. There is an increase in the rated importance of a sustainable economy, and an associated decrease in the importance of material prosperity, across the visionary scale from scenario one to four.

Further to the above, as environmental and social qualities dominate in importance, the *Eco City* and *Gaian City* visions emerge as the most preferred. Where economic qualities of material prosperity dominate, the *Techno City* vision emerges as the most preferred. An integration of environmental, social and economic qualities tends to correlate with the *Smart City* vision.

5.5   Discussion: assess whether the model is testable and what it means for the thesis propositions

In this section the findings of the quantitative analyses are interpreted in terms of their implications for the CCM and the associated thesis propositions when applied to alternative city visions of the future. The discussion is structured around the main research propositions (B, C, and D) and explains the deductions and hypotheses drawn from the analyses to conclude whether or not the CCM is testable using survey methods.

Research proposition B asked whether the surveys illuminated the relations between city visions, worldviews/cultural paradigms and governance. The relationship between governance and city vision may be simply perceived as the agency and means to achieve the desired ends. Examination of the cross tabulation between these two variables within the global sample shows four relational tendencies.

All participants who selected "planetary governance and democracy" exclusively chose *Eco City* as their preferred 2100 urban vision (Figure 5.23). Those who chose this top down form of global governance perhaps see it as the means of achieving ecological

sustainability. Respondents (62%), who preferred the global/local approach to governance and community empowerment also tended to exclusively select the *Eco City* vision (39 cases out of 63). This subgroup may believe that a sustainable city is best achieved through local agency and partnerships, to design solutions most suitable for their local context.

Diverse visions of future governance were desired by those people who chose the *Smart City* as their preferred 2100 urban vision. This is somewhat consistent with the CCM, as an integration of material and spiritual forms of making meaning of life and reality, implied by the *Smart City* vision, requires a multicultural, multi-dimensional approach to decision-making and politics. The CCM anticipates that *Smart City* is governed by a mix of regional regulatory control and participatory subsidiarity. This is reflected in the findings, such that participants who preferred a local form of community governance under a regional trade block (40%) tended to select the *Smart City* vision (4 cases out of 10). As a result, a mix of values is evident in the *Smart City* subgroup (Figure 5.23).

None of those people who chose the *Techno City* as their preferred 2100 urban vision hoped for planetary governance and democracy, nor local community governance under trade blocks. This is consistent with the CCM, as the *Techno City* is considered to be the future product of the status quo or business as usual forms of governance. One person in the *Techno City* subgroup appears to be an outlier, as they chose a planetary democracy with local community governance (Figure 5.23).

Of those people who chose *Gaian City* as their preferred 2100 urban vision, 54% chose the option of planetary democracy with local community governance (13 cases out of 24). This is consistent with the CCM's expectation. Those hoping for a meaningful (*ideational*) city future would logically also hope for the transformation of the current system of Nation State Sovereignties to a more integrated global/local form of community empowerment.

The wider relational dynamics incorporating all three variables – worldviews, city visions and governance – are considered next, using the survey results in addition to referring back to the expectations set up by the CCM. The city visions are discussed in descending order of preference, namely *Green/Eco City*, *Gaian City*, *Smart City* and *Techno City*.

The CCM anticipates that the integrated-*ideational* Green/*Eco City* is manifested by a tripartite partnership of Hierarchists, Egalitarians and Individualists. The global sample supports this, as all three social groups and their worldviews are found in conjunction with the *Green/Eco City* vision subgroup (Figures 5.19 and 5.20).

Of those people who chose the *ideational Gaian City* vision, most (91.7%) were missing their worldview preference, and therefore the dominant social group cannot be speculated. Of the available cases in this vision category, one Egalitarian and one Individualist were found. The CCM anticipates that Egalitarians ought to manifest the *Gaian City* vision, but this remains contestable. Of those people who chose the integrated *Smart City* vision, most (78.9%) were also missing their worldview preference, however 15.8% indicated they were Hierarchists and 5.3% indicated they were Egalitarians. This pattern is consistent with the CCM's expectation that Hierarchists manifest the *Smart City* vision in partnership with Egalitarians. Of those people who chose the materialistic *Techno City* vision, all (2 cases) were missing their worldview preference, and therefore the dominant social group's worldview cannot be speculated from the sample. Due to the respondents' low preference for the *Techno City* vision, the sample size of this subgroup would have been too small to test or infer relationships with their defining worldviews. The CCM expects that the *Techno City* vision is manifested by Individualists but this remains contestable.

The following five relational tendencies are also consistent with the thesis's CCM. The first is that no self-selected Egalitarians chose the materialistic *Techno City* vision, and as expected, most self-selected Egalitarians (8 out of 9) chose the option of planetary democracy with local community governance, whilst the sole remainder chose planetary democracy and governance as their preferred system of governance in 2100. The second tendency is that most self-selected Hierarchists (60%, 3 out of 5), who tend to favour strong forms of control/governance, chose the integrated *Smart City* vision, with the remaining 40% (2 out of 5) preferring the integrated-*ideational* Green/*Eco City* vision with its outcome focussed partnership approach. As expected, the Hierarchists chose systems of governance for 2100 that integrated in some form, global and local concerns/demands. Of the self-selected Hierarchists 60% (3 out of 5) chose "Local

community governance aligned under world (region) trade blocks", whilst the remainder chose "Planetary Democracy with local community governance".

The third tendency revealed by the results is that no respondents stated that they perceived themselves as Fatalists. One explanation for this result, using Thompson's SC-V theory, is (consistent with the CCM's assumption) that Fatalists would not see the value in completing the survey or imagining their preferred future, as control would be beyond their influence. Another explanation is that the valid data were too few to reflect this component. The fourth tendency is that no respondents stated that they perceived themselves as Hermits. Similar to Fatalists, this is largely consistent with their expected trait of not engaging within society, let alone with the survey instrument. However, the CCM presented in this thesis speculates that those Hermit respondents would also tend to choose the *ideational Gaian City* vision. This theory could not be tested.

A fifth finding is the relationships between worldview/cultural perspective and governance that may be tenuously drawn from the global survey's cross tabulation analyses. These are as follows. (1) Egalitarians tend towards participatory forms of governance (e.g., *Green-Eco City* where the context of both strong governance and markets requires global/local partnerships and shared goals). (2) Hierarchists tend towards top-down regulatory forms of governance (e.g., *Smart City* where the market is directed towards sustainability through regulation and monitoring). The third relationship not substantiated nor discounted by the survey analysis is that Individualists tend towards less controlling forms of governance (e.g., *Techno City* where the market dominates over collective control).

Despite the technical difficulties with the online global survey, the limited data collected suggests that proposition B may explain the cultural dynamics of envisioning city futures. Relations between the urban/city visions, forms of governance and cultural paradigms or worldviews are possible, and perhaps these mutual relationships are self-fulfilling. The global survey as a case study demonstrates that it is possible to assess the validity of the CCM using quantitative survey methods, subject to the following three parameters. Firstly, the sample size needs to be larger. About 500 valid cases would ensure statistically testable subgroups based on vision category. Secondly, the sample needs to more closely represent the world urban population by region (chi-square one sample test

for goodness of fit for the variable world region). To achieve this, the internet may not be the appropriate means of data collection, given that significant urban populations within developing regions of the world are disconnected from the internet. Thirdly, further psychographic questions need to be developed to elicit worldviews/cultural perspectives using both Sorokin's model and SC-V theory to allow relationship testing between them, and hence assessment of the validity of the CCM.

The local survey findings relevant to research proposition C demonstrated that city visions are dependent on the method of futures questioning. This relationship is critical to the success of actioning cultural and urban change towards sustainable city futures. The local case study suggests that the greater the investment in raising the literacy and awareness of participants about the qualities of the alternative city futures scenarios, the more likely the respondents are to choose sustainable visions and change agendas. The implication for subsequent survey designs is that local community-based workshops are probably the most effective means of envisioning urban futures and building shared policy actions. To satisfy the research objective of validating the CMM, a well constructed hardcopy survey instrument distributed through regional networks would suffice, as compared with intensive workshops.

In terms of research proposition D, both the local and global samples revealed that it is possible to quantitatively assess the desired environmental, community and economic qualities of urban futures to cross-validate the preferred vision. This point does not have significant implications for the proposed CCM, which focuses on the relations between city visions, worldviews and abstract social solidarities.

5.6 Conclusion

This chapter developed five glo-cal city scenarios (*Collapse, Techno City, Smart City, Eco-city* and *Gaian City*) and these excluding the *Collapse* scenario, explored alternative city futures and the relationships between these and deeper cultural change dynamics as proposed in the CCM. The CCM's propositions sought to explain the relationships between changing cultural paradigms and emerging city futures (Table 5.2). From this,

the link between the surveys and the two research objectives and four research questions were clarified, before justifying the survey design and methods.

The local survey design and data analyses focussed on research questions addressing the relationship between visions of the future city and demographic relationships, method of questioning and qualities of the future. The global survey design and data analyses focussed on these research questions and in addition investigated relationships between city visions and cultural paradigms.

It was outside the scope of the current research to empirically justify the reasons for the significant relationships between variables, as found in the local or global survey data. The survey results generally support the following research propositions: (A) that city visions are not dependent on demographic factors such as age or gender, but may be influenced by locality, its place identity and contextual forces of urban change; (C) that city visions are dependent on the method of futures questioning; and (D) that city visions are influenced by endogenous values-based environmental, community and economic qualities that shape them. The global survey data provided some evidence (relational tendencies) that are consistent with the expectations of the CCM, but research proposition (B) remains contestable, namely that city visions are dependent on Sorokin's cultural paradigms and SC-V theory's worldviews by social solidarity.

This chapter's survey analyses reveal that the local and global samples are each missing different data that is needed to rigorously test the validity of the CCM's propositions. However, the analyses did suggest that it is possible to test the CCM if the suggested improvements to the survey instrument and data collection methods are made. Therefore, further survey research is not only technically feasible, but is required to test the relationships between urban/city visions of human habitation and worldview/cultural paradigms, and urban/city visions of human habitation and preferred governance models.

The aim of such a study remains the same, to more rigorously examine the CCM's claims that: (1) Individualists enable the *Techno City*; (2) Hierarchists and Egalitarians enable the *Smart City*; (3) Hierarchists in partnership with Egalitarians and Individualists enable the *Eco City*; (4) Egalitarians and Hermits enable the spiritual *Gaian City*; and (5) Fatalists and Individualists enable the *Collapse Scenario*.

In conclusion, this chapter satisfied research objective three by exploring the possibility of testing the cultural change model. The results revealed that it is plausible to validate or discount its theoretical propositions using quantitative survey methods. Due to the limitations of the local and global samples, not all the CCM's propositions were comprehensively investigated. As such, the research considers another method that may critically analyse the relations between city visions and worldviews/cultural paradigms in the context of the sustainability revolution. The next chapter uses CLA to deconstruct the glo-cal city futures scenarios and the cultural dynamics proposed by the CCM.

6   City futures scenarios, their cultural paradigms, archetypes and myths
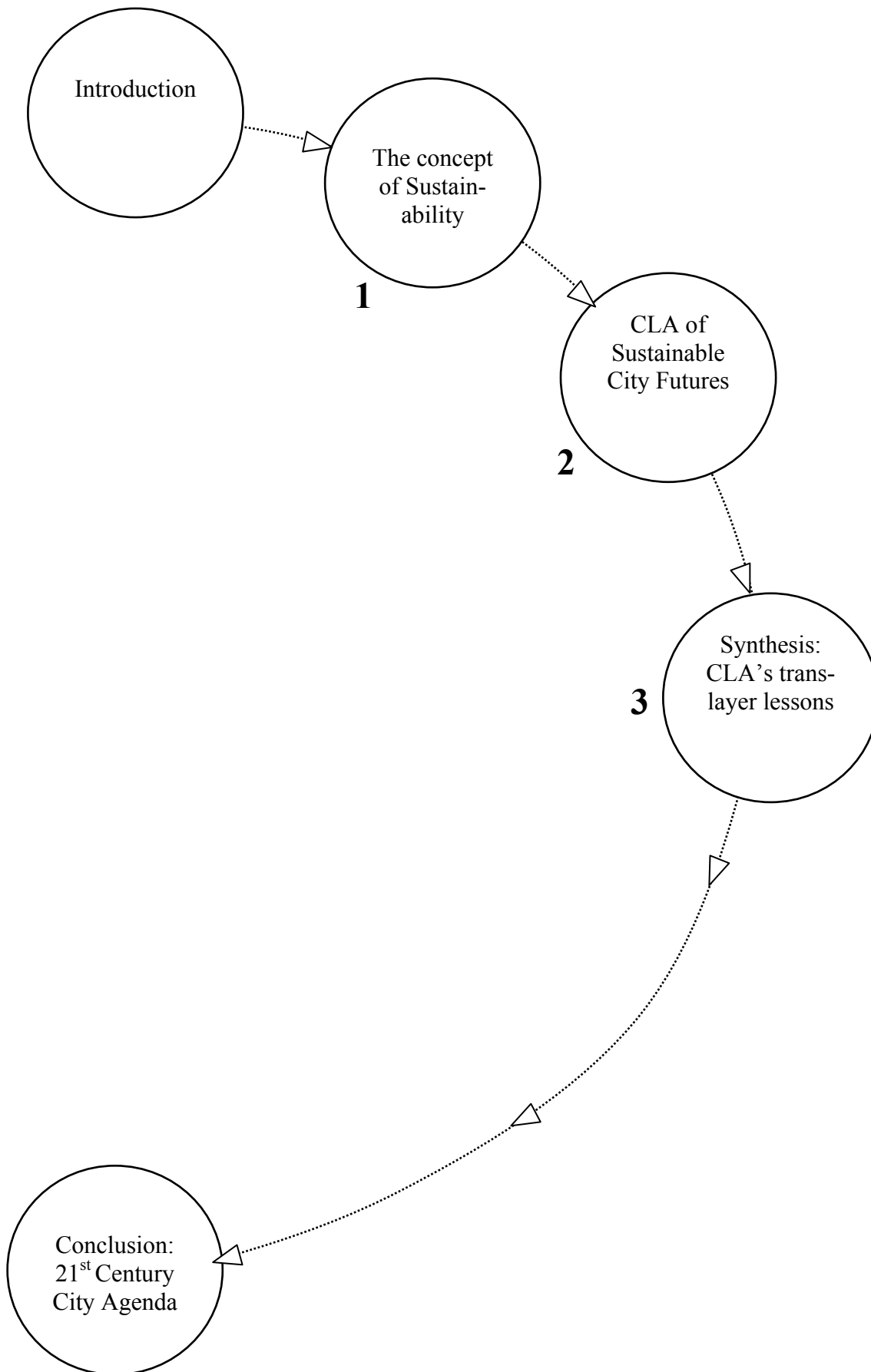
Figure (6.1): Chapter Six Roadmap

6.1 Introduction

In Chapter One, the urban planning objective for sustainable city futures was shown to be a significant urban driver of change as well as counter the significant urban weights against change (Section 1.2.1.2). It is also inherently multi-dimensional, as it affects ecological, social, economic and governance spheres of activity. As a significant driver of the future, the degree of diffusion of sustainability and sustainable technologies within society generates alternative scenarios for the future city, and is associated differently with the four glo-cal scenarios generated in the preceding chapter (Section 5.2).

The last chapter demonstrated that it is possible to empirically test the CCM's proposed relationships between city visions and worldviews/cultural paradigms. However, the limitations of the survey methods used in the current research leave most of the propositions contestable. By using Causal Layered Analysis (CLA), this chapter seeks to understand the multiple levels of reality of sustainable glo-cal city futures. In this discursive process, the relations between city visions (as described by the glo-cal city futures scenarios) and the cultural dynamics proposed by the CCM can be critically deconstructed to satisfy the primary research objective. The discursive analysis in this chapter is presented in three parts (Figure 6.1).

Firstly, the concept of sustainability is clarified. Based on a world-centric[15] view (Wilber, 2000a: 22, 126), the sustainable development of cities needs to be implemented with new thinking, facilitating the progression of its citizens through the various cultural paradigms that limit or influence human behaviours. This social change requires intervention at all levels of the city, from citizens' collective images of the future and worldviews, to their ways of life and the resulting social system's products and processes. Currently, however, sustainable development is practiced within a milieu of competing technical and cultural paradigms, and this struggle is consuming the focus, rather than achieving tangible outcomes. Moreover, systemic contradictions continue to work against the realisation of sustainable urban outcomes. Before proceeding with the analysis, the TNS sustainability framework will be defined to enable the conceptualisation of the urban contradictions that arise when applied to the city.

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[15] World-centric awareness means that the mature adult meets the world on its own terms, as an individuated self in a community of other individuated selves operating by mutual recognition and respect. This level of consciousness espouses 'all of us' in unity in diversity.

Secondly, CLA is used to probe through the various cultural paradigms acting as frames of reference and the systemic levels of reality, in order to seek causal linkages and contradictions between them. CLA posits the systemic urban contradictions that work against the achievement of sustainability at each level of urban reality: (1) discursive litanies; (2) lifeworld's (systemic) social practices; (3) worldviews; and (4) collective myth/metaphors. Johan Galtung uses contradictions focussed on unsatisfied human needs and how they are resolved to generate alternative futures[16]. Using this approach, the resolution of urban contradictions may well signpost the journey towards the sustainable city.

Thirdly, by using the alternative city future scenarios generated in the preceding chapter, this section shows that the contradictions within 'sustainability cities' are interrelated at each level of reality, and how these may be resolved. The implication for cities is that the concept and achievement of sustainability is contingent on the diffusion of new developmental levels of consciousness within cultures.

Finally, a critique of the present urban system is presented and its four major systemic contradictions are posited, to make clear the critical resolutions needed to advance the revolution towards sustainable cities. As a result, a 21st Century City Policy Agenda is enunciated.

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[16] Presentation to futurists and postgraduate students at Sohail Inayatullah's house, 14 April 2003. Galtung defines a contradiction as an objective systemic incompatibility that is not solvable like a problem, but demands change of the system. He outlines six phases of the natural history of contradictions, being: (1) Consciousness formation as the contradiction forces awareness amongst its citizens; (2) Articulation as awareness is promulgated by innovators breaking through barriers of thought and speech police; (3) Mobilisation as change agents rally around the words of the innovators, themselves becoming leaders to mobilise the mainstreamers; (4) Confrontation, preferably non-violent, Ghandian and pedagogic struggle for systemic change; (5) Detachment as the system (establishment) releases itself from its limiting paradigms to accept transformation; and (6) Recoupling as the system transcends former contradictions to deliver desired ways of life. Galtung's framework for the "systemic synchronised accumulation of contradictions" within a society is applicable to the study of the evolution of cities, as the city is a system (holon) within society and civilisation.

6.2   Sustainability

This section clarifies the concept of sustainability so that its use within the Causal Layered Analysis proceeds unambiguously. Sustainability, like democracy, is a concept that has objective as well as subjective meaning. A plastic product that is perceived by one person as being sustainable may be considered as only economically viable by another person, whilst empirically it is ecologically toxic and not biodegradable for a thousand years. Examining the *Litany* of the urban problem through CLA, reveals this spectrum of understanding.

The advent of the sustainability revolution as an urban driver for alternative urban futures is discussed in two parts. Firstly, the rise of the ecological paradigm is presented, prior to a description of the TNS sustainable development framework and its relevant application to cities.

Firstly, the worldwide grassroots environmental movement – *deep ecology* – with its ecological consciousness, emerged in the early 1970s through the philosophical thought of Arne Naess between 'shallow' and 'deep' ecology (Capra, 1996: 7). Capra reiterates that:

> "Shallow ecology is anthropocentric, or human centred. It views humans as above or outside nature, as the source of all value, and ascribes only instrumental, or 'use' value to nature. Deep ecology does not separate humans – or anything else – from the natural environment. It does see the world not as a collection of isolated objects but as a network of phenomena that are fundamentally interconnected and interdependent. Deep ecology recognises the intrinsic value of all living beings and views humans as just one particular strand in the web of life" (Capra, 1996: 7).

Capra's (1996) argument cites the twin roles of social ecology and eco-feminism. Social economy is the study of cultural characteristics and patterns of social organisation that have brought about the current ecological crisis. Eco-feminism is the study of the patriarchal domination of women by men as the prototype of all domination and exploitation in the various hierarchical, militaristic, capitalist, industrialist and ecological forms. Capra states that both are important schools of thought alongside *deep ecology* that require integration into a coherent ecological vision of reality, grounded in the ecological paradigm. Capra also explains that the required values/ethics shift from anthropocentric to

ecocentric is essential to transform behaviour, but occurs naturally if born out of an expanding awareness of *deep ecology*.

> "What this implies is that the connection between an ecological perception of the world and corresponding behaviour is not a logical but a *psychological* connection. [Fox, 1990: 246-7] Logic does not lead us from the fact that we are an integral part of the web of life to certain norms of how we should live. However, if we have deep ecological awareness, or experience, of being part of the web of life, then we *will* (as opposed to *should*) be inclined to care for all of living nature. Indeed, we can scarcely refrain from responding in this way" (Capra, 1996: 12).

From this ecological worldview emerged the concept of sustainable development and its various advocates. Eventually the connection was made between cities as ecological, social, economic, and political/ethical forms with the sustainability movement. The quest for the sustainable city began and continues to grow (Clark, 1996; Mayor and Binde, 2001; Castells, [2000], 2002: 402 cites Capra). The key to the sustainable development of cities lies in the transformation of human minds and social institutions, not the environment. Echoing Arne Naess's argument (in Capra, 1996) for the ecological expansion of self, Ress (1998) concludes:

> "we do not have an ecological crisis, the ecosphere has a human crisis. Our 'story' about our place in the scheme of things has somehow gone awry in the industrial age. For sustainable development, therefore, the need is more appropriate philosophy than for appropriate technology. If we tend to ourselves, nature will take care of itself" (Rees, 1998 in Hamm and Muttagi, 1998: 39).

Secondly, various models of sustainable development have been formulated in response to the concept of sustainability as defined by the Brundtland Commission (1987). At the systems or empirical level:

> "Sustainability happens when we as Society create long term stable physical relationships with the "whole" environment within which we reside. […] Sustainability can be achieved by the design and development of products, services and infrastructure that balance Economic Prosperity, Environmental Health and Social Equity using systems thinking" (Robert, in TNSEA, 2001: 10).

These three dimensions are represented by the triple bottom line approach to monitoring and reporting sustainability measures. The Bruntland Commission (1987) defined the

objective of Sustainable Development, being "to meet the needs of the present without compromising the ability of future generations to meet their own needs" (Bruntland, 1987). Theoretically this is a dynamic process, which enables all people to realise their full potential and to improve their socio-cultural and economic quality of life in ways that simultaneously protect and enhance life's ecological support systems, and thus achieves sustainability. This is the essential objective of the Local Agenda 21, adopted at the 1992 United Nations Conference on Environment and Development. The International Institute of Sustainable Development (IISD) includes a fourth sphere into the formulation, being 'governance', which the IISD argue is critical in implementing sustainability.

The Natural Step (TNS) developed by Karl-Henrik Robert and supported by the international scientific community, provides a framework to achieve sustainability through the application of its 'First Order Principles' and 'four system conditions'.

Simply put, the four system conditions relate to:

1. What we *take;*
2. What we *make;*
3. What we *maintain*; and
4. Are we *fair*?

In a sustainable society, the application of the four system conditions ensures that nature is not subject to systematically increasing:

1. concentrations of substances extracted from the Earth's crust;
2. concentrations of substances produced by society;
3. degradation by physical means; and
4. in that society human needs are met worldwide.

This model has been applied within organisations and building projects to realise sustainability objectives (Robert, 2002). The effectiveness of the TNS model to engage towns and communities in sustainable practices, particularly in Swedish cities and towns, has also been studied (James and Lahti, 2004). These Swedish eco-municipalities attribute their implementation success to two characteristics, "an across-the-board systems approach and a bottom-up participatory approach" (2004: xvii) to community decision-making and action.

This means that the four TNS system conditions can be objectively used within CLA's systems level of reality. The urban contradictions that exist can thus be located, focusing around what we take, make and maintain for cities, and whether we are being fair in these ecological, social and economic transactions by meeting human needs.

6.2.1 Summary of urban dilemmas and contradictions effecting city futures

Collapse is inevitable within a system of expanding unresolved tensions of ecological, social, economic and spiritual contradictions. The *Collapse Scenario* is a part of the urban discourse, mainly from the ecological and social perspective. Indeed, some researchers view urbanisation and the city as a driver of this collapse, if its production processes are not transformed to recapture and recycle technical and biological resources. In other words, cities will collapse if they do not "remake the way they make things" (McDonough and Braungart, 2002).

The major glo-cal urban contradictions that emerge from the urban planning discourse are:

At the material reality (physis)

- Industrialisation of developing regions versus quality of life in developed regions. The current inequitable economic state being disrupted is that 20% of the world's population use 80% of the resources (UN- Habitat, 1996b, 2004).
- City funding for cars, versus city funding for people or mobility systems designed to maximise exchanges and minimise travel/movement (Engwicht, 1992; Newman and Kenworthy, 1999).
- Formal economy versus Informal economy (Hall and Pfeiffer, 2000).

At the biological/ecological reality (bios)

- Materialism (growth advocates) versus *deep ecology* (conserver advocates) (Dator, 1978; Capra, 1996).
- Rational, reductionist planning/design for order versus irrational planning/design for conflict, complexity and spontaneity (Engwicht, 1992; Sandercock, 1998).

- Expectation for urban health versus the actuality of urban disease/toxicity (UN-Habitat, 1996b; Hall and Pfeiffer, 2000; Tegart and Jewell, 2001).
- In regard to the ecological form and health of settlement patterns, urban sprawl versus urban consolidation (Calthorpe, 1993; Dekay and O'Brien 2001; Wheeler, [1998], 2000).

At the psychosocial reality (nous)

- Power contradictions within the network society, where decisions are made in the space of flows whilst people live in the space of places (virtual versus geographic) (Castells, 1996 in Susser, 2002).
- Cultural identity struggles typified by universal cultural imperialism versus cultural diversity (Zukin, 1995; Sandercock, 1998).
- Social polarisation/segregation within cities versus the renewal of an urban/social contract and social capital (Sassen, [1994] 2000; Castells [1999] 2002; Leyden, 2003).
- Active civil society versus a passive serviced society (Hall and Pfeiffer, 2000; Mayor and Binde, 2001).
- Inter-vision and epistemic contradictions between stakeholders (Marvin, 2000; Inayatullah, 2002a; Sandercock, 1998). For example, male gender biased design versus equitable intercultural cities.
- Materialism (growth advocates) versus *deep ecology* (conserver advocates) (Dator, 1978; Capra, 1996).
- Equitable urban opportunities versus urban poverty (Hall and Pfeiffer, 2000; UN-Habitat, 2004).

At the metaphysical reality (theos)

- City transformation by technological change versus city transformation by changing values and consciousness (Alexander, 2004; Daffara, 2004b).

Of course, urban dilemmas are multidimensional phenomena. For example, the paradigm of materialism may dominate the culture of a city at the psychosocial plane, but it also manifests consequences at the material (what we make), ecological (is it healthy) and spiritual (adding to experienced meaning) planes of life. The above positioning of contradictions into levels of reality is neither a comfortable fit nor definitive. Many overlaps are possible and ought to be considered by readers. The important message is

that urban contradictions tend to dominate particular discourses and levels of reality within that discourse, denying the complexity and interrelatedness of life in cities.

One meta-way forward emerges from a socio-cultural perspective, through the application of CLA. Cities need to transform themselves to resolve the urban contradictions or problems that exist within their quality of life systems. Intervention is required at the systems, worldview/cultural values and myth/metaphor layers of reality. These interventions will create a new set of problems in the future, setting up the need for continuous change. The strategic policy interventions for each layer of reality will be discussed next, and they provide the four, macro pillars for the 21st century City Agenda.

6.3 CLA of global urbanisation and sustainability

CLA is used here as the futures tool to develop the epistemology of sustainable city futures. The most significant urban sustainability contradictions are selected within the *litany*, *systemic*, *discourse/worldview* and *myth/metaphor* levels of urban reality or perception. Each of these layers is discussed in turn. The objectives of the CLA are to: (1) deconstruct the dominant official discourse about sustainable cities, revealing which future is privileged; (2) return to the genealogy of city visions and postulate which technical paradigms and city archetypes are dominating the discourse; (3) critique and distance the present from the alternative scenarios; (4) consider alternative futures and speculate which vision of the future is used to maintain or challenge the present; and (5) reorder knowledge about sustainable city futures, revealing who may be marginalised from the discourse and how current orderings may be reframed. Basically, this process seeks to understand the obstacles to transformation towards sustainable cities and to reconstruct resolutions towards systemic change.

6.3.1 The Litany level analysis about cities

At current rates of global urbanisation, the number of urban dwellers will equal the number of rural dwellers in the world in 2007 (UNPD, 2001: 6). How this demographic shift from agrarian to urban ways of life is managed may be the most significant factor in determining whether global life conditions remain sustainable.

As explained previously (Section 4.5.3), today's dominant Western city paradigm and image is the urban sprawl of the *Edge City*, as described by Joel Garreau (1992), or the technoburbs, as described by Robert Fishman ([1987] 2000). The growth of the suburbs has extended into what is now referred to as the exurbs. This phenomenon is currently perceived to be unsustainable development, a problem that now requires intervention. If the developing countries of the world adopt Western urbanism's ecological footprint, the world may indeed overshoot the Earth's ecological limits, and collapse.

The *litany* is the official public description of the issue and is encapsulated for urban sustainability by the following piece in National Geographic: "As new home seekers look for breathing room in the burbs and the lands beyond, the dream has been displaced by all too familiar worlds — places plagued by traffic jams, high taxes and pollution: the irony of Urban Sprawl" (Mitchell, 2001: 49).

The explicit urban contradiction at the *litany* level is that the promised land of suburbia, offering landscape amenity and liveability away from the city core, is in fact delivering social isolation, unaffordable infrastructure costs and environmental degradation. The Western dream has been publicly shattered and exposed, and yet the urban system still rolls out the marketable settlement pattern – sprawl versus higher density consolidation. The main actors behind this *litany* defending the status quo are the supporters of economic growth, typically the urban development industry and political leaders/advocates of the free market within local government. The development, construction and property services industries are a significant employment sector within Western economies and, as such, are 'sacred cows' when unemployment also exists in these economies. The main actors lobbying against urban sprawl are environmental and rural activists who advocate protectionist policies such as urban containment boundaries. Here lies the *litany* of the moderate alternative to sprawl, known as 'growth management' (for example, Peter Calthorpe's (1993) 'New Urbanism'). The balance sought here is still framed by the paradigm for economic growth. A more revolutionary *litany* exists which calls for empirically measured 'sustainable development' advocated by ecologists, urban sociologists, TNS and doomsayers (for example, Paolo Soleri's (1969) *Arcology*, or Richard Register's (1987) *Eco-city*). Beyond the revolutionary lies the *litany* of the visionary, and here solutions (utopian habitats) are offered that rely on technological competency mastered by humanistic wisdom (for example, The *Venus Project's* floating

ocean cities or Buckminster Fuller's floating geodesic sky cities). Transforming the ways in which cities make themselves and their products and services are critical to realise eco-efficiency and a shift away from 'doing less bad' (McDonough and Braungart, 2002).

6.3.2   The Systems level analysis about cities

Returning to the *litany* of the major urban contradiction of urban sprawl and its quality of life contradictions begs the following question. Is it possible to develop sustainable urban sprawl? For some, this question would seem to be a tautology, as the environmental sciences discourse at the *systems* level has shown that the current form of urban sprawl is ecologically unsustainable. The purpose of the question is to critique the *system* contradictions that result from the urban sprawl. If it were possible to develop sustainable urban sprawl, then the four *systems* conditions of TNS would have to be satisfied at the systemic realm below.

> **System Condition 1** focuses on "What we Take" from Nature. Its application means substituting certain minerals that are scarce in nature with others that are more abundant, using all mined materials efficiently, and systematically reducing dependence on fossil fuels (oil, gas, coal) and heavy metals such as cadmium and lead (TNSEIA, 2001: 30).

The urban contradiction that exists in this condition is that cities (and urban cultures) are more resource consumptive than rural cultures, and are major consumers of non-renewable energy sources (fossil and nuclear fuels). For example, the ecological footprint[17] of Australia (one of the most developed countries in Oceania with approximately 74.1% of the population living in urban areas) is 9.4 hectares per person, compared to Bangladesh (one of the least developed countries in Asia with approx 37.5% of the population living in urban areas) at 0.6 hectares per person. Bangladesh's low ecological footprint is linked to its unacceptable poverty. The fourth *system* condition requires equitable environmental management and quality of life. The need to address global development inequities with the consumption of cities, defines the first system contraction that needs resolution, namely how to develop without growth (increasing consumption)?

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[17] The ecological footprint shows how much productive land and water humans occupy to produce all the consumed resources and to take in all their waste. Extracted from the "Redefining Progress" NGO, at http://www.rprogress.org/

System Condition 2 focuses on 'What we Make' within Nature. Its application means systematically substituting certain persistently harmful and unnatural compounds (for example, Dioxins, PCBs, CFCs and HCFCs and PVC) with others that are normally abundant, or break down more easily in nature, and using all substances in the production cycle (TNSEIA, 2001: 31).

The urban contradiction that exists in this condition is that cities are the major producers of entropy (pollution) on the planet, as they are based on closed linear systems of production not open ecological (cyclic) systems. For example, some linear outputs include greenhouse gas emissions from urban systems, materials used for infrastructure/architecture, and the disposable products of urban culture such as fast food plastic toys. The contradiction that needs resolution is, how can cities be built (physically and culturally) without pollution? McDonough and Braungart (2002) in *Cradle to cradle: remaking the way we make things,* describe a means of transforming the world's industrial production system towards eco-efficiency where all products re-enter the system as technical or biological nutrients. "The goal is zero: zero waste, zero emissions, zero ecological footprint" (McDonough and Braungart, 2002: 67). This means the abundant re-integration and re-design of human activity as a part of nature.

System Condition 3 focuses on 'What we Maintain' within Nature. Its application means drawing resources only from well managed eco–systems, systemically pursuing the most productive and efficient use both of those resources and of land, and exercising general caution in all kinds of modification of nature. It embodies best practice environmental management — for example, logging plantation timbers instead of old growth forests, avoiding dams, minimising monoculture agriculture and urban sprawl (TNSEIA, 2001: 31).

The urban contradiction that exists is that modern cities are the antithesis of biodiversity in that they rely on and create monocultures. Water harvesting in Western cities, for instance, is centralised and monopolised, using high impact dams instead of relying on a more diverse system of personal water harvesting methods and grey water recycling. The urban system also influences agricultural methods of production to feed its urban populations. Seventy percent of water consumption in Australia is for agricultural use, to irrigate vast monocultures. The contradiction that needs resolution is, how can urban design enrich biodiversity, society and the economy, and how can cities integrate these systems rather than atomise them?

System Condition 4 focuses on "Are we Fair?" within the system. Its application means using all our resources efficiently, fairly and responsibly, so that the needs of all people on whom we have an impact, and the future needs of people who are not yet born, stand the best chance of being met. (TNSEIA, 2001: 31).

The urban contradiction that exists, is that economic growth within cities does not provide fair distribution of resources. These resources are: (1) quality of life or wellbeing for the basic human needs of survival (shelter, food, clothing); (2) access to personal development opportunities (cultural wealth); (3) freedom of choice; and (4) identity (meaning in life). "The most pressing challenges of our time remain poverty, underdevelopment, environmental degradation and social and economic inequalities within and among countries [and their cities, since they will house the majority of the world's population by 2030]."[18] The contradiction that needs resolution is; how can urbanism and its spatial form create social justice with the equitable provision of housing, let alone liveability, transport and accessibility, and community and cultural development?

The interactive dynamic of the above *system* conditions creates the urban objective reality that shapes ways of life and the quality of experience, modes of production and labour markets. As such, four alternative *system-technical* paradigms are extrapolated from the dynamism, each with a different modus operandi for sustainability.

1. Continued Growth.
2. Smart Growth and Back to the Past.
3. Zero Growth + Triple Bottom Line Development.
4. Civilisational Transformation = (zero growth plus holonic spiral development).

These technical paradigms are used to articulate the character of the systems that make cities, and as such are posited in the CLA at the systems level rather than the worldview level.

The *Continued Growth* paradigm is where the economic reality dominates decision-making and the modernist's industrial mindset believes that 'growth' equates to 'prosperity' or 'development'. For example, the *Continued Growth* paradigm manifests

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[18] Political Declaration, United Nations World Summit on Sustainable Development, Johannesburg, South Africa 26 August–4 September 2002.

the belief that urbanisation and suburbanisation are signs of progress and a booming economy, as the Gross Domestic Product (GDP) is boosted by housing production and sales, which also contributes to GDP. The economic reality continues its dominance into the *Smart Growth* paradigm, but is here tempered by environmental and social management. The objectives of many world cities' urban planning schemes – influenced by the United Nation's 'Agenda 21' programme during the last decade or the emergence of the 'New Urbanism' movement – are synonymous with the *Smart Growth* systems approach. "Smart Growth promotes pedestrian–friendly communities, a mix of housing types, and less dependence on the car" (Mitchell, 2001: 65). *Smart Growth* denounces urban sprawl, and espouses the virtues of master planned communities and towns with higher standards of liveability. The paradigm's focus of 'Traditional Neighbourhood Design' draws on the planning heritage of the 'New Towns' advocated by Ebenezer Howard during the *Garden City* movement of the late 19th century. *Smart Growth* or urban revitalisation movements such as 'The New Urbanism' (Calthorpe, 1995) advocate the creation of community friendly habitats in the form of sustainable urban villages to counter the social plights of urban sprawl. Their strategy is to influence the form of urban development, but neither challenges its assumption of continued growth, nor the dream of the garden home and town.

The technical paradigm shift occurs in the *Zero growth + Development* (Atkisson, 1999: 24–26) systemic frame of reference as ecological, social and economic development operates within zero growth/waste parameters to deliver human wellbeing. The habitat solution offered by this alternative systems paradigm is the transformation of the entire world using the principles of sustainability. Cities are viewed as a renewable spatial form, manifesting a zero–emission society and economy. In Alan Atkisson's *systems* view, civilisation must transform itself toward 'Development without Growth', away from the current course of 'Growth equals Development'. This, in his view, is the greatest challenge of the current generation, and must become humanity's fundamental project for the 21st century. It is the same *systemic-technical* project as McDonough and Braungart's (2002) new global design assignment to create planetary eco-efficiency.

The last *systems* paradigm, *Civilisational Transformation*, represents another developmental leap, where spiritual and cultural wellbeing are integrated with the *Zero growth + Triple Bottom Line Development* technical paradigm. Essentially other bottom

lines are added to the system dynamics, such as transformational governance and spiritual development. This paradigm is still on the fringe, yet is evident amongst today's 'Cultural Creatives'[19] (Ray, 2000 in Marsh, *et al*., 2002: 105–106).

The main active stakeholders at the *systems* level of urbanism are local government planners and policy makers, community and environmental groups and the urban development industry. All urban citizens are critical passive stakeholders as their cumulative practices and habits exponentially affect the sustainability of the city.

6.3.3   The Worldview level analysis about cities

To posit the urban contradictions within the *discourse/worldview* level of reality, this thesis borrows concepts from the field of developmental psychology. The following developmental phases of consciousness, and their accompanying worldviews/frames of reference, are applied within CLA: egocentric, ethnocentric, world-centric and holistic (each is discussed in detail below). This ontology is useful in that it is simple, is supported by empirical studies in psychology and is based on how self-identity influences seeing and relating to the world (worldview). These concepts, in conjunction with planning's epistemologies (Section 2.2) are able to describe the worldview of stakeholders of the city. They thus add to the previous constructs used to position stakeholders such as "ideology, civilisation and episteme" (Inayatullah, 2004: 541). Furthermore, Sorokin's cultural paradigms, combined with Thompson et al's social solidarities, are used to describe the episteme that orders within the boundaries of the knowledge of the stakeholder. This is a higher-definition conceptual tool or more differentiated way of constituting episteme, which is based on how the nature of reality is understood, in comparison with the Western historical approach (Ancient, Pre-modern, Modern, and Postmodern) and advances Inayatullah's (2004) conceptual frameworks in order to be able to be applied in CLA.

The egocentric worldview centres all things on self. It is narcissistic, in that an individual's feelings and morals are heavily centred on their own impulses, physiological

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[19]Cultural Creatives are a cross-generational group of people whose core beliefs are formed by psychology, spiritual meaning in life, art and cultural expression, mastering new knowledge, being socially concerned, honouring women's issues and ecological sustainability.

needs and instinctual discharges to survive. Throughout history the process of city making tended to rely on ethnocentric or socio-centric consciousness amongst its citizens, which transcended egocentric behaviour in order to create the urban-social contract. Arguably, the historic exception to this may be found in the image of the *Imperial City*, founded and built on the singular vision and power of emperors. Cities in economic decline or extreme shock (e.g., because of war or natural disaster) may also provide the conditions that trigger egocentric behaviour, as evidenced either by the lootings in Bagdad during the U.S.A. military campaign to 'liberate' Iraq (2003), or during the aftermath of Hurricane Katrina (2005) in New Orleans. The multi-dimensional production of the city may also be shaped by the dominance or accumulated actions of egocentric behaviour (individualism) within its culture, as evidenced at the *systemic* level, by the effects of consumerism, homecentredness in gated communities, car-based mobility and the decline of the urban-social contract. *Modernist Planning's* epistemology, that framed its knowledge through the heroic, technical rationality of the individual, relates to the egocentric worldview.

The ethnocentric worldview recognises the shift in consciousness that occurs when an individual has the cognitive capacity to understand the role and perspective of 'the other'. This worldview is centred on the group (family, peers, tribe, nation), and typically an individual conforms to the shared view or perspective of that group. Ancient Greek city-states and medieval city-states within Europe operated within an ethnocentric worldview, such that the polis or city as a social group dominated human relations to maximise competitive advantage over other city-states. World cities today, as they compete in a global market and emerging cultural creative economy, easily manifest an ethnocentric worldview. This is evident during the bidding process to host an Olympic Games, or during the civic efforts made to attract iconic development, such as the revitalisation of industrial Bilbao with the Guggenheim Museum. The ethnocentric worldview also has a tendency to foster 'Back to the Past' solutions at the *systemic* level, where the focus is on recreating traditional values and life conditions. In the urban context, examples of 'Back to the Past' strategies include protectionist policies (such as urban growth boundaries), and cultural heritage regulations to moderate changes to the built environment. These are also recognised as *Smart Growth* strategies that relate to the *Equity Planning* model.

World-centric awareness emerges as the myths, conformist values and the ethnocentric biases of one's peer group are subjected to scrutiny for the cause of universal care of all

peoples, justice and fairness. Instead of treating the world and others as an extension of self, the mature adult of world-centric awareness, "meets the world on its own terms, as an individuated self in a community of other individuated selves operating by mutual recognition and respect" (Wilber, 2000a: 22). Ecological sustainability enters the urban agenda at the *systemic* level of reality when the world-centric frame of reference is being used. Sustainability would not survive as a concept without world-centrism as a lens through which the world is interpreted. Both share the aims of intergenerational equity and social justice. The image of the *Eco City* relates to world-centrism's global-local perspective and Planning's *Social learning and communicative action* model/episteme. For example, the city of Freiburg in Germany intends to be an *Eco City* and is intentionally establishing itself as a world-learning centre for sustainable development, being the home of the International Centre for Local Environmental Initiatives (ICLEI), which produces a database on environmental urban best practices (Landry, 2000: 146).

The holistic worldview is similar to world-centrism's focus on all peoples, but has an added dimension for the care of all living entities as integrated systems. Through the holistic worldview, self is part of a larger, conscious, spiritual whole that also serves self (Beck and Cowan, 1996: 287–9). Complexity theory, where the behaviour of any element in a universe immediately impacts all the others, is respected over mysticism. Through the holistic worldview, ecological sustainability is the central concept of the 21st century, necessary to transform urban cultures and development. The holistic worldview and its transformation project have also shaped the *Radical Planning model's* episteme and the role of the planner as change agent.

The urban contradiction that exists at this *discourse* level of reality is that sustainability may only be understood and affected through world-centric and holistic worldviews and thinking, but most of the world's population is estimated to be thinking and living within the ethnocentric worldview (Beck and Cowan, 1996: 300; Wilber, 2000a: 118). For example, the Agenda 21 ideology, 'act locally, think globally', just doesn't make sense to many people without prior education or best practice models, or in the context of a refugee camp in Rwanda where egocentric survival is the main agenda.

The main active stakeholders at the *discourse/worldview* level of urbanism are environmental/social movements, sustainability innovators, futurists, visionaries and the

'Cultural Creatives'. Once again the discussion through CLA reveals that the masses in the milieu are pivotal in any transformation process towards sustainability, as this concept is understood and appreciated by the world-centric and holistic worldviews.

6.3.4   The Myth/Metaphor level analysis about cities

The final causal layer or perspective in CLA is the *myth/metaphor* level. Inayatullah (2004: 4) cites Galtung's civilisation-trauma-myth syndrome that seeks to explain the actions and identity formation of nations, in order to emphasise the relevance of myths in giving meaning to the project of changing or maintaining the external world (life conditions). From a cultural perspective, myths do not die, but are either dormant in consciousness or re-invented to remain meaningful in the historical context of life conditions. If this is true, each of the urban conditions at the *litany*, *systems* and *worldview* perspectives described above has an underpinning myth/metaphor that relates them to a specific image of the future and to the broader process of making sense of reality (in society and the city).

In this section, CLA proposes the causal relationships between each system paradigm and their reciprocal empowering myth/metaphor (Table 6.1). Each mutual relation is explained using the *myth/metaphor* as the header: (1) Progenitor Myth and Cockaygne; (2) Arcadia and *Garden City*; (3) Spaceship Earth; and (4) Gaia.

Table 6.1: System paradigms and their myth/metaphors	
System Paradigms	**Myth/Metaphor**
Continued Growth	Progenitor Myth & Cockaygne
Smart Growth	Arcadia & Garden City
Sustainable Development (Zero Growth + Transformation)	Spaceship Earth
Civilisational Transformation	Gaia

6.3.4.1 Progenitor Myth and Land of Cockaygne

The Land of Cockaygne (Hollis III, 1998: 40-2) is a Western pagan folk legend of a land of peace, plenty and placation. It is a fantasy world describing an ancient tradition about a golden age of happiness, where human needs are effortlessly satisfied through strictly materialistic/sensual means. Hollis states that this myth offered an escapist dream world for selfdom during medieval Europe. Variations include the legendary Celtic Island of Earthly Paradise, and the Greek myth of Elysium[20]. Cockaygne epitomises egocentrism or narcissism – the material fulfilment of self. Using the CCM, Cockaygne is a culture of Individualists who believe in the myth that nature is a skill-controlled cornucopia, and that human nature is stable. They are fundamentally self-seeking within a *sensate* cultural paradigm. Related to Cockaygne – in other than the spiritual dimension – are the Judaeo-Christian legend of the Garden of Eden and the prophesy of the coming New Jerusalem. The 'Progenitor Myth' is a concept proposed to describe the underpinning belief that humans, being the progeny of Adam and Eve, have the divine right to "multiply and subdue the Earth" (*Genesis*, 1:28), thus reordering nature. It is a process of dominion, where humans, if they obey Yahweh's Law, will enjoy abundant control of Earth's resources. Old Testament stewardship is ordained to the 'chosen people' and not shared equitably, yet the New Testament's age of grace and evangelism allows a pioneering spirit espousing individualism, freedom and a bountiful sufficiency of the 'Promised Land' whilst on Earth, and eternal bliss in the Spiritual City of God – New Jerusalem.

This egocentric dream – to stake out one's own plot of paradise, a dream shared by the cultures of Western countries, particularly America and Australia – has, this thesis argues, fuelled the manifestation of the *Continued Growth* paradigm and its urban sprawl. The Cockaygne and Progenitor myths contradict the contemporary concepts of sustainability, as they enable the colonising traits of the *Mechanistic City* archetype/metaphor that then drives the *Continued Growth* systems paradigm.

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[20] D. Suvin, *Science Fiction Studies #10 Vol 3, Part 3*, 1976. Extracted online, at
www.depauw.edu/sfs/backissues/10/suvin10art.htm

6.3.4.2   Arcadia/Garden City ideal

According to the Arcadian myth Arcadia is an isolated and unspoilt Greek land, mountainous with large fir forests and lush vegetation. The Arcadians are believed to be the oldest inhabitants of the Peloponnese and, according to legend, are the benefactors of an idyllic lifestyle. The Arcadian myth (Hollis III, 1998: 14-8) that was revived in Europe during the Renaissance was of an agrarian/pastoral society, where people's sociological desires were moderated within nature's benevolence. This fostered a harmony between people of moderation and nature. "Arcadians tend to assume that, if the problems of material scarcity are resolved in a world of men of moderation, problems of sociological scarcity will also cease to exist" (Davis, 1979: 22 in Dziamka, 2000: 2). Arcadia simplifies human needs and emphasises their satisfaction in a context of minimal governance or organisational perfection.

From the CCM's perspective, Arcadia is a culture of egalitarian autonomy whose inhabitants believe in the myth that nature is resilient, within limits, and its cornucopia is freely available to those who seek to become one with nature. Therefore, the Arcadian myth recognises a traditional practice of sustainability, due to its close relationship with nature and transcendence of materialistic human nature. Arcadia relates to the mixed *idealistic* cultural paradigm and hybrid city archetype/metaphor comprising both *mechanistic* and *organic* socio-spatial patterns.

The *Garden/Social City* vision owes its genesis in one part to the Arcadian vision and to the other the anarchist tradition. The *Garden/Social City* ideal has the underpinning belief that life in the *Garden/Social City* provides the marriage of town and country. This is essentially the best of both worlds, Agrarian [Arcadian] aesthetics and healthy functional [urban] amenity. Ebenezer Howard's ideal habitat was conceived in response to 19th century industrial cities with their traumatic life conditions, characterised by overcrowding, pollution, poor public health and social injustice. Howard's vision epitomises the re-discovery of the lost paradise, created using the master planning process. Through this process, satellite towns were designed and built outside the inner ring of the choking industrial city. The Arcadian myth, reinterpreted by Modernity's planning epistemology and new thinking, created the *Garden/Social City* vision, which continues to inspire the *Smart Growth* systems paradigm. This paradigm emphasises: (1)

promoting a sense of ethnocentric community and unity; (2) reaching decisions through consensus; (3) progression of personal well being and social capital; and (4) seeking out the 'good life'.

6.3.4.3   Spaceship Earth metaphor

R. Buckminster Fuller (1969) developed the "Spaceship Earth" metaphor, during the emergence of general systems theory and the U.S.A. Apollo space missions. Televised images of Earth from space and the moon's surface helped communicate the idea of humanity travelling through the universe on a living spacecraft. During the Cold War, with the new threat of planetary annihilation by nuclear warfare, this new cultural trauma gave birth to a new myth/metaphor – that of planetary cooperation amongst a united crew on Spaceship Earth. Therefore this myth of global hope has no historic Western antecedent, except for its antithesis – the end of the world by fire in Christian eschatology. The metaphor of Spaceship Earth, as intended by Fuller, encapsulates the idea that human intellect needs to operate new thinking — synergy — to create a society capable of living on the planet indefinitely, and to continue the journey through the universe. "If we do not comprehend and realise our potential ability to support all life forever, we are cosmically bankrupt" (Fuller, 1969: 87).

Using the CCM, Spaceship Earth relates to the *idealistic* to *ideational* cultural paradigms, as human consciousness perceives the reality that the planet is the unconscious store and technical craft of collective human wealth, and as such requires maintenance for "our coming generations and their future days" (Fuller, 1969: 87). To achieve this social objective an alliance of Hierarchists, Egalitarians and Individualists is required to manage the planet. Spaceship Earth therefore embodies the core principles of sustainability, namely worldcentrism and inter-generational equity. The urban vision of the *Eco-city* likewise embodies the principles of synergy and sustainability that Fuller espoused. As previously described, the *Eco-city* (Section 4.5.1) is an *idealistic* city form that derives its *organic* socio-spatial inspiration from nature.

The narrative of Spaceship Earth emphasises four principles: (1) accept the inevitability of nature's flows and forms; (2) discover personal freedom without harm to others or excesses of self-interest; (3) experience fullness of living on an Earth of such diversity in

multiple dimensions; and (4) liberate humans from dogma, refresh spirituality and bring harmony.

6.3.4.4 Gaia hypothesis/metaphor

James Lovelock's (1979) Gaia hypothesis is named after the Greek Earth Goddess. Gaia theory is based on planetary system dynamics, and suggests "that the earth behaves functionally as a self-regulating single super-organism" (Moughtin *et al.*, 1999: 90). Life has existed on the planet for a large fraction of the time since its formation despite the incredible odds against it, due to the second law of thermodynamics (tendency towards entropy). Gaia theory as a model of geophysiological macrohistory (Jones, 1997: 151) is detailed by Lovelock in his *The Ages of Gaia* (1988). The significant difference between the metaphors of Lovelock's Gaia and Fuller's systemic Spaceship Earth is that Gaia is alive, such that its ecological self-regulation operates consciously. Gaia theory reveals the Earth to humans as a symbiotic living spaceship and ecological partner travelling on a physical and metaphysical journey through universe (the concept of 'one song').

Spaceship Earth (operated correctly using systems thinking and synergy) and Gaia theory share the same underpinning belief that humanity is on a journey of evolving consciousness. Humanity's collective consciousness is seen as mutually interdependent with the nature of the Earth. It is a dynamic symbiotic relationship, where humans have reached a level of spiritual consciousness and technological skill to choose to either tread lightly on the limited resources of the Earth, or suffer civilisational collapse due to the consequences of continued exponential growth. This relationship also generates the ecological imperative for sustainable development. The Spaceship Earth myth aligns with the empirical and technical prowess required to achieve the systems paradigm of *Sustainable Development*, whilst the Gaia concept drives the spiritual revolution needed for the systems paradigm of *Civilisational Transformation*.

Using the CCM, the Gaia hypothesis arguably is a product of the *ideational* cultural paradigm and holistic worldview which emphasises the following principles: (1) focus on the good of all living entities as integrated systems; (2) global networking seen as routine; and (3) minimalist living, so that less is actually more. Gaia as myth – super-conscious organism – also shares the traits of the Egalitarian's holistic worldview: (4) harmonising a

strong collective of individuals; (5) expanded use of human brain/mind tools and competencies; and (6) the self as part of a larger conscious, spiritual whole that also serves self (Beck and Cowan, 1996: 287). The socio-spatial production of the *Gaian City* is still only in the realms of the imagination, but related city visions include Johansen's (2002) concept of 'nanoarchitecture', a habitat that is genetically coded and grown as an integral part of nature, or (2) Soleri's *Arcology* (4.5.2), created to focus the evolution of consciousness and reflect cosmic order.

Actors within urbanism's causal layer of *myth/metaphor* include wisdom elders, spirituality writers, Indigenous groups, visionaries, as well as astrophysicists and high-order mathematicians who increasingly espouse a universal spirituality. The CCM provides a frame of reference to explain how the above cultural *myths/metaphors* regress, resurge and shift with the city's collective consciousness. By implication, myths may continue to exert an influence on the socio-spatial production of cities into the future, for as long as human consciousness exists.

6.4 Synthesis using CLA (trans–layer findings)

CLA conducted on the issue of sustainable urban development and its contradictions provides a layered rubric's cube of the cultural dynamics of cities. The analogon 'rubric' applies here in the sense of a set of clear standards or rules. CLA abstracts an urban ontology of relations and contradictions. By visioning how these different urban contradictions are resolved, individually or collectively, at each layer, an epistemology of purposive city futures or an urban teleology develops. Here the resolution, rather than the mechanical causes, becomes the purpose to transform future urban life conditions. For example, the four alternative city futures generated in Chapter Five are deconstructed (Table 6.2) using CLA to speculate different inter-level resolutions or interventions.

Scenario	TECHNO CITY	SMART CITY	ECO CITY	GAIAN CITY

Table 6.2: CLA of City futures and sustainability

Scenario	TECHNO CITY	SMART CITY	ECO CITY	GAIAN CITY
Driver				
		DEGREE OF DIFFUSION OF SUSTAINABILITY & SUSTAINABLE TECHOLOGIES WITHIN REGION →		
	Up to 25% (Cultural Creatives are early adopters)	Up to 50% (Mainstreamers start adopting)	75 % adoption (Laggards and Reactionaries persist)	Saturation (Sustainability is the way of life for all)
Causal Layered Analysis				
Litany	Sprawl	Growth Management	Sustainable Development	Utopian/ Visionary
Technical Systems Perspective	Continued Growth	Smart Growth & Back to the Past	Zero Growth and Development	Civilisational Transformation
Worldview	Egocentric	Ethnocentric	World–centric	Holistic
Planning Epistemology Stakeholders	Modernist Planning	Equity Planning Model	Social Learning & Communicative action	Radical Planning Model
	Free Market Capitalists, Consumers Minimal Govt regulation	Local Government Leaders, Environmental & Social movements e.g., slow city movement	Local Community Governance, Aged, Women and Children Sustainability innovators Eco-efficient Private Sector /industry partners,	All peoples All living entities Future futures
SC-V Social Solidarity (dominant groups)	Individualism	Hierarchy + Egalitarianism	Hierarchy + Egalitarianism + Individualism	Egalitarianism

Chapter Six: City Futures Scenarios, their cultural paradigms, archetypes and myths, Page 273

Scenario	TECHNO CITY	SMART CITY	ECO CITY	GAIAN CITY
Table 6.2: CLA of City futures and sustainability				
Cultural Paradigms	*Sensate → Hypersensate*	*Idealistic (mixed-ecclectic)*	*Idealistic → Ideational*	*Ideational*
Civilisation	Western	Western	Western + Indic influences	Planetary - "unitas multiplex" – unity-in-diversity
Myth/ metaphor				
About sustainable way of life:	Progenitor/ Cockaygne	Arcadia	Spaceship Earth	Gaia
About the City:	*Perpetual colonisation Imperial City*	*Garden City Ideal Creative learning city & Heritage city*	*Green City, Solar City*	*Holonic ecologies e.g. the city is an Arcology*
City Archetype (socio-spatial form)	Mechanistic City	Hybrid: Mechanistic and Organic City	Organic City	Cosmic City

The CLA of sustainable city futures makes apparent that the concept and achievement of sustainability is contingent on the diffusion of new developmental levels of consciousness within cultures (Table 6.2). This is evident across the city scenarios, not only at the technical systems level, but also at the worldview level through the eyes of different stakeholders.

The *Techno City* is the place where all the systemic urban contradictions (described in Section 6.2) remain unresolved. It is potentially the cultural antecedent to ecological and social collapse and the monumental legacy to mark that ruin, just as the Easter Island statues stand today to mark the ecological and social collapse of their maker's unsustainable way of life. Its cultural paradigm is *sensate → hypersensate,* dominated by Individualism. It manifests a *mechanistic* socio-spatial form. The *Techno City* as an image of the future is driven by the *egocentric* worldview of market Capitalism that reframes the Progenitor and Land of Cockaygne myths, to constitute cities of perpetual colonisation and materialism.

The *Smart City* is a place where the inhabitants are seeking to resolve the urban contradictions of sprawl and its systemic impacts through growth management. However, the *Smart City* is still blinkered by a worldview that is mainly ethnocentric. The wellbeing of the planet and its biodiversity (global) still comes behind the wellbeing of the city and its region (local). Its cultural paradigm is *idealistic (mixed-ecclectic)*, dominated by an alliance of Hierarchy + Egalitarianism and it manifests a hybrid '*mechanistic + organic*' socio-spatial form. The *Smart City* as an image of the future is driven by the *ethnocentric* concern for the group, with a mix of authoritarian and social democratic political forms which reframe the Arcadian myth, to then constitute narratives about creative, learning garden cities that manage urban renewal and heritage conservation.

The *Eco City* is a place where the inhabitants are intent on reconstructing their ways of life to resolve all urban contradictions through a systems policy of sustainable development (Zero Growth plus equitable TBL development). Social justice is pursued through a world-centric view of reality. Its cultural paradigm is *idealistic→ ideational*, dominated by a tripartite mutual alliance of Hierarchy + Egalitarianism + Individualism, and it manifests an *organic* socio-spatial form. The *Eco City* as an image of the future is

driven by *world-centric* green politics and eco-relational, consensual thinking which reinterprets the Spaceship Earth myth, to then constitute sustainable, green city projects and policies.

The *Gaian City* is a place of dreams, where the current urban contradictions have been resolved within a sustainable and holistic culture. This city is a holon, habitat within the physiosphere within the larger holons of biosphere, noosphere, theosphere and cosmos (Gaia). Therefore, the *Gaian City* would manifest an *integral* ecology (Wilber, 2000a: 97-8). Its cultural paradigm is *Ideational (Spiritual),* dominated by Egalitarianism, and it manifests a *cosmic* socio-spatial form. The *Gaian City* as an image of the future is driven by the *world-centrist's* holistic thinking and politics that creates the Gaia myth/hypothesis. This then constitutes the urban metaphor of the city being – a holon – *integral* with ecology. For example, the city is an *Arcology*.

The current proposal argues that images of the city, and indeed cities as multi-dimensional forms, are likewise influenced by consciousness. For example, the *Techno City* is a manifestation of egocentric and ethnocentric thinking, whereas the *Eco City* is an expression of world-centric thinking. As such, a 21st century global/local project needs to be developed which transforms the city as a catalyst for the development of a planetary human civilisation. This planetary civilisation (unitas multiplex) is characterised by global consciousness that integrates matter, body, mind and spirit. Therefore cities ought to help citizens through the levels of consciousness from egocentric, ethnocentric to world-centric thinking.

Let's now return to the apparent tautology that rose earlier in this chapter at the *litany* layer, namely is it possible to have sustainable urban sprawl? The sprawl of the *Techno City* may not lead the networked society to its doom. It too can be made sustainable by holistically transforming its underlying myth, worldview/cultural paradigm and life systems. For example, by implementing a vision of sustainable suburbs using permaculture (Mollison, 1990)[21] principles, the sprawl of the *Techno City* might

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[21] B. Mollison, *Permaculture, A practical guide for a sustainable future*, Washington DC, Island Press, 1990, preface, *ix*. "Permaculture (**perma**nent agri**culture**) is the conscious design and maintenance of agriculturally productive ecosystems which have the diversity, stability, and resilience of natural ecosystems. It is the harmonious integration of landscape and people providing their food, energy, shelter and other material and non-material needs in a sustainable way." An suburban model exists in "Village Homes", Davis, California, a residential development that features solar

transform towards a form of *Gaian City*. This evolutionary process of urbanisation resembles in most respects Doxiadis's (1968, 1974) inevitable vision for the city of the future – *Ecumenopolis* – being a stable, global network or fractal pattern of communities. Doxiadis' long-term urban future might well be renamed global permaculture-*Garden City*, expressing the memetic shifts that have occurred since the publication of his city futures project. At the memetic level, psychosocial development is crucial to foster new thinking from the *mechanistic* paradigm to the *ecological systems* paradigm (Capra, 1987, 1996). At the myth level, permaculture is underpinned by a tripartite melding of Arcadia, Spaceship Earth and Gaia, reinterpreted through a world-centric/holistic frame of reference. Global permaculture-*Garden City's* prime directive at the systemic level is to redesign the way the city produces and adapts itself. Eco-efficiency principles are well suited to implementation at the local scale, and may convert the amorphous monocultures of current urban sprawl to highly fecund and diverse habitats by promoting and facilitating cooperative, interactive ways of life that make no waste.

6.5   Conclusion

This section is presented in three parts. Firstly, the deconstruction of city futures is summarised to reveal the major multi-level contradictions which point to a 21st century city policy agenda for their resolution. Secondly, the privileged future is explained using the alternative city scenarios. Thirdly, contrasting city archetypes (as cultural metaphors of ideal cities) and paradigms are shown that dominate the discourse to maintain or challenge the present. Moreover, those who are marginalised from the city futures discourse are also revealed.

In this chapter the application of CLA has not only demonstrated the method's usefulness in developing an urban ontology of sustainability contradictions, but also speculated on the cultural dynamics of cities. The most significant urban sustainability contradictions were described within the systems (life conditions) level of urban reality. As a result, CLA examined the urban contradictions so that the formulation of resolutions towards multi-level systemic change becomes plausible. It revealed that these sustainability

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orientation, water sensitive design/management, greenbelts and common areas for shared resources and food production.

contradictions within each level of reality are interrelated, and how these are resolved to create alternative urban futures.

The first consclusion of this chapter is that cities, being socio-cultural forms, need to transform themselves to resolve the contradictions or tensions that exist within their quality of life systems. The policy implications for cities, arising from CLA's method of inquiry, are that change intervention is required at the *litany*, *systems*, *worldview/cultural* and *myth/metaphor* layers of reality. These interventions will create new sets of problems in the future, setting up the need for continuous change. The main findings from the CLA that inform the 21st century city policy agenda are presented next, according to the four layers.

At the *litany* layer, the redefinition of the urban challenge (litany) is the first step towards its resolution. However, changing the official and or public perception of the urban problem requires a futures-orientated, multi-dimensional planning method, such as CLA or community visioning. Returning to the litany of today's urban problem — that urban sprawl is unsustainable — this thesis shows, using CLA, that it is possible (even plausible) to re-develop urban sprawl into a sustainable socio-spatial form. This is only possible if the problem is rigorously critiqued on multiple dimensions to redefine the required actions framed under a holistic (Section 3.4) vision for city development. For example, at the *litany* level the above challenge may be defined as the *Techno City* becoming Permaculture-*Garden City*. The alternative scenarios, represented by the *Techno City*, *Smart City*, *Eco City* and *Gaian City*, may also be used as templates to categorise the many city visions that already exist. For example, Castell's Informational-*Dual City* is a form of *Techno City*, whilst Ebenezer Howard's *Garden City* is a form of *Smart City*, and Paolo Soleri's *Arcology* is a form of *Eco City* tending towards *Gaian City*.

At the *systems* layer, CLA as a futures method also demonstrated that the degree of diffusion of sustainability and sustainable technologies within society is a significant driver of the future, and provides the means to resolve urban contradictions and hence generate alternative scenarios for the future city. The urban agenda becomes the sustainability agenda. Thus the *Eco City* would be evident in Robert's words, "when the

global society is sustainable, pollution will no longer increase, nature will no longer be impoverished through physical degradation, and within that frame, human needs will be met globally" (TNSEIA, 2001: 10). For example, if the *Techno City* satisfies the four system conditions of TNS at the urban systems (life conditions) realm, as described by the parameters below, then the *Techno City* may transform into Permaculture-*Garden City*.

1. Urban cultures are to be no more resource-consumptive compared to rural cultures, and need to switch to renewable energy sources.

2. Cities can no longer afford to be the major producers of entropy (pollution) on the planet because of their closed linear systems of production. They must redesign their means of production based on open ecological (cyclic) systems – thus recapturing all technical and biological nutrient flows.

3. Cities must be holons that maintain ecological biodiversity and not cause natural degradation by creating monocultures.

4. Economic development within cities must provide fair distribution of resources including: (1) quality of life or wellbeing for the basic human needs of survival (shelter, food, clothing); (2) access to personal development opportunities (cultural wealth); (3) freedom of choice; and (4) identity (meaning in life). Basically, urbanism and its spatial form must create social justice.

At the worldview level of urban reality, CLA demonstrates that the concept of sustainability may only be understood and actioned through world-centric and holistic worldviews and thinking. However, developmental psychologists have estimated that most of the world's population is thinking and living in terms of the ethnocentric worldview. Therefore, global education and capacity building become critical in developing global equity and urban sustainability. The learning city is also crucial in building an inter-cultural city such as Sandercock's (1998) *Cosmopolis*, which celebrates diversity and confronts the many faces of oppression.

At the *myth/metaphor* level, CLA elucidates that the Progenitor and Land of Cockaygne myths contradict the contemporary concepts of sustainability, and motivate instead the *Continued Growth* systems paradigm. Alternatively, Spaceship Earth and Gaia are metaphors that cultivate the diffusion of sustainability in society and its four TNS system conditions. The deeper agenda at this level of reality is, however, the development of human consciousness and spirituality. For example, as humanity progresses along the

developmental phases of consciousness towards the holistic worldview, then this will affect the design of cities, more so than any other factor. The grand mythical narrative for this century may be that each child may have the opportunity to realise that they are a unique individual, one with the holistic planetary organism, and that their city (like a tree) contributes more to the planetary organism than it takes. Such a narrative, if believed and actioned, would not only transform humanity but also their cities and the planet.

The approaches which guide these interventions for each layer of reality provide the four macro pillars for the 21st century city policy agenda. Firstly, at the *litany* layer, the key question asks, what are the city's visions shared by citizens? Community visioning is critical to explore shared inspirational images of the future that motivate urban change. Secondly, at the *systems* layer, the sustainability agenda is key, particularly retro-fitting eco-efficiency into the suburbs. Thirdly, at the *worldview* layer, the creative learning city is important. Citizen education programs need to focus on human consciousness development, cultural diversity and a 'politics of difference' countering the faces of oppression. Fourthly, at the *myth/metaphor* layer, a deeper spirituality agenda is needed to enable the co-creation of humanity's shared stories (collective consciousness) about the purpose and meaning of existence.

The second conclusion of this chapter is that CLA revealed at the *litany* level, that the *Smart City* scenario as the privileged future. The dominant official *litany* about sustainable cities advocates growth management, enabled at the *systems* level by the *Smart Growth* paradigm, which aims to curb the environmental, social and economic impacts of sprawl. However, the present socio-economic systems of city production and consumption are not challenged by the *Smart City* image of the future. Nor are the deeper divides of social polarisation and poverty. As a result, the *Smart Growth* systems paradigm may only slow the apparent inevitable manifestation of the *Techno City* – a networked megalopolis of intercontinental scale.

The third conclusion requires returning to the genealogy of city archetypes or socio-spatial forms in Chapter Four, which demonstrated how the *Mechanistic City* archetype has dominated the 20th century and continues to be privileged in forming the future. The *Techno City* is now an urban reality in many parts of the Western world (e.g., Los Angeles, U.S.A.). As such, its economic powerhouse image is used by free market

capitalists and consumers to maintain the status quo of urbanisation. Consequently, the aged, women and children are the largest stakeholder groups who continue to be marginalised within cities today. The *Eco City*, with its *organic* socio-spatial form and the *Gaian City* (*cosmic* archetype) as alternative city scenarios are more distant from the present and challenge the current urban systems the most. The *Eco City* is the image of the future used by change agents to demonstrate and argue for significant technical, economic and social transformations. It is pedestrian friendly and seeks to be inclusive, not disadvantaging the aged, women and children. Imagine the children of an *Eco City*, able to play once again within their streets. A spiritual city future such as that offered by the *Gaian City* image is largely at the fringe of the urban planning discourse. Few raise this critical dimension of the role of the sacred city, as humanity struggles to understand their spirituality in the 21st century. This issue is easier for city/social planners to disassociate from their focus of inquiry and action, rather than to acknowledge that the two (spirituality and cities) are interconnected. The CLA suggests that the notion of spirituality is connected to the civilisational worldview within which it is formed. For example, a shift in worldview is required for the construction of the *Eco City*, which encompasses the Eastern worldview of dynamic interconnected processes of flow, as well as the Western worldview of atomistic linearity of cause and effect. Here the convergence of Eastern thought with Western worldview is isomorphic with the emergence of the 'New Physics' (Capra, [1975] 1983: 316), which is challenging humanity's notions of matter, mind and spirit.

Finally, by using CLA to study the urban condition, the analysis supports a tenet of evolutionary psychology, that "new life conditions (age) need new thinking" (Beck and Cowan, 1996: 23, 314). In the context of urbanism, the application of this tenet is a truism, revealing the need to resolve today's contradictory urban life conditions through the application of new thinking to create sustainable city futures. Urban foresight, creativity and the learning city are needed to inspire the transformation process of sustainable habitat innovation. The application of foresight techniques such as CLA to the urban condition is not only an example of this new thinking, but has also critiqued the CCM's relations between city visions, social systems and cultural paradigms.

7 Conclusion – hope for an *integral* city
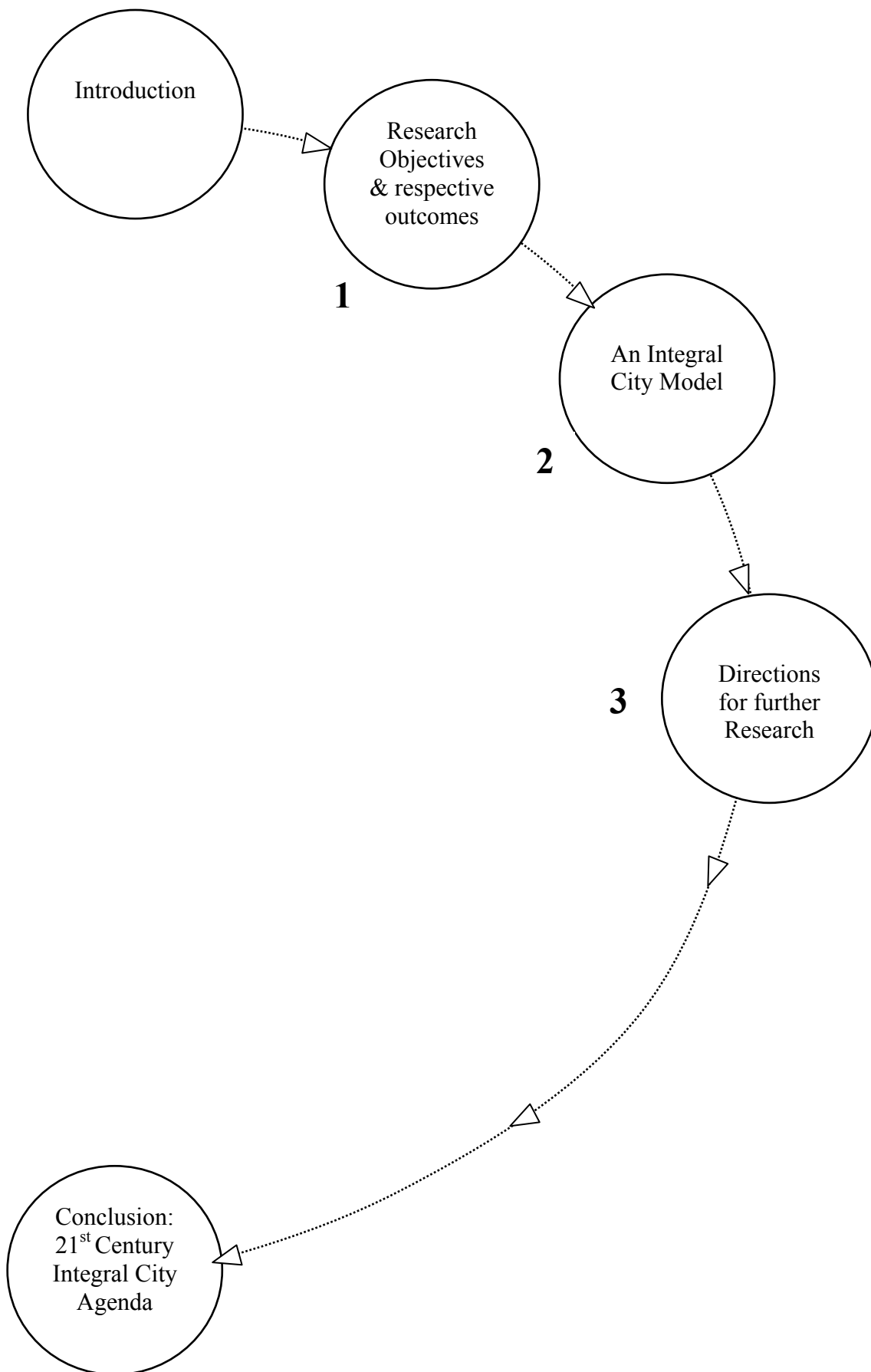
Figure (7.1): Chapter Eight Roadmap

The circles in the diagram contain the following text:

- Introduction
- Research Objectives & respective outcomes — **1**
- An Integral City Model — **2**
- Directions for further Research — **3**
- Conclusion: 21st Century Integral City Agenda

7.1 Introduction

Chapter Seven summarises the main findings of the research objectives and related questions, presented in three parts. First, the research process is revisited by focussing on the futures methods used to investigate each research objective, and then the respective conclusions reached are explained. What emerges from this section is the main thesis for the '*integral* city model', where the city is defined as the multi-dimensional habitat (*physis, bios, nous and theos*) for human and non-human exchange that allows civilisation to realise its potential. The city is conceived as a holon within the cosmos. This section discusses global/local city futures and proposes a planetary transformation towards an urban global consciousness. However, for cities to be catalysts of social change and global consciousness the current schism between urban planning theory and practice needs to be bridged (Hall, 1996; Sandercock, 1998).

The second section introduces directions for further research, based on gathering the missing field data required to support the thesis propositions. A critical research question that arises from the spiritual city agenda is how the global city can become a site for collective problem-solving as the catalyst for an emerging global consciousness, planetary civilisation and for the possible emergence of a *Gaian City* future.

Third, the chapter concludes with a 21st century Integral City Agenda that nests meta-criteria within key city futures focus areas. The result is a city teleology that reconciles theory and practice, to make clear the purposive actions required to transform cities. CLA was used to map the interrelationships between different dimensions of the urban condition and alternative city futures. As a method, CLA is a change navigation and transformation tool. The application of this knowledge was used to formulate an agenda for city development that related to its teleology. The project aims to transform the city as a catalyst for the development of a planetary human civilisation.

7.2 Research objectives and respective outcomes

The primary research question is, what are the civilisational worldviews and cultural paradigms influencing Western glo-cal city visions? To examine this issue a multi-dimensional methodological approach was required to critique different frames of

reference or levels of reality. CLA was used to structure the re-ordering of knowledge about the city and posit the various disciplinary frameworks from the UP/DS, SCCS, and the FS fields (Figure 2.1, Section 2.3). The following three research objectives were pursued before CLA was applied to alternative city futures, in order to map the interrelationships between different dimensions of the urban condition, namely the *litany* of visions, their *systems*, *worldviews/cultural paradigms* and *myths/city metaphors*.

Research objective one focused on the applicable theoretical frameworks that may be synthesised to explain the cultural change dynamics between city visions and cultural paradigms under examination. A multi-level CCM was developed by drawing on Sorokin's ([1957] 1970) *Super-rhythm of cultural paradigms*, Thompson, Ellis and Wildavsky's (1990) *Socio-cultural viability theory,* and Lynch's ([1981] 1989) historical socio-spatial *City Archetypes.* The aim of the CCM was to demonstrate that there were alternative cultural change theories (other than neo-Marxist dialectics) to explain cities' socio-cultural process of production and the recursive emergence of historical Western city visions. The CCM recast the evolution of Western city development by relating historic examples of Lynch's city archetypes to cultural paradigms in order to explain their manifestation. The resulting speculations generated the ideal or abstract social groups and their ways of life and worldviews (cultural paradigms) responsible for the fabrication of the city. These social groups may be seen as major actors of urban change. The propositions put forward were that (Section 2.5):

1. The *Cosmic City* archetype was the manifestation of the *ideational* cultural paradigm, dominated by Hierarchy and Fatalism;

2. The *Organic City* archetype was the manifestation of the *idealistic* cultural paradigm, dominated by Hierarchy and Egalitarianism; and

3. The *Mechanistic City* archetype was the manifestation of a *sensate* cultural paradigm, dominated by Individualism and Hierarchy.

Chapter Two thus established a hypothesis about what cultural paradigms are responsible for the replication and reproducibility of the cultural metaphors of ideal city form, as evidenced by Western history. As a result, the CCM offered explanations for the recursive or cyclic emergence of city archetypes (*Cosmic*, *Organic* and *Mechanistic Cities*) couched within historical city visions. The application of the CCM in Chapter Six elucidated the cultural paradigms, and social solidarities that may make clear the change

dynamics shaping the four glo-cal city future scenarios (*Techno City, Smart City, Eco City and Gaian City*) (Table 7.1).

Table (7.1) Cultural Dynamics of Alternative Glo-cal City Futures			
Vision (Litany)	Archetype (spatial system)	Dominant Cultural Paradigm (worldview)	Dominant ways of life (worldview)
Techno City	"Mechanistic"	(Sensate → Hypersensate)	Individualism
Smart City	"Hybrid – mechanistic + organic"	(Sensate→Idealistic)	Hierarchy + Egalitarianism
Eco City	"Organic"	(Idealistic → Ideational)	Hierarchy + Egalitarianism + Individualism
Gaian City	"Cosmic"	(Ideational)	Egalitarianism

Chapter Four's genealogy of city visions illuminated the correlation between humanity's objective/collective historical evolution of the construction of the city and a subjective/collective pyschosocial reciprocal journey at a deeper level. Cities are the cultural products of civilisation (Weber, 1958; Spengler, 1926). By implication, the proposition is that city visions, like psychosocial genes, create meaning for the life conditions and social systems for human habitation. The poststructuralist view is that city visions are not 'real' and are themselves social constructions influenced by worldviews, cultural paradigms, and myths/metaphors in order to provide meaning to human agency/actions in *Lifeworld*. Therefore, civilisations' construction of cities is their manifestation of a deeper construction of collective consciousness and spirit. For example, it is evident from the scenario analysis in Chapter Five and the CLA of scenarios in Chapter Six that the green city model is a continuum, ranging along the sustainability vector from *Smart Growth*, to the *Eco City*, to the peaceful symbiosis of culture and ecology in *Gaian City*. The CLA clarified that the path to sustainability correlates with the developmental path of human consciousness. Therefore cities' cultures need to facilitate for their citizens a developmental pathway from egocentric, ethnocentric to world-centric levels of

consciousness and onwards (Beck and Cowan, 1996; Wilber, 2001), in their synchronous endeavour towards sustainability.

Research objective three questioned the possibility of empirically testing the CCM. Specifically, this thesis asked whether it is possible to design research methods to quantitatively measure the effects (behavioural relationships) of deeper worldviews/cultural paradigms on preferred visions of human habitation. Chapter Five considered this question and presented the results of the local and global survey methods and analysis. Five scenarios for the future city were generated using the double variable method, which was based on the most critical forces of urban change (urban governance, urban development industry and the degree of urban sustainability). The glo-cal city scenarios were compared with the CCM to speculate about possible relationships between their image of the future and deeper paradigms, before testing these within different survey methods, namely self-completion (hardcopy and online), visioning workshops and phone interviews. The critical exploratory investigation of the survey process showed that it is possible to validate or discount the CCM's theoretical propositions, though in the current research the samples were not large enough to empirically justify drawing conclusions either way.

Chapter Five's survey analyses revealed that the local and global samples were each missing different data that was needed to rigorously test the validity of the CCM's propositions. However, the analyses did show that it is possible to more rigorously test the CCM if the suggested improvements to the survey instrument and data collection methods were made. Therefore, further survey research is not only technically feasible, but it is required to test the following hypothesised relationships, that: (1) Individualists enable the *Techno City*; (2) Hierarchists and Egalitarians enable the *Smart City*; (3) Hierarchists in partnership with Egalitarians and Individualists enable the *Eco City*; (4) Egalitarians and Hermits enable the spiritual *Gaian City*; and (5) Fatalists and Individualists enable the *Collapse Scenario*.

Research objective four asked how the synthesis of the applicable theoretical frameworks might reconstruct the cultural meaning of the city. This objective sought to respond to the current schism between urban planning theory and practice, and speculate how this schism might be resolved. Such a resolution would innovate a holistic (multi-

dimensional) teleology of the city and driving forces for its cultural meaning. Chapter Three drew on the planning field's epistemologies, in conjunction with Wilber's *integral* epistemology to firstly structure the review of urban theories, and secondly to formulate an *integral* meta-framework for city development that relates the material, biological/ecological, psychosocial and metaphysical dimensions of reality.

Theoretical urban concepts developed across multiple disciples (sociology, biology, geography, architecture, urban and regional planning, and urban sociology) by a broad range of contributors[22] could be nested within the meta-criteria, and no concepts were found that fell outside the framework. The meta-framework thus provides multi-dimensional criteria for a 21st century model of the city, based on the full spectrum of human consciousness. Through these meta-criteria or attributes the city reveals itself as a multi-dimensional habitat (*physis, bios, nous and theos*) within the cosmos.

Chapter Three also demonstrated that the *integral* meta-framework of the nature of the city is capable of critiquing and positioning past and contemporary urban theories. City theories found to be the least *integral* are those developed in the episteme and ideology of modernity (the early 20th century), particularly those developed in the emerging discipline of urban sociology. In contrast, the analysis shows that the most *integral* or holistic city theory is the pre-modern civilisational cosmology or sacred science of Vāstu. It provides normative principles for daily life for constructing the built environment (via Vāstu Vidyā) and ensuring the well being of inhabitants (via the conjunctive practice of Vāstu Shāstra; Ayurveda and Jyotish). The findings of the *integral* assessment of city theories reinforces Wilber's (2000a) claim that pre-modern ways of knowing more holistically integrate art (aesthetics), morals and science. In other words, modernity tends to reduce the nature of the real into subjective, objective, intersubjective and interobjective forms. This drives the rise of distinct urban disciplines within the silos of phenomenology, ontology, ideology and epistemology. The Western city, as a result, manifests this splintering phenomenon. An *integral* vision for the 21st century city has not been articulated within the urban planning field that encompasses the former dimensions, nor attempts to bridge the schism between urban theory and practice.

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[22] Max Weber, Louis Wirth, Patrick Geddes, Lewis Mumford, Kevin Lynch, Christopher Alexander, David Harvey, 'The Istanbul Declaration on Human Settlements: The Habitat Agenda', Manuel Castells and Peter Hall.

Chapter Three also concluded that modernist and post-modernist models of the city are impoverished, due to a lack of discourse on their metaphysical or spiritual relations about their form. In other words, they do not explore how to create a city that spiritually nurtures and delights. The exceptions include the works of the generalists Patrick Geddes and Lewis Mumford and of the humanist Christopher Alexander, who sought an alternative to modernity that reconciles humanity's inner and outer life. Each of these approaches seeks to address the schism between the real (science) and the ideal (spirituality) within the civilising culture of the city. However, with the recent emergence of *deep ecology* (Capra, 1996), and Alexander's (2004) 'Nature of Order' and its cosmology, may come a resurgence of urban planning research about creating the city of spirit.

Chapter Three also illustrated that the meta-framework generated in this thesis is useful to reframe and restate the urban condition and problem in creating better city futures. For example, the urban conditions or forces being discussed locally and globally across the various disciplines fall within the material, biological/ecological, and psychosocial relations of city form. Metaphysical or spiritual relations are largely missing from the city planning agenda. Likewise, there is no significant debate about cities' role as a driver and loci for the metaphysical development of the human species. Such a strategy may reconcile the cultural dilemmas and conflicts faced by many cities. Only in the realm of city visions or utopias do humans dare to dream of a city that nurtures their spiritual development and fulfilment.

Furthermore, the current meta-framework implies by deduction that the power of city visions relates to the degree by which it changes the real city's qualities or assets. As such, it was used as a tool to consider the recurring power of city visions in history, for the purpose of mapping a genealogy of dominant, emergent and alternative images of the future. Chapter Four's genealogy of *City Visions* established that the current dominant urban paradigm is characterised by the *Mechanistic City* archetype as underpinning the *Technocity* vision. Even though the urban discourse argues for a transformation towards the *Eco-city*, no such city yet exists. In Chapter Six, it was investigated whether the technological advancements needed to drive this evolution would be enough to transform *Technocity* into an ecologically sustainable habitat. The discursive analysis (CLA) of the

city as a socio-cultural form supports the claim that a cultural paradigm shift is needed, as well as a deeper spiritual shift. If this is the case then the disturbing dilemma emerges that the discourse does not address this point whatsoever. An utopian vision of the spiritual city is far from contemporary planners' or designers' agenda or skills set.

The *integral* city meta-framework proposes that the city is the locus of personal spiritual beliefs, self-actualisation, sacred collective action and potentially collective bliss (Section 3.4). As such, it's planning and design ought to explore how to fulfil this role. This urban challenge then reframes one aspect of the urban problem, which becomes, how to explore, develop and achieve the meta-physical roles of the city whilst reconciling inter-faith conflicts? Transforming human consciousness as a strategy may have a far greater impact on future city form than by focussing on its material, ecological and cultural dynamics. This claim arose again in Chapter 6 and its CLA of city futures.

The final outcome of the critical examination of research objective four is the articulation of the teleology of the city, couched as an *integral* city model.

7.3   An emerging *Integral* City model – a teleology

What then, is the city of the 21st century? In this age of growing global consciousness, what ought the city of the future to be? Chapters Four and Six found that city visions/archetypes emerge and re-emerge synchronously with the dominant developmental phases of human consciousness (worldviews) and their respective cultural paradigms. The CCM proposes that city visions affect life conditions and social systems for human habitation, and are themselves shaped by deeper worldviews, cultural paradigms, and myths/metaphors.

Based on the discursive analysis on urban theories in Chapter Three, and the need for a holistic or *integral* vision of the city, the current thesis proposes that the city ought to be defined as the multi-dimensional habitat (*physis, bios, nous and theos*) for human and non-human exchange that allows civilisation to realise its potential. It is conceived as a holon within the cosmos.

The hypothesis for an *integral* city model consists of three propositions. Proposition one states that urban transformations are concomitant with synchronous and sympathetic transformations of civilisation's dominant cultural paradigms. Proposition two states that a technique for navigating the process of memetic transformation (paradigm shifts) is provided by CLA, as it relates human habitats with the CCM's different ways of interpreting reifications of consciousness. Proposition three states that an *integral* city model – multi-dimensional in nature – ought to nest contemporary urban concepts with socio-cultural dynamics, and thereby bridge the schism between urban planning theory (the ideal) and practice (the real).

7.3.1   Supporting argument and data for each proposition

Proposition one deals with content. The CLA of alternative city futures presented in Chapter Six explains the interrelationships between different dimensions of the urban condition and alternative city futures. That is, the relations between the *litanies* of city visions and their reciprocal urban *systems*; *worldviews* and cultural paradigms; and underlying *myths/metaphors* (Table 6.2). This is done using the CCM's frameworks of macrohistory, cultural change theory and architectural/urban design concepts to describe the attributes of each scenario at each particular layer of reality. Both macrohistory and cultural theory are applied at the worldview level, whilst spatial archetypes are used to abstract the mythic level of the city. Generally, the survey data and analyses in Chapter Five did not contradict the CCM's proposed relations between cultural/social change and city/urban futures. What followed is an exegesis of the cultural paradigms responsible for the replication and reproducibility of the identified urban visions (aspirations) for human habitation. It was argued that the five identifiable future scenarios for the city may be considered as templates, namely: (1) the probable future being *Collapse Scenario*; (2) and (3) the bipolar plausible futures of the *Techno City* versus *Smart City*; (4) the preferred future being the *Eco City*; and (5) the possible future being the Spiritual or *Gaian City*. Further, it was proposed that Egalitarians and Hermits motivated by *ideational* consciousness enable the *Gaian City*. Fatalists and Individualists motivated by *sensate* consciousness enable the *Collapse Scenario*. Individualists likewise motivated by *sensate* consciousness enable the *Techno City*. Hierarchists and Egalitarians motivated by *idealistic* consciousness enable the *Smart City*. Hierarchists in partnership with

Egalitarians and Individualists motivated by *idealistic→ideational* consciousness enable the *Eco City* (Table 7.1).

The scenarios are presented in order of the degree of human agency required to facilitate change. The most likely scenarios based on trends data and no intervening actions are the probable city futures *Techno City* and *City Collapse*. The plausible city future *Smart City* requires more human agency and intervention to make it a reality. The preferred city future *Eco City* requires greater effort in human agency and cultural transformation to make it a reality. This scenario based on the urban studies discourse is the espoused vision that currently motivates and attracts social change. The possible city future *Gaian City* is considered the least likely, the outlier scenario requiring the greatest paradigm shifts in consciousness.

Propositions two and three deal with the process of identifying and enacting effective city change interventions. Proposition two states that CLA and the CCM, used in conjunction, are efective tools to critically examine city dynamics and navigate paradigm shifts. For example, from the multi-dimensional city futures analysis (CLA) two key conclusions are apparent. Firstly, the transformation of the current urban (socio-spatial) condition is possible by transforming the current socio-cultural condition of *Sensate, Individualism* motivated by *egocentric* consciousness towards a planetary culture of *Integrated, Egalitarianism* motivated by *world-centric* consciousness. This project is an immediate development goal for the world to avoid ecological overshoot and collapse. However, Egalitarianism is not the end of the evolutionary development of human consciousness and culture. Furthermore, the CLA identified the need for the design of a 21st century global/local project to transform the city, as a catalyst for the development of a planetary human civilisation – towards global consciousness – integrating matter, body, mind and spirit.

Secondly, the ideal city has aspects of all four alternative scenarios. To allow this diversity and tolerance of multiple perspectives it has to be what cultural theorists term a 'clumsy institution' (Thompson, 2000) or chaordic – expressing the nature of different levels or realms of reality – whilst promoting people to progress through these developmental levels or phases of human consciousness. Therefore city transformations

must respect the diversity and health of the levels of consciousness and avoid preferential treatment for any particular form.

Returning to proposition three, the *integral* city model as a process combines the *integral* meta-framework for city development with CLA and the CCM. To formulate a holistic urban teleology – regarding the purpose of the city and its cultural meaning – an *integral* (multi-dimensional) city model is needed. Such a model comprises different frames of reference or levels of reality. The causal relationships between the following different levels of reality within the city were investigated using CLA: (1) official city policies located at the *litany* level; (2) at the *systemic* level by its social, technological, environmental, economic and political systems and how these relate to influence city futures; (3) *worldviews* and cultural paradigms; and (4) cities' deeper utopian/dystopian *myths* of human habitation.

As discussed previously (sections 3.4, 3.5), the research demonstrates that the proposed *integral* city model is:

- Multi-dimensional;
- Inclusive of contemporary urban concepts;
- Applicable to contemporary urban issues, dilemmas and contradictions;
- Adaptable to greater differentiation of urban attributes or criteria;
- An ontology or general theory explaining the cultural paradigms responsible for the replication and reproducibility of the identified urban visions (aspirations) for human habitation (Sections 2.5, 4.7); and
- Able to qualify urban objectives and strategies for change that align with urban vision (Section 6.5).

The *integral* city model assembles contemporary geographic, biological/ecological and urban planning/design concepts with socio-cultural dynamics and metaphysics to formulate the city's teleology. This process thus expounds the purposiveness of the urban structure and system, whilst bridging the schism between urban planning theory (the ideal) and practice (the real). The *integral* city model is able to address the latter schism by focussing on the urban qualities/meta-criteria as the sites for collective purpose and

action, in order to resolve any urban contradictions and tensions within the city (Section 3.4).

As such, the *integral* city model represents a significant new technique for stakeholders of the city and its future quality. This point is demonstrated by moving along the 'Ideology' developmental line of inquiry (Table 7.2) from *Equitable exchange* to *Sacred public places*, to identify stakeholders who play lead roles as change agents in the urban milieu. For example, in the urban arena of *Multi-cultural leadership*, active stakeholders seeking reform include: (1) ethnic groups; (2) post-colonialists; (3) feminist movements; (4) gay/lesbian movements; (5) human rights advocates and (6) social and community planners.

Table 7.2: City Futures focus areas, attributes and Stakeholders					
Level of Reality	**City Futures Focus Area (Daffara, 2004)**	**Phenomenology "I"**	**Ontology "It"**	**Ideology "We"**	**Epistemology "Its"**
Physis	**E^4 Energy Flows**	**Effective exchange**	**Economic (efficient) exchange**	**Equitable exchange**	**Ecological exchange**
	Stakeholders	Mass consumers	Urban Practitioners: Planners, Engineers Architects Government Policy makers Producers Developers	Unions/Labour movements Socialists/Communitarians Governments	Academics- urban theorists, astro and quantum physicists Urban innovators Energy Producers
Physis & Bios	**C^4 City of Synthesis**	**Convenient urban form**	**Compact urban form**	**Complex urban form**	**Cybernetic urban form**
	Stakeholders	Residents Workers	Same as above	Green movement Ecologists	IT infrastructure network providers & industry Urban Managers
Nous	**'MUST' City Governance**	**Self empowered leadership**	**Utilitarian**	**Multi-cultural Leadership**	**Transformational leadership**
	Stakeholders	Citizens Marginal groups	Government Policy makers Politicians	Ethnic groups; Human rights advocates; Post-colonialists Feminists, Gay/Lesbian movements; Social and community planners	Public and Private sector leaders Community leaders

Level of Reality	City Futures Focus Area (Daffara, 2004)	Phenomenology "I"	Ontology "It"	Ideology "We"	Epistemology "Its"
			Table 7.2: City Futures focus areas, attributes and Stakeholders		
Bios & Nous	**H⁴ Sustainability**	**Hospitable habitat**	**Healthy habitat**	**Humane habitat**	**Habitually Fecund**
	Stakeholders	Residents	Residents Health Service Providers	Feminist and Green movements Children advocates	Sustainability movement and advocates
Nous	**City Noosphere**	**Learning citizen**	**Creative citizens**	**Identifiable Cultures**	**Conscious communities**
	Stakeholders	Marginal groups Cultural Creatives	Switched-off locales Businesses Cultural industries	Ethnic groups Local, place based community activists Slow food and Slow City movements	All Cultural change agents Futurists Urban sociologists
Theos	**S⁴ Spiritual City**	**Sacred personal places**	**Self-actualisation supported**	**Sacred public places**	**Suffer less Place**
	Stakeholders	All	All Media Wisdom Writers	Worshipers Religious fundamentalists Indigenous groups	All Spiritual leaders Philosophers

7.4   Directions for further research

By comparing the outcomes of the research against Wilber's *integral* epistemology, three areas for further research are made plain. Firstly, more knowledge about the inner individual realm of consciousness and outward behaviour in making the city is needed. Secondly, more knowledge about the inner individual and collective realms of spirituality and its relationship to city form is needed. Thirdly, more knowledge about the inter-objective realm of cities' social systems, and any change impacts caused by the practical application of the *integral* city model or CCM, is needed (Figure 7.2).

Figure 7.2: Areas of further research
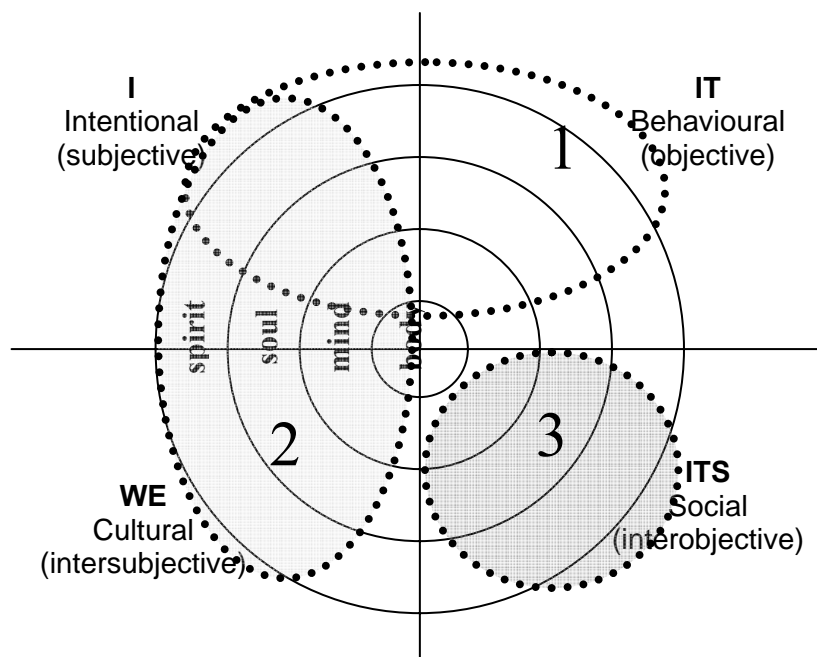
Adapted from Ken Wilber, The Theory of Everything, *(Boston, Shambhala, 2001)*

7.4.1 Reciprocal relations between levels of reality: City vision, Urban Lifeworld, Cultural Paradigms and City metaphors

Based on the findings of Chapter Five's survey analyses, further research is required to empirically test the CCM's hypothesised relationships between urban/city visions of human habitation and worldview/cultural paradigms, and preferred governance models. The aim of the further research is to rigorously examine the validity of the CCM's propositions. Are certain governance models preferred by particular social solidarities as they make decisions within *Lifeworld* to coopt their vision of the future city? At deeper levels, are social solidarities predisposed towards particular urban/city visions because of dominant worldviews and memetic paradigms active within them? For example, do Individualists prefer and enable the *Techno City* vision due to an egocentric worldview and a predisposition towards minimal external regulation and governance? Moreover, the development of psychographic variables to create a scale of human consciousness would be useful to explore the correlation between urban/city visions of human habitation and egocentric, ethnocentric, world-centric and holistic worldviews. The *integral* city model's second proposition suggests that as human civilisation develops along the spiral of collective consciousness, cities as habitats for civilisation would reciprocally develop. Further research might address this gap in knowledge to clarify the relation of human habitats with developmental phases of consciousness.

7.4.2 A spiritual city – what is it?

As discussed throughout this research, the multi-dimensional development of the city would require intervention at the metaphysical level of reality, in order to reconstruct its meaning. Three separate analyses reiterated the importance of the *City of Spirit*. These were the reframing of urban theories with the *integral* city meta-framework, the genealogy of city visions using the CCM, and the CLA of sustainable city futures. However, further research is needed to clarify what it means to build a spiritually or cosmologically inclusive city, and what are the limits of agency (role) in the development of a planetary civilisation with global consciousness. To elucidate on the *integral* city model's metaphysical dimension it is necessary to explore how city planning and design

ought to fulfil the role of the city as the locus of personal spiritual beliefs, self-actualisation, sacred collective action and potentially collective bliss. An *integral* re-examination of Patrick Geddes' schemes for 'Temples (metaphysical centres) of the City' or Christopher Alexander's pattern language for 'sacred sites' may be fruitful here. The latter research question underscores a significant urban challenge, namely how to explore, develop and achieve the meta-physical roles of the city whilst reconciling inter-faith conflicts. Such research would recognise that the city is a construction site for collective problem-solving, which in turn is the catalyst for an emerging global consciousness. It potentially might bring the *Gaian City* vision – the city of peace – closer to reality.

7.4.3 Further case studies

The third area for further research focuses on the impact of praxis in real cities. The claim that the *integral* city model is able to bridge the urban planning theory and practice divide needs to be tested in the real world. Case studies which apply and evaluate the *integral* city model and the CCM are needed to assess their effectiveness as techniques for city planning. The meta-attributes for city development may be used as indicators to benchmark the quality of a city prior to any foresight/planning process incorporating the *integral* city model techniques. Post-intervention evaluation and monitoring may proceed using the same city indicators. In this way, the *integral* city meta-framework provides holistic performance indicators for sustainability.

7.5 Conclusion

The *integral* city model synthesises concepts from macrohistory, cultural change theory, and urban planning/design to "create new tools, both theoretical and methodological" (Castells, 2002: 404). It seeks to reveal the hidden realms of urban life and society and allow people to imagine their own myths and urban visions, and work towards their achievement. But what actually is the *integral* city model? More than anything it is a process — a way of thinking — that implies the holonic teleology for the city through the *integral* city meta-framework's attributes[23]; along with the CCM's socio-cultural dynamics. The operating rules for facilitating multidimensional urban transformations are

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[23] The *integral* city meta-framework's attributes may also be used as the indicators of holistic urban transformation.

provided by the model's three propositions, as well as the deconstructive, foresight technique of CLA.

Currently, most Western cities are trending towards mass civilisation, urban sprawl and megalopolis (Section 4.7). The urban dilemmas of city futures derived from the CLA, when juxtaposed with the meta-framework of city development, provide the foci and cultural impetus for transformation in order to shift the present towards an alternative urban future. This methodological approach generated normative objectives for holistic city development that interact with the *physis, bios, nous* and *theos* levels of reality (Table 7.3).

The layers of CLA then structured the grouping of the city's critical focus areas, to expound the four macro pillars for the 21st century City Policy Agenda. The aim of this agenda is to provide cities with a roadmap to resolve locally their urban contradictions and tensions that manifest problems. The 'Foresight City Agenda' addresses the *litany* layer; the 'Sustainable City Agenda' addresses the *systems* layer; the 'Diverse Learning City Agenda' addresses the discourse/*worldview* layer; and the 'Spiritual City Agenda' addresses the *myth/metaphor* layer of meaning. Each of these agendas is detailed next, in context with the relevant forces of urban change they seek to affect.

Table (7.3) Urban Dilemmas nested within City Futures Focus areas		
Level of Reality	**City Futures Focus Area** (Daffara, 2004)	Urban Dilemmas and contradictions
Physis	E^4 Energy Flows	Industrialisation of developing regions (South) versus Quality of Life in developed regions (North). 20% of the world's population use 80% of the resources. Formal economy versus informal economy
Physis & Bios	C^4 City of Synthesis (Complexification)	Urban health versus urban disease City funding for cars versus city funding for people or mobility systems designed to maximise exchanges and minimise travel/movement. Rational, reductionist planning/design for order versus irrational planning/design for conflict, complexity and spontaneity.
Nous	'MUST' City Governance	Power contradictions within the network society – decisions are made in the space of flows whilst people live in the space of places (virtual versus geographic) Active civil society versus a passive serviced society Inter-vision contradictions between stakeholders e.g., gender biased design versus equitable city
Bios & Nous	H^4 Sustainability	Materialism (growth advocates) versus *Deep ecology* (conserver advocates) Equitable urban opportunities versus urban poverty
Nous	City Noosphere	Cultural identity struggles – universal cultural imperialism versus cultural diversity Social polarisation/segregation within cities versus an urban/social contract
Theos	S^4 Spiritual City	City transformation by technological change versus transformation by values/consciousness change.

7.5.1   The Foresight City Agenda

Overall, the two driving questions for all cities are, where do its citizens want to be in the future and what are their shared visions of human habitation? In this foresight process *Community visioning* is the means to achieve the ends, within the waves of urban change. Technological drivers such as the computer, bio-molecular and quantum revolutions, in tandem with a local/global multi-cultural identity crisis, indicate an unprecedented level

of social change for humanity now and in the future. This process is challenging historical stable notions of nature, the city and reality. The sustainability revolution and its ecological imperative are also forcing societies and cities to rethink their limits of growth. Conversely, the sheer physical/spatial mass and infrastructure of urbanisation and its economic-technic engine of production resist agile adaptations. The unfolding civilisational changes will inevitably shape alternative city futures, particularly when trends indicate that the majority of the world's population will live in cities and urbanised environments. The need for cities of foresight, which develop community governance models that empower their citizens to participate in community visioning, is real and urgent. Visioning the future city allows communities to debate and choose their desired environmental habitat. It creates a 'pull' towards the preferred future. This process also creates space and dialogue for cultural transformation and learning, to allow the removal of the obstacles to change (weights) and reengineer the drivers of change (pushes). Moreover, based on the *integral* city meta-framework the psychosocial form of a foresight city would build: (1) self-empowered citizen leadership; (2) utilitarian policies; (3) intercultural leadership or politics of difference; and (4) reflective, transformational leadership (Table 7.4).

7.5.2   The Sustainable City Agenda

The Sustainable City Agenda conjoins three city focus areas: (1) the E^4 City of ecological, equitable, effective and economic energy flow that supports the concept of eco-efficiency; (2) the C^4 City of Synthesis that requires a complex, compact, convenient and cybernetic city form; and (3) the 'MUST' transformation of city governance (refer to Table 7.4 for city focus areas). City governance needs to enable world-centric thinking amongst its stakeholders to improve its eco-efficient energy and resource use. The challenge is to shift mindsets from 'material growth is good' to 'balance', as well as address the current unfair use of global resources. Next, city governance needs to build its own capacity to synthesise the complex, multidimensional city, to move away from 'blue-print' rational/cognitive planning towards other ways of knowing, including intuitive and tacit forms to respond to chaos.

Level of Reality	City Futures Focus Area	Phenomenology "I"	Ontology "It"	Ideology "We"	Epistemology "Its"
	Table (7.4): City Futures focus areas and levels of reality ≡ urban qualities				
Physis	E⁴ Energy Flows	Effective exchange	Economic (efficient) exchange	Equitable exchange	Ecological exchange
Physis & Bios	C⁴ City of Synthesis (Complexification)	Convenient urban form	Compact urban form	Complex urban form	Cybernetic urban form
Nous	'MUST' City Governance	Self empowered leadership	Utilitarian	Multi-cultural Leadership (Politics of difference)	Transformational leadership
Bios & Nous	H⁴ Sustainability	Hospitable habitat	Healthy habitat	Humane habitat	Habitually Fecund
Nous	City Noosphere	Learning citizen	Creative citizens	Identifiable Cultures	Conscious communities
Theos	S⁴ Spiritual City	Sacred personal places	Self-actualisation supported	Sacred public places	Suffer less Place

The wealth divide is deep at the global and local levels and remains a significant weight against change. The sustainability agenda needs to resolve the current global resource inequities, between the developed regions seeking to maintain their quality of life, and the developing regions whose resource needs are growing due to increasing industrialisation. Provision of safe water is a critical global resource problem for many cities. At the local level the sustainable city agenda needs to provide equitable urban opportunities to counter urban poverty. Contrasting the underlying worldviews for the survival of the human species, materialism (growth advocates) and environmentalism (conserver advocates) both need to give way to *deep ecology* (eco-efficiency advocates).

The current research proposes that the normative principles for the production of space (city design and urban form) would be grounded in the same eco-efficient principles of:

(1) complexification of energy and matter; (2) synthesis of systems; (3) symbiotic relationships; and (4) self-regulation and bio-mimicry (or learning) towards dynamic balance (homeostasis). Moreover, based on the *integral* city meta-framework, the spatial form of a sustainable city would also be a hospitable, healthy, humane and fecund habitat.

The resultant city form would be compact, energy efficient, produce zero net waste and zero emissions, be equitably accessible and symbiotically one with the ecology, thus adding to its abundant productivity. In the past, such visions – such as Soleri's (1969) concept of *Arcology* – were considered impractical. However, as described in Chapters Four and Six, the *deep ecology* synthesis of mind and matter now fundamentally challenges the dominant technical urban paradigms (modernist or neo-traditional forms of city design). City form in the future must follow function, and function will be reassessed to follow fecundity (life). This transformation is dependent on a synchronous transformation of city governance and leadership.

7.5.3   The Diverse Learning City Agenda

For the Diverse Learning City Agenda, city governance needs to focus on human consciousness development, support cultural diversity and a 'politics of difference' to counter the faces of oppression, cultural desertification and imperialism. Essentially, the diverse learning city agenda is similar to Sandercock's (1998) *Cosmopolis*. Diversity is not merely tolerated, but respected and valued. As such, significant challenges need to be overcome, including the power contradictions within the network-information society – where decisions are made in the space of information flows that affect urban populations whilst people live in the space of places (virtual versus geographic). This driver of urban change contributes to the rise of the *Dual City* (Castells, 1989) – a spatial manifestation of social polarisation/segregation within cities that threatens the urban/social contract. Another consequence of the *Network Society* needing resolution is the significant cultural identity struggles within cities, as sites of conflict between universal cultural imperialism versus cultural diversity. On a more hopeful note, experience shows that cities are more effective than other levels of government in building an active civil society. This will remain important to counter the rise of a passive technologically serviced society. Above all, the capacity of organisational forms to creatively engage the multiple stakeholders who make decisions in and 'build' the multi-dimensional city is paramount to purposively

communicate and resolve inter-vision and inter-agenda contradictions. Moreover, based on the *integral* city meta-framework (Table 7.4), the psychosocial form of the city (*noosphere*) would aim to develop learning and creative citizens, identifiable cultures, and conscious communities (the concept of the self determining 'collective mind').

7.5.4 The Spiritual City Agenda

For the Spiritual City Agenda, city governance needs to facilitate a deeper, meaningful local/global consciousness about human purpose. Inner-individual spiritual growth will improve outer-collective purposive action. From this perspective, the humane and spiritual city may serve as a catalyst for the journey towards planetary civilisation. The hope is to direct urban transformation by values change, rather than be directed solely by technological change.

In this research the spiritual city agenda arose in importance because the evidence revealed that the collective consciousness affects the way humans make cities, and likewise is affected by their multi-dimensional nature. Most urban problems and contradictions may be transformed in two ways, either city transformation by technological change or transformation by values changes. This finding is based on the causal relationship between variables across different dimensions of what is perceived to be real, as demonstrated by either the CLA or the *integral* model. For example, what was once viewed as merely an objective problem (It) has a broader inter-objective (Its), as well as deeper subjective (I) and inter-subjective (We) dimension.

This thesis has demonstrated how humanity's objective/collective historical evolution of the construction of the city correlates with a subjective/collective pyschosocial reciprocal evolutionary journey at a deeper level. One conclusion is that civilisations' construction of the city is their manifestation of a deeper construction of collective consciousness and spirit. The application of this knowledge may be used for the design of a glo-cal project, to transform the city as a catalyst for the development of a planetary human civilisation – integrating matter, body, mind and spirit. The *integral* city model – multidimensional in nature – provides normative criteria/qualities for holistic city development (Table 3.1 and Table 7.4) that also serve as performance indicators. The model is able to nest contemporary urban concepts with socio-cultural dynamics, and thereby bridge the

schism of urban planning theory (the ideal) with practice (the real), which is the first step on a long journey of transformation.

In this endeavour, individuals need to be focussed on making the transition from an egocentric or ethnocentric to world-centric civilisation. Egocentrism and ethnocentrism are the states of collective mind where the human species may destroy themselves in war or ecological collapse. The city is emerging as a global force transcending nation-states, and if they operate in world-centrism (local/global perspective) rather than ethnocentrism (local perspective) their influence would help facilitate a planetary civilisation. In the future, *Cities of Spirit* ought to be the places of meaningful habitation as a planetary civilisation. Based on the *integral* city meta-framework, the metaphysical form of a spiritual city would also offer sacred personal and public places, a lifeworld that supports freedom for self-actualisation and respite from suffering. These cities are certainly imaginable, as demonstrated by the thesis and survey findings. The challenge is now to collectively choose at the *litany* level a preferred city vision and its images, and work together to reconcile contradictions at the systemic *Lifeworld*, discourse/*worldview*, and *myth/metaphor* layers of reality to manifest it. Such a challenge is dynamic, always under construction and not possible to complete as multiple realities shift.

7.5.5 After word

At the time of writing this after word, the UN Security Council's resolution for a cease fire took effect over the thirty-three day war between Israel and Hezbollah. During this conflict it seems that the greatest casualties are the cities of Lebanon. Cities in the multi-dimensional sense as described in the current research. During war, governments recognise the strategic importance of destroying the holistic fabric of cities, as demonstrated by the recent bombings of Beirut and Tyre, and of past bombings of European cities during WWII (*The Destruction of Memory: Architecture at War*, Bevan, 2006). Bevan argues that these military tactics exist because cities (more specifically their physical architecture) symbolise the values and aspirations of their cultures and communities, and the destruction of an enemies' cultural memory is a powerful weapon in a military campaign. This proposition exposes the dark side of humanity's clear understanding of the role of cities as catalysts for civilisation. Why then, is it much harder

to build the peaceful *Spiritual City* that facilitates the development of human consciousness, and collective cultural memory?

In the stark harshness of war, the current research purpose takes on a new sense of urgency. In 2001, the research purpose sought to understand the cultural dynamic within the Western city and its effect on its multi-dimensional manifestation. Understanding this open-ended dialectic between levels of reality (from the *litany* of vision, *social systems*, *worldview/episteme* and *myth/metaphor*), and across alternative urban futures, hoped to provide the means for effective city transformations. The research methodology synthesised a cultural change model (CCM) for cities and also an *integral* city meta-framework for transdisciplinary, comparative urban inquiry. Through this framework and its teleology of the city, the schism between urban theory and practice becomes resolvable. CLA used as a transformative method for building cultural/city foresight revealed the key urban contradictions needing resolution to make cities sustainable. From the conjunction of the CLA and the *integral* city meta-criteria, emerged a 21st century City Policy Agenda that clarified the interventions required to create holistic and better urban futures. Now, the research purpose remains not only significant, but its findings provide hope to cities that their concomitant futures are dependent on the development of human consciousness. Cities have a vital global/local role to enact to transform themselves as catalysts for the development of a planetary human civilisation – towards global consciousness – integrating matter, body, mind and spirit.

8   Appendices

8.1 Appendix A: Sunshine Coast Habitat Survey

8.1.1 Survey Instrument (Hardcopy format for self completion and workshops)

FUTURE HABITAT SCENARIOS: Community Survey

What is this about?

The Sunshine Coast region will be facing a great deal of growth and change in the future. In fact, Maroochy Shire's resident population may increase by 88,000 to 215,000 people by the year 2016. The number of people living on the Sunshine Coast in the year 2021 may increase by 190,000 to 435,000.

This growth will have an impact upon the quality of life of residents and visitors alike, particularly the quality of FUTURE HUMAN HABITATION.

HABITAT- A PLACE WHERE PEOPLE, PLANTS AND ANIMALS LIVE.

Maroochy Shire Council is sponsoring a study to develop plausible scenarios for future human habitation on the Sunshine Coast.

As a community it is important that we collectively agree upon our desired vision for the region's Habitat.

Purpose and Significance of the Study

The proposed research will work towards the achievement of Maroochy Shire's Corporate Plan Objective 5:

Key Objective: A dynamic approach to integrated planning and management of population growth that reflects community aspirations and enhances our lifestyle, diverse heritage and environment

Strategy: Promote, plan and guide the development of built environments with a quality of architecture, urban and landscape that is consistent with the built and natural character of the locality and with residents' aspirations.

The research is to be conducted by Mr Phillip Daffara and supervised by Dr Sohail Inayatullah and Dr Pam Dyer from the Dept of Arts & Social Sciences, University of the Sunshine Coast. The results will provide alternative future scenarios for human settlement/habitat in the shire.

This work will be of major benefit to Council as it will inform other corporate initiatives such as:

- Subsequent Maroochy Plan Amendments conducted every two years and measurement of Maroochy Plan's Desired Environmental Outcomes conducted every 7 years; in objectives for the urban design quality of the Shire's built environmen.
- Quality of Life Strategy;
- the 15 year Capital works programme;
- long range service delivery profiles; and
- "learning organisation" impacts so that the organisation remains responsive to external trends and pressures.

Maroochy Shire Council

FUTURE HABITAT SCENARIOS: Community Survey

Alternative Habitat Scenarios

HABITAT ASPECTS	8.1.2 Characteristics of the Habitat Scenarios			
	A	**B**	**C**	**D**
Nature	Bio-diversity fragmented and lost	Existing bio-diversity conserved	Bio-diversity rehabilitated	Abundant, healthy bio-diversity
Architecture	Monotonous Sprawl Slow incremental change	Existing distinctive architecture conserved as future heritage. Slow incremental change	Compact, energy efficient design, with a timeless beauty. Slow incremental change	Innovative, Artificially intelligent Habitat, highly responsive to social and cultural change
Culture	Segregated	tolerant	Diversity valued	Diversity valued and evolving
Social	Stressful	Fair (balanced)	Vibrant	Wise and fulfilling
Business	Unsustainable	Responsive	Prosperous	Sustainable
Transport	Car orientated; Inefficient public transport	Diverse ways to travel – Car, bus, bike, walk	Walkable Towns, linked by efficient public transport	Walkable Habitats, linked by efficient public transport
Urban Growth	Outward upon the landscape	Limited outward expansion and limited character change	Consolidated with no further outward growth	Consolidated and retraction of existing sprawl
Metaphor	Labyrinth	Patchwork quilt	Bee hive Colonies	Nurturing Mother with child

For Further **Information:**	Please contact Mr Phillip Daffara, Principal Urban Design Coordinator, Strategic Planning Services, Maroochy Shire Council on **1300 366 695.**

Maroochy Shire Council

FUTURE HABITAT SCENARIOS: Community Survey

You are encouraged to imagine the preferred future habitat by answering the following simple questions.

Below are four different habitat scenarios for the Sunshine Coast represented by simple images labelled A,B,C,D.
Take some time to reflect intuitively on each image and be aware of the feelings and thoughts you receive from each scenario.

Question 1: Which image best describes your preferred vision for human habitation on the Sunshine Coast in?:
The Year 2025_____
The Year 2050_____
The Year 2100_____

A:
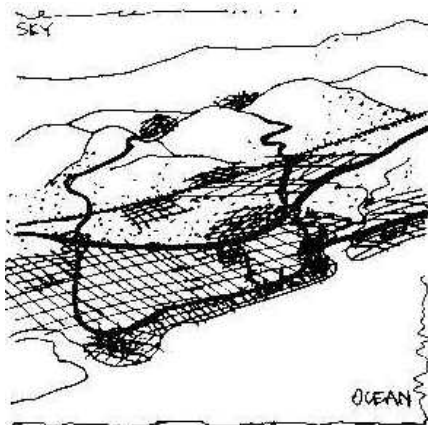
B:
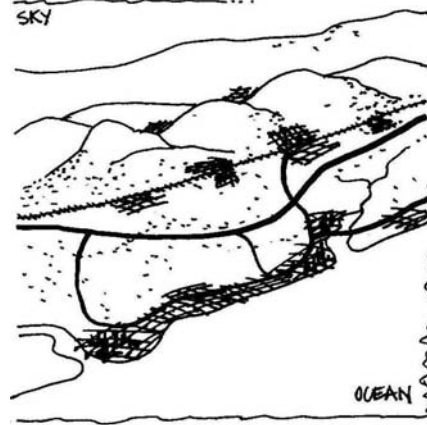
C:
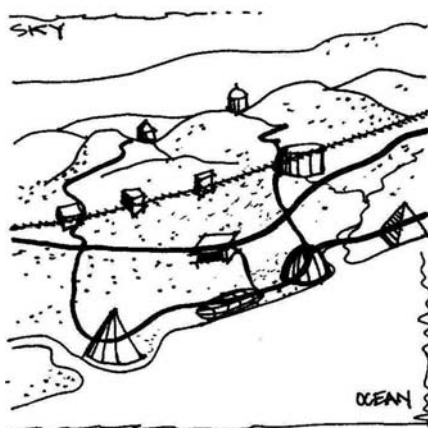
D:
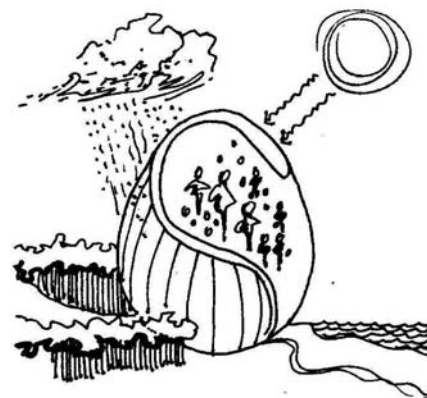
Please turn over the page to answer Questions 2 and 3

FUTURE HABITAT SCENARIOS: Community Survey

**Question 2:
Imagine the region
in the Year 2100
and it's qualities.**

Choose 6 words that describe the qualities of your preferred future Habitat of the Sunshine Coast. Select from the list below or choose your own words and add them under the relevant category.
Choose 2 qualities for each category and prioritise your selections by placing a "1" or "2" against your choice under each category.

Qualities for the:

Environment:	**Community**	**Business**
☐ Healthy	☐ Distinctive	☐ Accessible
☐ Comfortable	☐ Vibrant	☐ Convenient
☐ Tranquil	☐ Interactive	☐ Prosperous
☐ Green	☐ Stressful	☐ Adaptable
☐ Human Scale	☐ Fun	☐ Innovative
☐ Grey	☐ unjust	☐ Non-viable
☐ Polluted	☐ segregated	☐ unresponsive
☐ Dead	☐ Dull	☐ Stagnant
☐ Beautiful	☐ fair	☐ bureaucratic
☐ Fragmented	☐ Wise (foresight)	☐ Sustainable
☐	☐	☐ (Others)

Question 3:   **Please provide some information about yourself as a member of the community by circling the appropriate number.**

I am	**male**	**1**	**My age is**	under 17	1
	female	2		18 - 35	2
				36 - 50	3
				51 - 65	4
				over 66	5

I have lived on the Sunshine Coast Region for

My Post Code is ☐

Less than		All my life	7
1 year	1	6 to 10 years	4
1 to 2 years	2	11 to 20 years	5
3 to 5 years	3	over 20 years	6

8.1.3 Survey Instrument (Random Phone Survey Format)

SUNSHINE COAST FUTURE HABITAT SURVEY

[Welcome by Market Facts' Interviewer]

The Sunshine Coast habitat – where people, plants and animals live is facing a great deal of growth and change in the future, because it is projected to accommodate 19% of the population growth in South East Queensland over the next 20 years.

The number of people living on the Sunshine Coast in the year 2021 may increase by 190,000 to 435,000.

This growth will have an impact upon the quality of life of residents and visitors alike, particularly the quality of life of future human habitation.

The purpose of this survey is to research the communities preferred vision for human habitation on the Sunshine Coast in 2100.

Maroochy Shire and the University of the Sunshine Coast are conducting the research. For further information Contact Mr Phillip Daffara.

You are encouraged to imagine the preferred future habitat by answering the following simple questions.

Listen carefully to the following stories about the future Sunshine Coast and be aware of the feelings, thoughts and images you receive from each.

You will be asked to pick the story that best describes your preferred vision for human habitation on the Sunshine Coast in 2100.

[NARRATION OF SCENARIOS]

QUESTION 1

Which story best describes your preferred vision for human habitation on the Sunshine Coast in 2100?

1. Sunshine Coast Suburbs expand as part of a Brisbane SuperCity
2. Diverse Sunshine Coast Towns
3. Sunshine Coast Archologies (Town Consolidation)
4. Sunshine Coast BioCity (High Tech Sustainable Habitat)

QUESTION 2 – IMAGINE YOUR PREFERRED VISION OF THE SUNSHINE COAST IN 2100 AND ITS QUALITIES.

QUESTION 2A

Choose 2 words from the following list that describe the qualities of the Sunshine Coast's Environment you hope will be in 2100.

- Healthy
- Comfortable
- Tranquil
- Green
- Human Scale
- Beautiful
- Diverse

Prioritise your selections by placing a "1" or "2" against your choice.

QUESTION 2B

Choose 2 words from the following list that describe the qualities of the Sunshine Coast's Community you hope will be in 2100.

- Distinctive
- Vibrant
- Interactive
- Responsive
- Fun
- Fair/Just/Ethical
- Wise (foresight)

Prioritise your selections by placing a "1" or "2" against your choice.

QUESTION 2C

Choose 2 words from the following list that describe the qualities of the Sunshine Coast's Economy you hope will be in 2100.

- Accessible
- Convenient
- Prosperous
- Adaptable
- Innovative
- Materialistic
- Sustainable

Prioritise your selections by placing a "1" or "2" against your choice.

QUESTION 3

Please provide some information about yourself as a member of the community by circling the appropriate number.

You are   male
                Female

Your age is   under 17
                  18 - 35
                  36 - 50
                  51 - 65
                  over 66

You have lived on the Sunshine Coast Region for

                  Less than 1 year
                  1 to 2 years
                  3 to 5 years
                  6 to 10 years
                  11to 20 years
                  over 20 years, but not all your life
                  All my life

Your Post Code is   _____

NARRATIVE OF THE 4 SCENARIOS:

SCENARIO 1 Sunshine Coast Suburbs Expand within Brisbane Super City

Weak regional governance and planning policy interacting with a strong urban development industry results in a sprawling settlement pattern to house the anticipated population growth.

The region's Bio-diversity (natural environment) is fragmented and declining.

The private car is the major means of travel. Access to facilities and town centres is inequitable due to poor public transport unable to service the large areas of low-density residential development. Most people live, work and play in the technology connected suburbs.

A driving social value within this scenario is that home ownership and the private domain is valued as more important than the creation of community capital.

SCENARIO 2 Diverse Sunshine Coast Towns (limited expansion and change)

Strong regional governance and planning policy interacting with a weaker urban development industry results in limited urban expansion which also restricts population growth. Urban growth boundaries and natural/cultural conservation policies limit urban development.

The region's existing bio-diversity is protected and maintained.

Access to facilities and centres occurs mainly by car. Urban enhancements to make residential communities well connected allow diverse ways to travel including bus, cycle and walking.

A driving social value within this scenario is that people value traditional community benefits and livability equally with the desire for home ownership and accumulation of personal capital.

SCENARIO 3 Sunshine Coast Arcologies (Town consolidation)

Strong regional governance and planning policy interacting with a strong urban development industry results in town consolidation and renewal to house the anticipated population growth.

The region's existing Bio-diversity is protected and many degraded areas are rehabilitated back to a natural state and sustained.

Urban form is transformed from sprawl to *Arcology*, which means the creation of Architectural Ecology or eco-village - where communities live in compact, walkable mixed use towns. Equitable access to facilities and centres is delivered by efficient and viable public transport linking the archologies.

A driving social value within this scenario is that people cooperate creatively to meet the local challenge of transforming their habitat and culture towards sustainability, liveability and viability.

SCENARIO 4 Sunshine Coast BioCity – (High Tech Sustainable Habitat)

Regional governance is replaced by community self action and visioning, enabled by technology and the internet. This empowered community interacting with a weak urban development industry creates a settlement pattern that likewise has transformed to be an "artificially intelligent" habitat. This City is a Living Entity co-habitating in a mutually beneficial relationship with its Citizens.

Resident's quality of life is optimised through technological advances. Human Habitation is organised to minimise the ecological impact upon the region; by being self sufficient in energy and water consumption and converting all waste into valuable commodities. 70% of the region has been restored to its natural state. Community Health and spiritual well being are important qualities nurtured within culture. BioCity is walkable, carfree and connected to other Biocities by rapid public transport.

A driving social value of this scenario is a respect for the land. A belief that "we are a part of the land and do not own it". The sustainable journey of life is valued more than the collection of assets.

8.2 Appendix B: Global City Survey

8.2.1 Survey Instrument (hardcopy format for National Conferences)

GLOBAL CITY FUTURES SURVEY:
IMAGINE YOUR PREFERRED VISION FOR THE CITY OF 2100

Purpose of this survey

The purpose of this survey is to research Humanity's preferred vision for human habitation on the Earth in 2100.

The urban problem!

According to Federico Mayor and Jerome Binde of UNESCO, **the major problem facing us on the planet is the shocking projected urban growth**. They write that:

*"The urban population worldwide is growing two to three times more quickly than the rural population. In the space of 40 years, **we shall have to build the equivalent of a thousand cities of three million inhabitants**; approximately as many cities as there are today. This urban revolution will mostly affect the developing countries.*

Two-thirds of the world's population in mega-cities is concentrated in the poorest regions - increasing the risk of uncontrolled chaos, poor management of social structure and unsustainable impact on natural resources – particularly water and energy.

*As pointed out by Candido Mendes, "**Human Habitat is political as its intrinsic biodiversity is related to human values and lifestyles.**" This means that strategies have to be adopted that defend cultural pluralism, preservation of ecology and democracy."*

(Extracted from The World Ahead, Mayor and Binde 2001)

This growth if it occurs within existing technologies and organisational structures is likely to have a deleterious impact upon the quality of life of future human habitation on the Earth.

How might this research make a difference?

Visioning global city futures allows communities to debate and choose their desired environmental habitat. It **creates** a "pull" towards the preferred future. It is obvious that cities are human habitats, but evidence shows that they are far from being humane. This research will clarify the human aspirations for the future city (urban habitat) of 2100, thereby constructing **a bridge towards a humane habitat.**
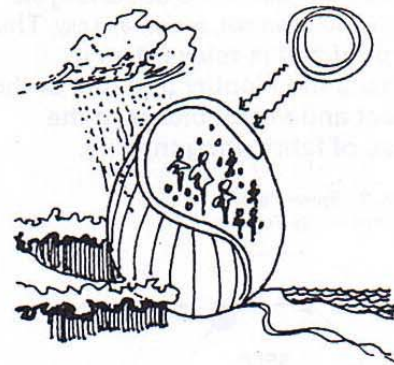
Who is conducting the survey?

Phillip Daffara is conducting this research and is being sponsored by Maroochy Shire Council (a participating local government in the Cities for Climate Protection Program). This survey is part of Mr Daffara's postgraduate research at the University of the Sunshine Coast.

> *"Expect nothing from the twenty-first century. It is the twenty-first century that expects everything from you."*
> Gabriel Garcia Marquez.

PLEASE RETURN THE COMPLETED SURVEY TO THE CONFERENCE REGISTRATION DESK.

Survey's theoretical context

This survey draws from the fields of Futures Studies, Architecture, Cultural Theory and of particular importance are the insights from macro-history. Macro-history is the study of the histories of social systems, along separate trajectories in search of patterns. Macro-history is a means of understanding the grand civilisational patterns or trends that may reveal possibilities of the future. Refer to Figure 1.

An exemplary macro-historian is Pitirim Sorokin (1889-1968) and his macro-history of cultural paradigms gives us a pattern for the future from which we can understand the formation of the next phase of the city.

Sorokin's macro-history of Cultural Paradigms provides a grand pattern of understanding the relationship between self, society and city. **The concept of self is relevant as it influences the identity and role of the architect and stakeholders in the process of fabricating the city.**

Figure 2 : Sphere's of Influence – City Futures
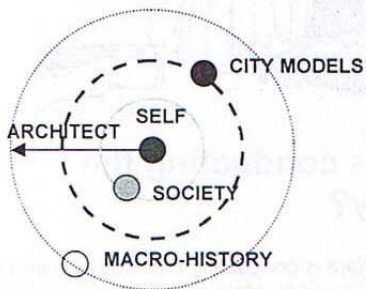
Sorokin's cultural paradigms do not carry geohistorically identifiable names; rather they are typologies of how cultures perceive the nature of reality. He categorises cultures as being predominately:

- Ideational (spiritual) – nature of reality concerned with ideas.
- Sensate (materialistic) – nature of reality concerned with matter.
- Idealistic (eclectic/integrated) – nature of reality concerned with or balanced by both matter and ideas.

Figure 1: Fields & Global City Futures
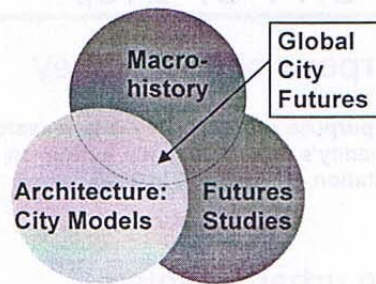
Sorokin argues that civilisational/cultural change is cyclic in the form of a pendulum, moving from Ideational to Idealistic to Sensate, and back to Ideational. Refer to Figure 3.

Figure 3: Sorokin's Macro-History

Where are we now and where are we going?

Using Sorokin's model, our present culture is Sensate – based on scientific reductionist observation and material resource consumption to benefit society.

The meta-architecture of the city that has emerged is similarly reductionist, sprawling and resource consumptive.

The future city from a global perspective has an important role to play as the habitat for emerging planetary civilisations.

Focussing on this relationship, this survey explores how alternative future city models of urban development may arise out of the alternative emerging civilisations, and their cultural paradigms.

Examining the relationship between:
  (1) Urban Policy and Decision making interacting with the
  (2) Urban Development Industry and;
  (3) The level of Sustainable development practices in the culture.

Generates the following scenarios for the future city or human habitat of 2100:
Refer to Figure 4.

How to participate –
Three simple steps

  (1) Read carefully the following stories about the future world and be aware of the feelings, thoughts and images you receive from each.

  (2) Decide which story best describes your preferred vision for human habitation on the Earth in 2100 with its related cultural paradigm.

  (3) Fill out the survey form and return it to the **Conference Registration Desk.**

Contact details

For further information, contact Phillip Daffara, Programme Coordinator, Urban Design, Heritage and Landscape, Maroochy Shire Council by:

Phone: 1300 366 695

Fax: 07 5441 8029

Visit Maroochy Shire Council's website:
http://203.147.194.251/global_cities_survey.cfm

Email: daffarap@maroochy.qld.gov.au

Writing: Mr P Daffara
                Maroochy Shire Council
                PO Box 76
                Nambour, Qld 4560

Figure 4: City Scenarios
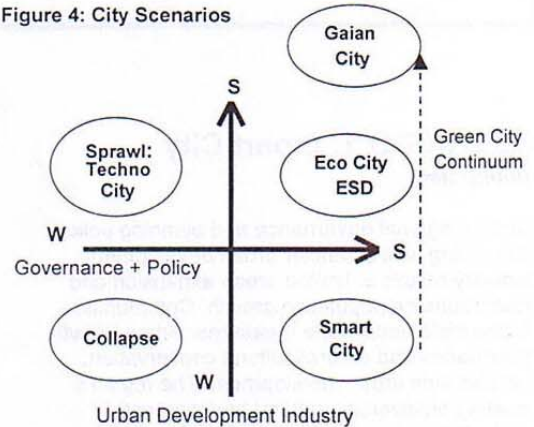
ESD = ecologically sustainable development
GAIA = transformed civilisation where G+P and UDI are obsolete concepts. It is the Outlier scenario
S = Strong; W = Weak

Sponsors

The author acknowledges and thanks the assistance received from the following organisations:

FOUR ALTERNATIVE VISIONS FOR THE CITY OF 2100

SCENARIO 1: Smart City
(Integrated)

Strong regional governance and planning policy interacting with a weaker urban development industry results in limited urban expansion and restrictions on population growth. Communities follow triple bottom line measures. Urban growth boundaries and natural/cultural conservation policies limit urban development. The region's existing biodiversity (natural environment) is protected and maintained.
While access to facilities and centres occurs mainly by car, urban enhancements make residential communities well connected and allow diverse ways to travel including bus, cycle and walk.

A driving social value within this scenario is that people value traditional community benefits and liveability equally with the desire for home ownership and accumulation of personal capital.

SCENARIO 2: Eco City
(Integrated → Spiritual)

Strong regional governance and planning policy interacting with a strong urban development industry results in urban consolidation and renewal to house the anticipated population growth.
The region's existing biodiversity is protected and many degraded areas are rehabilitated back to a natural state and sustained.
Urban form is transformed from sprawl to "arcology" which means the creation of architectural ecology or eco-village – where communities live in compact, walkable mixed-use habitats. Equitable access to facilities and centres is delivered by efficient and viable public transport linking the arcologies. Biofeedback loops of the cyber city's sensors ensure the development of sustainable social, constructed, natural and ethical capital.

A driving social value within this scenario is that people cooperate creatively to meet the local challenge of transforming their habitat and culture towards sustainability, liveability and viability.

SCENARIO 3: Techno City (Sprawl)
(Materialistic)

Weak regional governance and planning policy interacting with a strong urban development industry results in a sprawling settlement pattern to house the anticipated population growth.
The region's biodiversity is fragmented and declining.
The private car is the major means of travel. Access to facilities and urban centres is inequitable due to poor public transport unable to service the large areas of low-density residential development. Most people live, work and play in the technology connected suburbs.

A driving social value within this scenario is that home ownership and the private domain is valued as more important than the creation of community capital.

SCENARIO 4: Gaian City
(Spiritual)

Regional governance is replaced by community self-action and visioning, enabled by technology and the Internet. This empowered community interacting with a weak urban development industry creates a settlement pattern that likewise has transformed to be an "artificially intelligent" habitat. This city is a **living entity** co-habitating in a mutually beneficial relationship with its citizens.

Resident's quality of life is optimised through technological advances. Human habitation is organised to minimise the ecological impact upon the region by being self-sufficient in energy and water consumption and converting all waste into valuable commodities. Seventy percent of the earth's landmass has been restored to its natural state. Community health and spiritual well-being are important qualities nurtured within culture. Gaian cities are walkable, car-free and connected to other Gaian cities by rapid public transport.
A driving social value of this scenario is a respect for the land. A belief that "we are a part of the land and do not own it". The sustainable journey of life is valued more than the collection of assets.

You are encouraged to imagine the preferred future habitat of an ideal "Global City" by answering the following simple questions.

QUESTION 1: Which story best describes your preferred vision for human habitation on the Earth in the year 2100? Circle your choice.

VISION	CULTURAL PARADIGM
1. Smart City	*Integrated (balanced)*
2. Eco City	*Integrated → Spiritual*
3. Techno City	*Materialistic*
4. Gaian City	*Spiritual*

QUESTION 2: Within your preferred 2100 city vision above, what 3 key qualities of the architecture of the city do you hope for?

_____

_____

_____

_____

_____

_____

QUESTION 3:
In 2100 which system of governance do you hope for?

Please Tick your choice:

☐ Planetary democracy and governance

☐ Status quo of Nation State Sovereignties

☐ Local community governance aligned under World Trade Blocks

☐ Planetary Democracy with local community governance

☐ Other: (describe)

Imagine your preferred vision of the world in 2100 and its qualities.

QUESTION 4:
Prioritise from the list below the words that describe the qualities of the earth's environment in 2100 that you hope for.

1 = Top priority

Preferred Environmental Quality for 2100

☐ Healthy
☐ Comfortable
☐ Tranquil
☐ Green
☐ Human Scale
☐ Beautiful
☐ Diverse

QUESTION 5:
Prioritise from the list below the words that describe the qualities of the world's civilisations in 2100 that you hope for.

1 = Top priority

Preferred Cultural Quality for 2100

☐ Diverse
☐ Vibrant
☐ Interactive
☐ Responsive
☐ Fun
☐ Wise - Fair/Just/Ethical
☐ Futures orientated

QUESTION 6:
Prioritise from the list below the words that describe the qualities of the world's economy in 2100 that you hope for.

1 = Top priority

Preferred Economic Quality for 2100

- ☐ Equitable access
- ☐ Convenient
- ☐ Prosperous
- ☐ Adaptable
- ☐ Innovative
- ☐ Materialistic
- ☐ Sustainable

Please provide some information about yourself as a member of the global community by choosing the appropriate answer.

QUESTION 7:
Your Gender is   ☐ female
☐ male

QUESTION 8:
Your age is   ☐ under 17
☐ 18 – 35
☐ 36 – 50
☐ 51 – 65
☐ over 66

QUESTION 9:
You live in the World Region of

- ☐ Africa
- ☐ Asia (Central)
- ☐ Australasia + Asia Pacific Rim
- ☐ Europe
- ☐ North America
- ☐ South America

Your worldview

QUESTION 10:
Choose the statement which best describes your main view of humanity's (the World's) relationship with the Earth and universe (Nature).

Your World View (cultural perspective) is as an/a

☐ **Individualist:**
I believe in the ingenuity of human beings and the resilience of Nature.

☐ **Egalitarian:**
I believe the World needs to be more equitable, lean and green.

☐ **Hierarchist:**
I believe in balance and stability through partnership and control.

☐ **Fatalist:**
I believe life is a lottery and reality is capricious. Our fate is sealed.

☐ **Hermit:**
I believe I am on the fringe of society, looking in on the World

Please provide your name and contact details if you would like a copy of the results, when the survey information has been analysed.

| Name/Surname: |
| Address: |
| Email: |

THANK YOU FOR PARTICIPATING.

PLEASE RETURN THE COMPLETED SURVEY TO THE CONFERENCE REGISTRATION DESK.

8.2.2   Global City Futures Survey (Webpage Text)

Purpose of this survey

The purpose of this survey is to research Humanity's preferred vision for human habitation on the Earth in 2100, and how cultural perspectives affect it.

Shocking Urban Growth!

"The urban population worldwide is growing 2 to 3 times more quickly than the rural population. In the space of 40 years, we shall have to build the equivalent of a thousand cities of three million inhabitants; approximately as many cities as there are today. This urban revolution will mostly affect the developing countries.

2/3 of the world's population in Mega-cities is concentrated in the poorest regions-increasing the risk of uncontrolled chaos, poor management of social structure and unsustainable impact on natural resources – particularly water and energy.

As pointed out by Candido Mendes, "Human Habitat" is political as its intrinsic biodiversity is related to human values and lifestyles. This means that strategies have to be adopted that defend cultural pluralism, preservation of ecology and democracy.

To meet the urban challenge, we need from now on, according to Nestor Garcia Cancilini, to "revive the public space" and recover the overall meaning of social life: otherwise we are faced with the risk of ungovernability. The destructive urban trends lead us to greater authoritarianism and repression." – extracted from The World Ahead, (Mayor and Binde 2001)

This growth will have an impact upon the quality of life of future human habitation on the Earth.

How might it make a difference?

Visioning city futures allows communities to debate and choose their desired environmental habitat. It creates a "pull" towards the preferred future. It is obvious that cities are human habitats, but evidence shows that they are far from being humane, this research will be done to clarify the human aspirations for the future city (urban habitat) of 2100, thereby constructing a bridge towards a humane habitat.

Who is conducting the survey?

Maroochy Shire Council (a participating local government in the Cities for Climate Protection Program) and the University of the Sunshine Coast are conducting the research. For further information, contact Mr Phillip Daffara. Email: daffarap@maroochy.qld.gov.au

You are encouraged to imagine the preferred future habitat of an ideal "Global City" by answering the following simple questions.

How to participate – 4 Simple Steps

1. Read carefully the following stories about the future World and be aware of the feelings, thoughts and images you receive from each.

2. Decide which story best describes your preferred vision for human habitation on the Earth in 2100 with its related cultural mentality.

3. Fill out the online form and submit it when you are finished.
4. Please forward the web address of this survey to a friend or colleague.

More info about Macro-history, Cultural Mentalities & the City

Macro-history is the study of the histories of social systems, along separate trajectories in search of patterns. Macro-history is a means of understanding the grand civilisational patterns or trends that may reveal possibilities of the future.

An exemplary macro-historian is Pitirim Sorokin (1889-1968) and his macro-history of "cultural mentalities" gives us a pattern for the future from which we can understand the formation of the next phase of the City.

Sorokin's macro-history of "Cultural Mentalities" provides a grand pattern of understanding the relationship between Self, Society and City. Sorokin's cultural mentalities do not carry geo-historically identifiable names; rather they are typologies of how cultures perceive the nature of reality. He categorises cultures as being predominately:

Ideational (spiritual) – nature of reality concerned with ideas.

Sensate (materialistic) – nature of reality concerned with matter.

Idealistic (eclectic/integrated) - nature of reality concerned with or balanced by both matter and ideas.

Sorokin's Macro-history

Sensate: **Materialism**

Ideational:

Idealistic: **Integrated**

Sorokin argues that civilisational/cultural change is cyclic in the form of a pendulum, moving from Ideational to Idealistic to Sensate, and back to Ideational.

Where are we now and where are we going?

Using Sorokin's model, our present culture is Sensate – based on scientific reductionist observation and material resource consumption to benefit society.

The meta-architecture of the city that has emerged is similarly reductionist, sprawling and resource consumptive.

The future city from a global perspective has an important role to play as the habitat for emerging planetary civilisations.

Focussing on this relationship, this survey explores how alternative future city models of urban development may arise out of the alternative emerging civilisations, and their cultural paradigms.

Examining the relationship between:
1. Urban Policy and Decision making interacting with the
2. Urban Development Industry and;

3. The level of Sustainable development practices in the culture.
Generates the following scenarios for the future city or human habitat of 2100:
Refer to Figure 1

Figure 9.1: City Scenarios

ESD = ecologically sustainable
development
GAIA = transformed civilisation
where G+P and UDI are obsolete
concepts. It is the Outlier scenario
S = Strong; W = Weak

When will the survey end?

The survey form will remain online until the end of October 2002 or until over
100,000 responses from across the world are received.

It's an ambition target, so please participate.

NARRATIVES OF THE FOUR 2100 SCENARIOS:

SCENARIO 1 Green City   *(Idealistic) cultural mentality*

Strong regional governance and planning policy interacting with a weaker urban development industry results in limited urban expansion and restrictions on population growth. Urban growth boundaries and natural/cultural conservation policies limit urban development.

The region's existing bio-diversity is protected and maintained.

Access to facilities and centres occurs mainly by car. Urban enhancements to make residential communities well connected allow diverse ways to travel including bus, cycle and walking.

A driving social value within this scenario is that people value traditional community benefits and livability equally with the desire for home ownership and accumulation of personal capital.

SCENARIO 2 CyberCity   *(Sensate → Ideational) cultural mentality*

Strong regional governance and planning policy interacting with a strong urban development industry results in urban consolidation and renewal to house the anticipated population growth.

The region's existing Bio-diversity is protected and many degraded areas are rehabilitated back to a natural state and sustained.

Urban form is transformed from sprawl to "arcology" which means the creation of Architectural Ecology or eco-village - where communities live in compact, walkable mixed use habitats. Equitable access to facilities and centres is delivered by efficient and viable public transport linking the archologies. Bio-feedback loops of the Cyber City's sensors ensure the development of sustainable social, constructed, natural and ethical capital.

A driving social value within this scenario is that people cooperate creatively to meet the local challenge of transforming their habitat and culture towards sustainability, liveability and viability.

SCENARIO 3 TechnoCity   *(Sensate → chaos) cultural mentality*

Weak regional governance and planning policy interacting with a strong urban development industry results in a sprawling settlement pattern to house the anticipated population growth.

The region's Bio-diversity (natural environment) is fragmented and declining.

The private car is the major means of travel. Access to facilities and urban centres is inequitable due to poor public transport unable to service the large areas of low-density residential development. Most people live, work and play in the technology connected suburbs.

A driving social value within this scenario is that home ownership and the private domain is valued as more important than the creation of community capital.

SCENARIO 4 Gaian City   *(Ideational) cultural mentality*

Regional governance is replaced by community self action and visioning, enabled by technology and the internet. This empowered community interacting with a weak urban development industry creates a settlement pattern that likewise has transformed to

be an "artificially intelligent" habitat. This City is a Living Entity co-habitating in a mutually beneficial relationship with its Citizens.

Resident's quality of life is optimised through technological advances. Human Habitation is organised to minimise the ecological impact upon the region; by being self sufficient in energy and water consumption and converting all waste into valuable commodities. 70% of the region has been restored to its natural state. Community Health and spiritual well being are important qualities nurtured within culture. Gaian Cities are walkable, car-free and connected to other Gaian cities by rapid public transport.

A driving social value of this scenario is a respect for the land. A belief that "we are a part of the land and do not own it". The sustainable journey of life is valued more than the collection of assets.

[Link to online survey form]

QUESTION 1: Which story best describes your preferred vision for human habitation on the Earth in the year 2100?

Which story best describes your preferred vision for human habitation on the Earth 2100?

VISION   **CULTURAL MENTALITY**

1. Smart City   **Integrated (balanced)**
2. Eco-City   **Integrated → Spiritual**
3. Techno-City   **Materialistic**
4. Gaian City   **Spiritual**

Imagine Your preferred vision of the World in 2100 and its qualities.

QUESTION 2a: Choose a word from each of the lists below that describe the qualities of the Earth's Environment you hope will be in 2100. Prioritise your selections

First Preferred Environmental Quality for 2100   Second Preferred Environmental Quality for 2100

- Healthy
- Comfortable
- Tranquil
- Green
- Human Scale
- Beautiful
- Diverse

QUESTION 2b: Choose a word from the each of the lists below that describe the qualities of the World's Civilisations you hope will be in 2100. Prioritise your selections.

First Preferred Cultural Quality for 2100

Second Preferred Cultural Quality for 2100

- Diverse
- Vibrant
- Interactive
- Responsive
- Fun
- Wise - Fair/Just/Ethical
- Futures orientated

In 2100 which system of governance do you hope for?

- Planetary democracy and governance
- Status quo of Nation State Sovereignties
- Local community governance aligned under World Trade Blocks
- Planetary Democracy with local community governance

QUESTION 2c: Choose a word from each of the lists below that describe the qualities of the World's Economy you hope will be in 2100.

First Preferred Economic Quality for 2100

Second Preferred Economic Quality for 2100

- Equitable access
- Convenient
- Prosperous
- Adaptable
- Innovative
- Materialistic
- Sustainable

Please provide some information about yourself as a member of the global community by choosing the appropriate answer.

Your Gender is
female
male

Your age is under 17
18 - 35
36 - 50
51 - 65
over 66

You live in the World Region of
Africa
Asia (Central)

Australasia + Asia Pacific Rim
Europe
North America
South America

Choose the statement which best describes your main view of humanity's (The World's) relationship with the Earth and Universe (Nature).

Your cultural perspective is as an/a

Individualist	I believe in the ingenuity of human beings and the resilience of Nature.
Egalitarian	I believe the World needs to be more equitable, lean and green.
Hierarchist	I believe in balance and stability through partnership and control.
Fatalist	I believe life is a lottery and reality is capricious. Our fate is sealed.
Hermit	I believe I am on the fringe of society, looking in on the World

Please provide your Name and Email if you would like a copy of the results, when the survey is completed.

Name/Surname

Email

Submit Survey

8.2.3 Cross Tables

Table 1: Cross Tabulation 2100 Vision * Worldview (110 cases)			Worldview/cultural perspective				Total
			Individualist	Egalitarian	Hierarchist	no response/missing data	
2100 Vision	**Green/ Eco City**	Count	3	7	2	53	65
		Expected Count	2.4	5.3	3.0	54.4	65.0
		% within 2100 Vision	4.6%	10.8%	3.1%	81.5%	100.0%
		% within Worldview/cultural perspective	75.0%	77.8%	40.0%	57.6%	59.1%
		% of Total	2.7%	6.4%	1.8%	48.2%	59.1%
	Smart. Cyber City	Count	0	1	3	15	19
		Expected Count	.7	1.6	.9	15.9	19.0
		% within 2100 Vision	.0%	5.3%	15.8%	78.9%	100.0%
		% within Worldview/cultural perspective	.0%	11.1%	60.0%	16.3%	17.3%
		% of Total	.0%	.9%	2.7%	13.6%	17.3%
	Techno City	Count	0	0	0	2	2
		Expected Count	.1	.2	.1	1.7	2.0
		% within 2100 Vision	.0%	.0%	.0%	100.0%	100.0%
		% within Worldview/cultural perspective	.0%	.0%	.0%	2.2%	1.8%
		% of Total	.0%	.0%	.0%	1.8%	1.8%
	Gaian City	Count	1	1	0	22	24
		Expected Count	.9	2.0	1.1	20.1	24.0
		% within 2100 Vision	4.2%	4.2%	.0%	91.7%	100.0%
		% within Worldview/cultural perspective	25.0%	11.1%	.0%	23.9%	21.8%
		% of Total	.9%	.9%	.0%	20.0%	21.8%
Total		Count	4	9	5	92	110
		Expected Count	4.0	9.0	5.0	92.0	110.0
		% within 2100 Vision	3.6%	8.2%	4.5%	83.6%	100.0%
		% within Worldview/cultural perspective	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	3.6%	8.2%	4.5%	83.6%	100.0%

Table 2: Cross Tabulation 2100 Vision * Worldview (18 cases)			Worldview/cultural perspective			Total
			Individualist	Egalitarian	Hierarchist	
2100 Vision	Green/Eco City	Count	3	7	2	12
		Expected Count	2.7	6.0	3.3	12.0
		% within 2100 Vision	25.0%	58.3%	16.7%	100.0%
		% within Worldview/cultural perspective	75.0%	77.8%	40.0%	66.7%
		% of Total	16.7%	38.9%	11.1%	66.7%
	Smart.Cyber City	Count	0	1	3	4
		Expected Count	.9	2.0	1.1	4.0
		% within 2100 Vision	.0%	25.0%	75.0%	100.0%
		% within Worldview/cultural perspective	.0%	11.1%	60.0%	22.2%
		% of Total	.0%	5.6%	16.7%	22.2%
	Gaian City	Count	1	1	0	2
		Expected Count	.4	1.0	.6	2.0
		% within 2100 Vision	50.0%	50.0%	.0%	100.0%
		% within Worldview/cultural perspective	25.0%	11.1%	.0%	11.1%
		% of Total	5.6%	5.6%	.0%	11.1%
Total		Count	4	9	5	18
		Expected Count	4.0	9.0	5.0	18.0
		% within 2100 Vision	22.2%	50.0%	27.8%	100.0%
		% within Worldview/cultural perspective	100.0%	100.0%	100.0%	100.0%
		% of Total	22.2%	50.0%	27.8%	100.0%

Table 3: Cross Tabulation 2100 Vision*Governance (110 cases)			Governance					Total
			Planetary democracy + governance	Status quo of Nation State Sovereignties	Local Community gov aligned under Trade Blocks	Planetary Democracy with local community governance	no response	
2100 Vision	Green/Eco City	Count	8	6	4	39	8	65
		Expected Count	4.7	5.9	5.9	37.2	11.2	65.0
		% within 2100 Vision	12.3%	9.2%	6.2%	60.0%	12.3%	100.0%
		% within Governance	100.0%	60.0%	40.0%	61.9%	42.1%	59.1%
		% of Total	7.3%	5.5%	3.6%	35.5%	7.3%	59.1%
	Smart.Cyber City	Count	0	2	4	10	3	19
		Expected Count	1.4	1.7	1.7	10.9	3.3	19.0
		% within 2100 Vision	.0%	10.5%	21.1%	52.6%	15.8%	100.0%
		% within Governance	.0%	20.0%	40.0%	15.9%	15.8%	17.3%
		% of Total	.0%	1.8%	3.6%	9.1%	2.7%	17.3%
	Techno City	Count	0	1	0	1	0	2
		Expected Count	.1	.2	.2	1.1	.3	2.0
		% within 2100 Vision	.0%	50.0%	.0%	50.0%	.0%	100.0%
		% within Governance	.0%	10.0%	.0%	1.6%	.0%	1.8%
		% of Total	.0%	.9%	.0%	.9%	.0%	1.8%
	Gaian City	Count	0	1	2	13	8	24
		Expected Count	1.7	2.2	2.2	13.7	4.1	24.0
		% within 2100 Vision	.0%	4.2%	8.3%	54.2%	33.3%	100.0%
		% within Governance	.0%	10.0%	20.0%	20.6%	42.1%	21.8%
		% of Total	.0%	.9%	1.8%	11.8%	7.3%	21.8%
Total		Count	8	10	10	63	19	110
		Expected Count	8.0	10.0	10.0	63.0	19.0	110.0
		% within 2100 Vision	7.3%	9.1%	9.1%	57.3%	17.3%	100.0%
		% within Governance	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	7.3%	9.1%	9.1%	57.3%	17.3%	100.0%

Table 4: Cross Tabulation Worldview*Governance (110 cases)			Governance					Total
			Planetary democracy + governance	Status quo of Nation State Sovereignties	Local Community gov aligned under Trade Blocks	Planetary Democracy with local community governance	no response	
Worldview/cultural perspective	Individualist	Count	0	0	0	4	0	4
		Expected Count	.3	.4	.4	2.3	.7	4.0
		% within Worldview/cultural perspective	.0%	.0%	.0%	100.0%	.0%	100.0%
		% within Governance	.0%	.0%	.0%	6.3%	.0%	3.6%
		% of Total	.0%	.0%	.0%	3.6%	.0%	3.6%
	Egalitarian	Count	1	0	0	8	0	9
		Expected Count	.7	.8	.8	5.2	1.6	9.0
		% within Worldview/cultural perspective	11.1%	.0%	.0%	88.9%	.0%	100.0%
		% within Governance	12.5%	.0%	.0%	12.7%	.0%	8.2%
		% of Total	.9%	.0%	.0%	7.3%	.0%	8.2%
	Hierarchist	Count	0	0	3	2	0	5
		Expected Count	.4	.5	.5	2.9	.9	5.0
		% within Worldview/cultural perspective	.0%	.0%	60.0%	40.0%	.0%	100.0%
		% within Governance	.0%	.0%	30.0%	3.2%	.0%	4.5%
		% of Total	.0%	.0%	2.7%	1.8%	.0%	4.5%
	no response/missing data	Count	7	10	7	49	19	92
		Expected Count	6.7	8.4	8.4	52.7	15.9	92.0
		% within Worldview/cultural perspective	7.6%	10.9%	7.6%	53.3%	20.7%	100.0%
		% within Governance	87.5%	100.0%	70.0%	77.8%	100.0%	83.6%
		% of Total	6.4%	9.1%	6.4%	44.5%	17.3%	83.6%
Total		Count	8	10	10	63	19	110

Table 4: Cross Tabulation Worldview*Governance (110 cases)		Governance					Total
		Planetary democracy + governance	Status quo of Nation State Sovereignties	Local Community gov aligned under Trade Blocks	Planetary Democracy with local community governance	no response	
	Expected Count	8.0	10.0	10.0	63.0	19.0	110.0
	% within Worldview/cultural perspective	7.3%	9.1%	9.1%	57.3%	17.3%	100.0%
	% within Governance	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	% of Total	7.3%	9.1%	9.1%	57.3%	17.3%	100.0%

8.2.4   Target Group

	Organisation	Contact	Email	Date contacted
TABLE B.1: GLOBAL CITY FUTURES ONLINE SURVEY – TARGET GROUP				
	Universities			
	Oxford Brookes	Dean: Prof John Raftery School of the Built Environment	jraftery@brookes.ac.uk	12/10/2003
		Jon Cooper, Joint Chair of the Joint Centre for Urban Design. Snr Lect Dept Planning	jcooper@brookes.ac.uk	12/10/2003
	Bartlett School of Architecture, University College of London Faculty of Built Environment	Prof. Iain Borden, Director of the school of Architecture	i.borden@ucl.ac.uk	12/10/2003
		Dr Jane Rendell – PhD Supervisor Arch Theory	j.rendell@ucl.ac.uk	12/10/2003
	University of California at Berkeley College of Environmental Design	Dean of CED, Prof Harrison S. Fraker	230 Wurster Hall, MC #1820 Berkeley, CA 94720-1820 Fax 510.642.7560 Fraker36@socrates.berkeley.edu	12/10/2003
		Manuel Castells Professor Emeritus - CITY AND REGIONAL PLANNING	n1581963@uclink.berkeley.edu	12/10/2003 didn't work
		Robert Cervero Professor, DCRP - CITY AND REGIONAL PLANNING **Karen Chapple**	robertc@uclink.berkeley.edu *UC Phone:* 510.642.1695 *Fax:* 510.642.1641	On Sabbitical 12/10/2003

	Organisation	Contact	Email	Date contacted
TABLE B.1: GLOBAL CITY FUTURES ONLINE SURVEY – TARGET GROUP				
		Assistant Professor, DCRP - CITY AND REGIONAL PLANNING	chapple@uclink.berkeley.edu *UC Phone:* 510.642.1868 *Fax:* 510.642.1641	
	School of Architecture & Planning, MIT	Prof. William Mitchell Dean of above	wjm@mit.edu	12/10/2003
	Princeton University School of Architecture	M. Christine Boyer, Prof Architecture, Urbanism	mcboyer@princeton.edu	12/10/2003
	Brazil Wisconsin International University	Dr Edson Miranda Prof Fabricio Boechat	edson.miranda73@bol.com.br wintu@wintu.com.br	12/10/2003 12/10/2003
Business (multi-nationals)				
	World Business Council for Sustainable Development	Geneviève Tremblay Media Relations Officer Tel: +41 (22) 839 3108 Fax: +41 (22) 839 3131	mailto:tremblay@wbcsd.org	14/10/2003
	World Economic Forum	Switzerland contact@weforum.org	mailto:contact@weforum.org http://www.weforum.org/site/homepublic.nsf/Content/Contact+Us	8/7/04
	BP	BP employs about 110,000 people worldwide and is represented in over 100 countries.	Contact Form http://www.bp.com/contactusdisplay.do?categoryId=1&contentId=2006973	7/7/04
	Shell	Contact Form: Tell Shell 135 000 staff across 135 countries	Contact Form http://www.shell.com/home/au-en/html/iwgen/about_shell/tell_shell/app_tell_shell.html	7/7/04

	Organisation	Contact	Email	Date contacted

TABLE B.1: GLOBAL CITY FUTURES ONLINE SURVEY – TARGET GROUP

	Organisation	Contact	Email	Date contacted
	Microsoft Worldwide	Community Affairs Team	http://register.microsoft.com/contactus30/feedback40.asp?domain=giving	8/7/04
	McDonalds	Social responsibility – feedback form	http://www.mcdonalds.com/countries/usa/corporate/contacts/comments/social/social_form.html	8/7/04
	General Electric	http://www.ge.com/en Gary Sheffer General Manager, Public Affairs and Employee Communications	(203) 373-3476 gary.sheffer@corporate.ge.com	8/7/04
	Ford – Corporate Citizenship reporting	Rob Frederick Ford Motor Company One American Road Dearborn, MI 48126 United States +1 (313) 322 3000	Emailing us at: corpcit@ford.com Contact Form https://www.customersaskford.com/KanaForm.asp?SourceSite=&launchsite=ford	7/7/04 Tracking ID: KMM2986965C0KM Case ID: 1057561
NGOs				
	World Bank: Global Urban Partnership	Tim Campbell, Head of the Urban Partnership- City Development Strategy; Mark Hildebrand – The Cities Alliance Urban Age. The Global City Magazine: Margaret Bergen	mailto:tcampbell@worldbank.org jsaville@worldbank.org citiesalliance@worldbank.org **Email:** info@citiesalliance.org mailto:urbanage@worldbank.org 40,000 sub – 6 languages	12/10/2003 12/10/2003 12/10/2003 obsolete
	Oxfam	Contact Form – programmes and	http://www.oxfam.org.uk/contact/forms/polic	7/7/04

	Organisation	Contact	Email	Date contacted
		policies 80 countries across world	y.htm	
	Greenpeace	Greenpeace International Ottho Heldringstraat 5 1066 AZ Amsterdam The Netherlands Tel: +31 20 5148150 Fax: +31 20 5148151	Email: supporter.services@int.greenpeace.org	8/7/04
	Amnesty International	Web site www.amnesty.org Address 1 Easton Street London WC1X 0DW, UK INTERNATIONAL SECRETARIAT	Contact Form http://web.amnesty.org/contacts/app.nsf/contact+us?readform&presence=eng-000	7/7/04
	UIA	Secrétariat général de l'Union Internationale des Architectes 51, rue Raynouard, 75 016 Paris (France) Tel : (33.1) 45 24 36 88 - Fax : (33.1) 45 24 02 78	uia@uia-architectes.org	2002 8/7/04
	RAIA	Robert Shaw roberts@raia.com.au	Via National Architecture Conference promotion and delegate pack	June 2003
	EDRA	**Cities and Globalization**	E-mail: jndj7@aol.com	Edra: 8/7/04

TABLE B.1: GLOBAL CITY FUTURES ONLINE SURVEY – TARGET GROUP

	Organisation	Contact	Email	Date contacted
	http://home.telepath.com/~edra/home.html edra@telepath.com	(Network) Julia Nevarez, Ph.D. Environmental Psychology Department of Sociology and Anthropology Kean University 350 Manhattan Ave. #2A NY, NY, 10026 212-961-9810 **Cultural Aspects of Design** Sanjoy Mazumdar (co-chair) University of California School of Social Ecology Irvine, CA 92697-7075 Fax: 949-824-8566 E-mail: mazumdar@uci.edu	David G. Saile (co-chair) School of Architecture University of Cincinnati P.O. Box 210016 Cincinnai, OH 45221-0016 Telephone: 513-556-3415 Fax: 513-556-3288 E-mail: sailed@email.uc.edu Listserv: CENLIST@uci.edu	City Network: 8/7/04 CAOD network: 8/7/04
	World Futures Studies Foundation	www.wfsf.org	Listserv see email WFSF-L@lists.nau.edu - didn't work	21/6/04 29/6/04 7/7/04
	World Futures Society	Clifton Coles, Communications Director, ccoles@wfs.org OR info@wfs.org		8/7/04
	IISD: International Institute for Sustainable	**IISD's Head Office** 161 Portage Avenue East, 6th Floor	E-mail: info@iisd.ca	8/7/04

TABLE B.1: GLOBAL CITY FUTURES ONLINE SURVEY – TARGET GROUP				
	Organisation	**Contact**	**Email**	**Date contacted**
	Development	Winnipeg, Manitoba, Canada R3B 0Y4 Telephone: 1 (204) 958-7700 Fax: 1 (204) 958-7710		
	Friends of the Earth International	http://www.foei.org/ **friends of the earth international** *secretariat* po box 19199, 1000 gd amsterdam, the netherlands tel: 31 20 622 1369. fax: 31 20 639 2181	Contact form: http://www.foei.org/about/contacts.html	8/7/04
	International Council for Local Environmental Initiatives Konrad Otto-Zimmermann, *Secretary General*	**World Secretariat** City Hall, West Tower 16th Floor 100 Queen Street, West Toronto, Ontario M5H 2N2, Canada Phone: 416-392-1462 Fax: 416-392-1478	www.iclei.org Email: iclei@iclei.org e-newsletter: "Initiatives"	12/10/2003
	World Watch Institute	Ubanisation Section	Contact msheehan@worldwatch.org Senior Researcher Area(s) of Specialization Cities, Transportation, Information Technology	8/7/04
	Global Ideas Bank	Institute for Social Inventions		12/10/2003

	Organisation	Contact	Email	Date contacted
TABLE B.1: GLOBAL CITY FUTURES ONLINE SURVEY – TARGET GROUP				
	(institute for Social Inventions) editorial team includes: Nick Temple, Stephanie Wienrich and Retta Bowen.	6 Blackstock Mews, Blackstock Road London N4 2BT UK tel (int. 44) [0]20 7359 8391 fax (int. 44) [0]20 7354 3831	www.globalideasbank.org mailto:rhino@dial.pipex.com	
	European Academy of the Urban Environment	Managing Director: Dr. Hanns-Uve Schwedler	www.eaue.de am@eaue.de	12/10/2003
	International Network for Urban Development	Nassau Dillenburgstraat 44 NL-2596 AE The Hague The Netherlands telephone: +31 (0)70 324 45 26 faxnumber: +31 (0)70 328 07 27 Inta Newsletters	www.inta-aivn.org e-mail: info@inta-net.org	12/10/2003
	IMPLADE Instituto Metropolitano De Planeacion Parael Desarrollo Sustentable	Arch. Alejandro Contreras Executive Director	implade@hotmail.com	26 November 2002 3:54 PM
Governments				
	UN Habitat	http://www.blpnet.org/blp/ e-newsletter	Best Practices and Policies Monitoring Systems Branch UN-HABITAT, P.O. Box 30030, Nairobi, Kenya Tel: (254-2) 624981, Fax: (254-2) 623080 E-mail: bestpractices@unhabitat.org	12/10/2003

	Organisation	Contact	Email	Date contacted
	CITYNET Secretariat **The Regional Network of Local Authorities for the Management of Human Settlements**	CITYNET is a network promoting local urban improvement initiatives in the Asian-Pacific region. http://www.citynet-ap.org/en/index.html e-news	5F, International Organizational Center Pacifico-Yokohama, 1-1-1 Minato-Mirai, Nishi-ku, Yokohama, 220-0012, Japan. Tel: +81-45- 223-2161; Fax: +81-45-223-2162 Email: info@citynet-ap.org	12/10/2003
	World Trade Organisation	Centre William Rappard, Rue de Lausanne 154, CH-1211 Geneva 21, Switzerland. http://www.wto.org/	**General enquiries** Tel: (41-22) 739 51 11 Fax: (41-22) 731 42 06 email: enquiries@wto.org	14/10/2003
	UNESCO: Bureau of Public Information UN Management of Social Transformations MOST	Unesco.org the United Nations Educational, Scientific and Cultural Organization Mr Michel BARTON - Director - DIR/BPI Ms Alice BOSQUILLON DE JENLIS - Public Relations Officer - BPI/PR	Worldwide presence – field network **UNESCO** 7, Place de Fontenoy 75352 PARIS 07 SP, France bpiweb@unesco.org m.barton@unesco.org a.de-jenlis@unesco.org **MOST Clearing House** *Co-ordinator:* Paul de Guchteneire p.deguchteneire@unesco.org Timothée **Ngakoutou**	14/10/2003 cc cc below

	Organisation	Contact	Email	Date contacted
			Executive Secretary of the MOST Programme, p.i. Director, Division of Social Science Research and Policy e-mail: *t.ngakoutou@unesco.org*	14/10/2003
	OECD Organisation for Economic Co-operation and Development	http://www.oecd.org/home/ 30 member countries 4 OECD Centres	mailto:webmaster@oecd.org **OECD Tokyo Centre: www.oecdtokyo.org** Email: tokyo.contact@oecd.org	10/7/2004
	Department of Foreign Affairs and Trade – Aust Embassies overseas	http://www.dfat.gov.au/ All Australian Embassies, high commissions, consulates, multilateral missions and representative offices across the world. Insight into their cities	Department of Foreign Affairs & Trade Queensland State Office Level 4, 295 Ann St Brisbane Qld 4000 GPO Box 879, Brisbane Qld 4001 Telephone: (07) 3405 4799 Fax: (07) 3405 4782 E-mail: dfatbris@dfat.gov.au	Sat 10/07/2004 3:47 PM
International Correspondents/Journalists				
	CNN	http://www.cnn.com/	Contact Form http://www.cnn.com/feedback/forms/form5.html?60	7/7/04

TABLE B.1: GLOBAL CITY FUTURES ONLINE SURVEY – TARGET GROUP

	Organisation	Contact	Email	Date contacted
	TABLE B.1: GLOBAL CITY FUTURES ONLINE SURVEY – TARGET GROUP			
	BBC World	http://www.bbcworld.com/content/template_customer.asp?pageid=75	Email: bbcworld@bbc.co.uk	Sat 10/07/2004 3:54 PM
	Champions			
	Peter Hall	Prof Planning, Bartlett School of Architecture & Planning, Uni College of London	p.hall@ucl.ac.uk	12/10/2003
	Steven Ames	Lon-term Strategic Planner	scams@aol.com	12/10/2003
	Alan AtKisson	Sustainability Advocate	info@atkisson.com	Sat 17/08/2002 5:03 PM
	Charles Landry The Round Bournes Green Stroud Gloucestershire GL6 7NL UK		www.comedia.org.uk Tel/Fax +44 (0)1452 770624 Email charleslandry@comedia.org.uk	12/10/2003
	Prof Neil Leach Ed: ReThinking Architecture	University of Bath Dept Architecture & Civil Eng	neilleach57@hotmail.com N.Leach@bath.ac.uk	12/10/2003
	Saskia Sassen Author: Global City	Uni of Chicago, Dept of Sociology: Ralph Lewis Professor of Sociology.	Phone: 773-702-7279 s-**sassen**@uchicago.edu	12/10/2003
	Stephen Graham:	reader for the ctr of Urban Tech at Newcastle University's School of Arch, Planning & Landscape	s.d.n.graham@ncl.ac.uk	12/10/2003

	Organisation	Contact	Email	Date contacted
		Global Urban Research Unit School of Architecture Planning		
	Simon Marvin	Prof Sustainable Urban & regional Development & Co-director of the Centre for Sustainable Urban & Regional Futures, Uni of Salford http://www.research.salford.ac.uk/surf/index.htm	The SURF Centre University of Salford 113-115 Portland Street Manchester M1 6DW E-mail: p.allen@salford.ac.uk	12/10/2003
	Nan Ellin	Assoc Professor, School of Arch, Arizona State University	nan.ellin@asu.edu http://www.asu.edu/caed/SOA/architecture/faculty/faculty_ellin.html	12/10/2003
	Richard T. LeGates	Prof of Urban Studies, San Francisco State University	dlegates@sfsu.edu http://www.sfsu.edu/~news/experts/94.htm	12/10/2003
	Frederic Stout	Lecturer: Urban Studies, Stanford University	Frederic Stout CERAS 315 Stanford, CA 94305-3084 725-6321 fstout@stanford.edu	12/10/2003
	Robert Fishman Author: Technoburb Urban Utopias in the 20thC (1977)	University of Michigan's A. Alfred Taubman College of Architecture and Urban Planning PROFESSOR, Coll of Arch & Urban Planning	fishmanr@umich.edu http://www.tcaup.umich.edu/facultystaff/faculty/fishmanrprofile.html	12/10/2003
	Christopher Alexander	Professor of Architecture in the Graduate School (Architecture) and Emeritus Professor of Architecture at the University of	*Fax:* 510.841.8668	

TABLE B.1: GLOBAL CITY FUTURES ONLINE SURVEY – TARGET GROUP				
	Organisation	**Contact**	**Email**	**Date contacted**
		California, Berkeley.		
	Graham Molitor		gttmolitor@aol.com	12/10/2003
	Robert Cowan	Director of the Urban Design Group and head of the secretariat of the UK's Urban Design Alliance.	*Address* 217 South Park Road, London SW19 8RY *Telephone* 020 8540 2078 (h) 020 7250 0872 (w) *Email* rcowan@udg.org.uk	12/10/2003
	Dr. Ken Yeang	Professor (Graham Willis Chair, Sheffield University), Adjunct Professor (RMIT, Melbourne), Adjunct Professor (University of Hawaii), Adjunct Professor (University of New South Wales, Sydney)	kynnet@pc.jaring.my loosee@trhamzahyeang.com	12/10/2003

8.2.5 Template invitation to Global Survey target group

Dear (Insert Stakeholder)

I am writing to you because of your international reputation and contribution to the discourse, study and quality of the city. As such I invite you to participate in a unique opportunity to contribute your vision for the city of the future.

I am conducting research about cultural paradigms and preferred civilisational visions for future human habitation and seek to widely circulate knowledge about the Global - City Futures - Online Survey, through a global network of Survey Champions. The research combines the Architecture of the City, Macro History, Futures Studies and Cultural Theory. I presented a paper about the "City Futures" scenarios at the World Congress of Architecture in Berlin (21-26 July 2002).

The research is being conducted through the University of the Sunshine Coast and is sponsored by Maroochy Shire Council, which is a registered City for Climate Protection with ICLEI in Australia. The purpose of this survey is to research Humanity's preferred vision for human habitation on the Earth in 2100 and correlate their replicating cultural paradigms. Visioning city futures allows communities to debate and choose their desired environmental habitat. It creates a "pull" towards the preferred future. It is obvious that cities are human habitats, but evidence shows that they are far from being humane. This research will clarify the human aspirations for the future city (urban habitat) of 2100, thereby constructing a bridge towards a humane habitat.

To find out more and to participate in the city futures research please navigate to the web page using the link below.

I also request your assistance in distributing the following invitation to colleagues and other potential stakeholders to promote the survey.

Please go to the site below to find out more (English & Spanish Version): <http://www.maroochy.qld.gov.au/global_cities_survey.cfm>

The online survey will continue to collect information until February/March 2004 and the research will be completed by December 2004.

I thank you for your assistance and look forward to your submission.

Regards

Phillip Daffara
Programme Coordinator- Urban Design, Heritage & Landscape
Maroochy Shire Council
ph 07 5441 8348
fax 07 5441 8029
Doctoral Candidate, University of the Sunshine Coast

8.3 Appendix C: List of Cities that have *Eco City* concepts in their city vision/plan as part of the official discourse

An Internet search was conducted in August 2004 by conducting a Boolean search of [metropolitan plan]+[ecocity]+[gov] which generated 385 sites.

CITY	COUNTRY
23 Metro Cities of India	India
Adelaide	Australia
Belfast Metro	Ireland
Berkeley	USA
Cape Metropolitan region	South Africa
Charlotte Metro region & Eco City Malmo	USA
Cleveland	USA
Curitiba	Brazil
Hamburg	Germany
Johannesburg	South Africa
Melbourne 2030	Australia
Memphis Metro Area	USA
Metropolitan Toronto	Canada
Metropolitan Washington Council	USA
Midrand EcoCity	South Africa
Northwest Ohio and Cuyahoga Bioregion	USA
Pittsburgh	USA
San Diego Metro region	USA
Seattle	USA
Whyalla	Australia
Yosemite Valley Plan	USA

9   Glossary of Terms

A Term	Definition
Anarchism	The absence of coercive authority (held by the State) to maintain social order.
Archaeological analysis	As argued by Foucault ([1969], 2002: 178-9) a method of critical discursive analysis that compares and contrasts models, shifts, 'isotopias' and correlations of ideas in history.
Archetype	An original pattern or model.
Ayurveda	Ancient Indian healing system based on the Vedas, including yoga.
Bios & Biosphere	Wilber (2000a,b): biological/ecological realm of consciousness
City	Cities are considered in this research as holons or "gesalts" (organic, irreducible wholes) perceived as a system of spatial (physis), ecological (bios), cultural and technico-economic (nous), and spiritual (theos) forms of habitation.
Cosmogony	A mythical account, or a scientific theory, of the origin of the world.
Cosmology	The general science or theory of the cosmos or material universe
Cultural change theory	Cultural change theory is the study of viable ways of life (with their accumulated store of symbols, ideas and material products) in a social system and how they are produced, experienced and replicated.
Cultural paradigm	A set of often-unquestionable assumptions about reality in a culture that underlies the questions asked and the kinds of answers arrived at as a result.
Dialectic Materialism	Karl Marx's Theory of Social Change. Marx joins materialism with the concept of the dialectic - a struggle between opposing ideas or social forces (the thesis and antithesis) - that results in a new thesis. Marx argued that social systems change through a continuing process in which socially generated internal

contradictions create tension toward some form of resolution. Marx, K. [1845] 1935. "Theses on Feuerbach (8th Thesis)." In Friedrich Engels, Ludwig Feuerbach and the outcome of classical German philosophy. International Publishers. New York.

Episteme (urban)	Urban episteme here means an historical form of knowledge specific to a time and culture bound framework and practice of urban discourse. The notion of episteme borrows from Foucault's work (*The Order of Things*, 1966; and *The Archaeology of Knowledge*, 1969)
Epistemology (urban)	Urban epistemology is the body of knowledge mapping diverse urban discourses across civilisations.
Eutopia(n)	A good place of realistic improvement compared to utopia, an imposed perfect order.
Exegesis	Critical explanation or interpretation.
Flatland	Slaughter (1999:345) reiterates Wilber's definition that 'flatland' is an epistemological view of the nature of reality that devalues vertical depths of human experience and is confined to an expansive horizontal dimension focussed on rational, measurable interlocking orders and sensory forms.
Genealogy	The body of knowledge about the change of ideas over time and which are diffused more successfully than others within a culture or history.
Historical Materialism	Views production and reproduction as fundamental social processes that greatly influence if not determine the basic character of social systems, the patterns of social life associated with them, and patterns of historical change and development.
Holon	An irreducible whole part of a hierarchy, similar to the concept of gestalt.
Ideal type	An abstracted model that is not found in the 'real' world, but helps describe the attributes of the social phenomenon being investigated.

Ideology (urban)	Urban ideology here means a body of knowledge that studies sets of ideas associated with specific urban sub-cultures, groups, social movements or collectivities.
Lifeworld	Elliot (1999:15): Lifeworld comprises "those public and private domains in which meaning and value reside, of deeply layered communicative interactions between subjects
Macrohistory	Macro-history is the study of the histories of social systems, along separate trajectories in search of patterns.
Natural Capitalism	Hawken, P. Lovins, B. and Lovins, L. H. (1999): A way of doing business that does not harm the environment nor a community's culture and social wellbeing. This way is based on the four principles: (1) radically increase resource productivity; (2) copy the nature uses energy to physically produce materials and processes (biomimicry); (3) re-invest in our natural capital; and (4) ensure no nett loss of human or natural capital.
Neotechnic Order	A term developed by Patrick Geddes to signify the emerging Eutopia where "conserving energies and organising environment towards the maintenance and evolution of life, social and individual, civic and eugenic" is achieved. (Geddes, [1915] 1968: 60)
Normative	The formulation describes how it 'ought' to be.
Nous & Noosphere	Wilber (2000a,b): socio-cultural realm of consciousness
Ontology (urban)	Urban ontology means a general theory of what the city is.
Paradigm	A pattern of thinking, a set of background assumptions taken for granted. E.g. with science or a culture.
Phenomenology (urban)	Urban phenomenology means a body of knowledge attempting to describe our urban experience directly, as it is, separately from its origins and development.
Planetary civilisation (new)	As referred to by Wilber (2000a,b) and Kaku (1997) that embodies global consciousness, purpose and action
Post-structuralism	A sociological perspective based on the premise that words point not to some concrete external reality but merely to other

words that we use to construct reality.

Puranas	Ancient Sanskrit versus, written around the eighth century, about the gods and their families.
Physis & Physiosphere	Wilber (2000a,b): material realm of consciousness
Śāstras or (Shastras)	A set of rules and regulations to follow in daily life
Sophism and Sophists	An argument which seems valid but is not. The Sophists turned philosophy from the study of nature to the study of man. They contrasted nature (physis) and convention (nomos) arguing that the many things taken for granted as being natural and therefore beyond control, including morality, customs and laws, are in fact conventional.
Syndicalism	A form of trade unionism, originating in France, which aims at the possession of means of production and distribution (and ultimately at the control of society) by the hierarchal coordination of federated bodies of industrial workers.
Theos & Theosphere	Wilber (2000a,b): metaphysical realm of consciousness
Urban	"Urban" is used to signify the phenomenon of a new social system's (as per the *gestalt* concept of city) occupation of space by its population but one that is not separate from the rural form.
Vāstu Purusha	Originally a daemon, Vāstu Purusha is the Lord of Construction. He is symbolic of harmful energy that can exist if the spirits of a site are not appeased and the gods blessed.
Vāstu Purusha Mandala	A grid representation of the Hindu view of the universe, used by Vāstu practitioners as a blueprint for constructing buildings and designing interiors that are spiritually uplifting and harmonious. Each square in the grid is associated with a specific god.
Vāstu Vidyā	A section of the Vāstu Śāstras that deals specifically with the architectural rules.

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