*chapter*

03

VISIONS OF CLEAN AND GREEN

Against this background, Lee Kuan Yew at the head of the People's Action Party (PAP), now in the seat of power in the new Republic of Singapore, prosecuted his insight that Singapore should become a clean and green city. This was motivated, as mentioned earlier, by putting the right face on the attraction of outside foreign investment and tourism upon which Singapore was to depend. He also saw 'clean greening' to be a tangible way of addressing inequality throughout the island and, finally, as an opportunity to create an identity for residents and a sense of national pride. As elsewhere, this underlying narrative or metaphor for island-city development went through subsequent transformations. The 'Garden City' idea, for instance, moved on to be a 'City in a Garden' and then towards the end of the twentieth-century, 'a Tropical City of Excellence' envisioned by the URA with strong connotations of its vegetative and 'geographical 'green-blue' aspect. More recently, more of a convergence into a 'city in nature' is emerging, with greater emphasis strongly on the identity aspect of an altogether tropical landscape in which living takes place befitting Singapore's geographic and otherwise natural location. This latest 'turn' on 'garden' and 'city' also argues for greater complementarity of green and blue aspects of Singapore's intrinsic

environment. It involves efforts to intensify the planting of more native and more diversified plant species; and through multi-layered heights of plants to emulate the forest structure and to create more ecosystems providing niches for different fauna species. The plantings are thus carefully curated in the beginning but will be left to grow and evolve naturally to produce a naturalistic rather than garden-like setting. It may also provide the rest of us with a clearer view into the successful occupation of 'hyperobjectivity' by beginning to invert the usual dominance of constructed over 'natural' environments in city making. Of course, Singapore is not alone in this strong metaphorical and influential presence of 'natural and cultivated' landscape qualities with those of a more constructed and technological kind, nor of the transformation of such juxtapositions over time. American 'pastoralism', for instance, giving way to the 'machine in the garden' is another such instance. Also, various rounds of '*citta*' in '*compagna*' in the Italian ecumen is another along with other European schemes. Indeed, it seems as if such poetics of occupied and environmental space are leit motifs of civilization. The key point here, though, is that what Singapore is beginning to tackle, so to speak, is unique and of its own making.
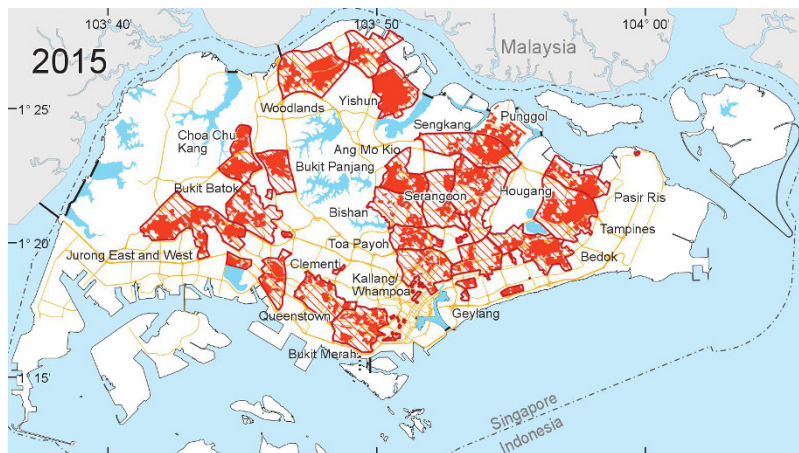
25. HOUSING AND DEVELOPMENT BOARD ESTATES IN THE CONTEXT OF URBANIZATION, C.2015

ONSET AND RISE OF 'CLEAN AND GREEN'

In a recent memoir, Lee Kuan Yew broached the subject of Singapore being 'clean and green' in the following manner. "After independence, I searched for some dramatic way to distinguish ourselves from other third-world countries. I settled for a clean ad green Singapore".[1] He went on further to say, "one aim of my strategy was to make Singapore into an oasis in Southeast Asia, for if we had first-world standards, the businessmen and tourists would make us a base for their businesses and tours of the region."[2] Moreover, "if we want to be a first-world oasis, we must produce first-class conditions, not just the environment but facilities, health standards, services, communications and security."[3] In short the stress on 'clean and green' was both a pragmatic reckoning with need and a metaphor for how he wanted the new island-state to be seen. Although ostensibly about a literal 'greening' of the state, it was to be more inclusive by attaching to almost every walk of life and to define the manner of interaction with the outside world, as well as to Singaporean senses of themselves and a more equitable distribution of this amenity benefit, As lee put it, " if we did not create a society which is clean throughout the island, I believed then and believe now, we have two classes of people: the upper-class, upper-middle class and even the middle class with gracious surroundings; and the lower-middle and working class, in poor conditions."[4]

2 6 . TREE PLANTING IN SINGAPORE

Apart from formal programs, a number of clean-up campaigns were initiated during the 1960s and into the early years of the city-state's development. Littering in various forms, for instance, came under scrutiny and regulation.[5] This began in October of 1968 with the month-long 'Keep Singapore Clean Campaign' aimed to discourage public littering as a part of a longer program that included changes to public health laws, development of sewage systems, disease control and even the relocation and licensing of itinerant hawkers.[6] The latter had proven to be a nuisance because of the dirt and stench of rotting food, as well as obstruction of public rights-of-way. Anti-spitting and anti-chewing gum campaigns also ensued in attempts to clean up the place and encourage more civilized behavior on the part of citizens. Taxi drivers without licenses and adequate insurance and who drove rented junk cars were also cracked down upon, a situation which was not resolved satisfactorily until 1971. Allegedly one morning in 1964, Lee Kuan Yew looking over the Padang from city hall saw several cows grazing upon The Esplanade. Shortly thereafter all stray animals were seized or slaughtered.[7] Part of the greening process also involved bringing Singapore more closely in harmony with its environment and striking the right balance between industrialization and environment. In these regards stricter standards were insisted upon in large-scale operations, such as the Jurong petrochemical refinery with Sumitomo.[8] Upon returning to Singapore from a trip to Boston, Lee Kuan Yew noticed that the roadside trees were covered with grime from cars and trucks, unlike in the American city. He also discovered this was because of annual inspections required of all vehicles in the United States that effectively limited pollution. Soon the Singapore government introduced inspections and fines on polluting vehicles. Tree planting started in 1963 and by 1971 a regular tree-planting day program became initiated annually, usually taking place in November as one of the best times of year to undertake such activity. This was followed in 1976 by a campaign

to plant hedges, creepers and foliage along fencing structures and in association with the city's concrete infrastructure like retaining walls, overhead bridges and flyovers.[9] In addition in the 1980s color was added to the palette of trees to compensate for a city that seemed to be too green, resulting in Bougainvilleas, Hibiscus and Ixoia shrubs being planted throughout the island.

Efforts to clean up the island also resulted in the closing down of numerous small-scale often family-run farms. By 1982 Singapore was self-sufficient in the production of pork, eggs and chicken, as noted earlier, with a total value of agricultural production in 1968 standing at around US$285 million.[10] Then in 1984 the Division of Primary Production was tasked to improve the efficiency of agriculture which they tried to do by advocating the phasing out of smaller farms. These businesses were also seen at the time as being backward and very polluting, especially the pig farms. The planned transformation of farmlands into agro-technology parks never really transpired and today agriculture accounts for only 0.2 percent of total GDP.[11] Certainly by the mid-1980s, if not before, Singapore was cleaner and greener than at the time of independence in 1965. Apart from moving closer to becoming a first-world city within the Third World, its avowed ambition, the three other aims in becoming clean and green were becoming evident. The first was attraction of outsiders in the form of investors, business people and tourists. The second was to provide a stronger sense of pride and identity for Singaporeans. The third was to effectuate a more equitable distribution of natural amenity across the island, without disparities among neighborhoods, particularly between those that were richer and less so. It was also a place where the 'city' part of the 'garden city' formulation also came to receive attention with regard to historic conservation, in addition to the shiny new projects of the Housing and Development Board (HDB) and the Urban Redevelopment Authority (URA).

27AB. THE GREENING PEDESTRIAN BRIDGES AND TRAFFIC ISLANDS

b.

FROM 'GARDEN CITY' TO 'CITY IN NATURE'

The Garden City Movement is a method of urban planning that was introduced in 1898 by Sir Ebenezer Howard in the United Kingdom. Garden Cities were intended to be planned, self-contained communities surrounded by greenbelts and containing proportionate areas of residences, industries and agriculture. Inspired by social utopian views about living from towards the end of the nineteenth century. Howard published the book *To-morrow: A Peaceful Path to Real Reform* in 1898, which was subsequently re-issued, as *Garden Cities of To-morrow* in 1902.[12] Howard's idealized garden city would have from 30,000 to 35,000 inhabitants and be planned in a concentric pattern with open space, parks and broad radial boulevards extending out from its centre. It would also be self-sufficient and could be linked to similar communities forming satellites to a large, older urban centre. Not inappropriate for Singapore, the beginning of the Garden City Movement came at a time of reform of the overcrowding, dilapidation and squalor of large industrial towns and cities during their industrial revolutions. At the time it also represented a town-country merger and drew upon the opinion of many about the deleterious nature of cities that were seen as being one of the biggest issues to be confronted at the time. Soon the 'Town and Country Planning Association' was formed and the 'First Garden City, Ltd' chartered to build Letchworth in 1899 some 50 kilometers outside of London. This was followed by Welwyn in 1919 even closer in to central London.[13]

From the early beginnings an international movement quickly formed with adherents and proponents in most of Europe, the United States,
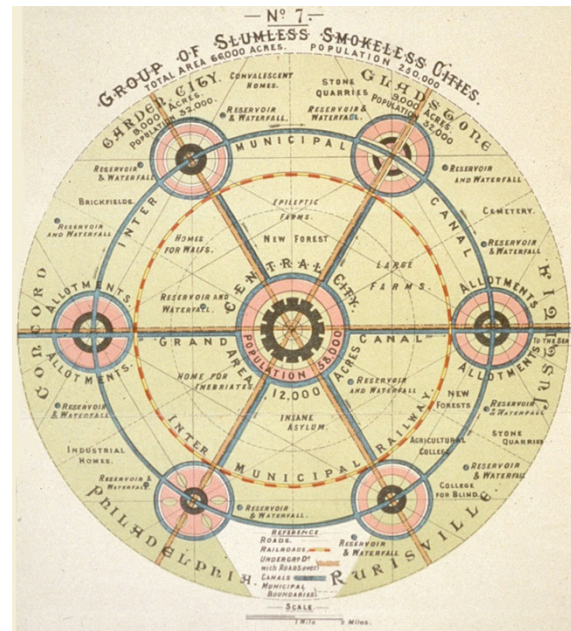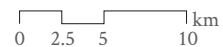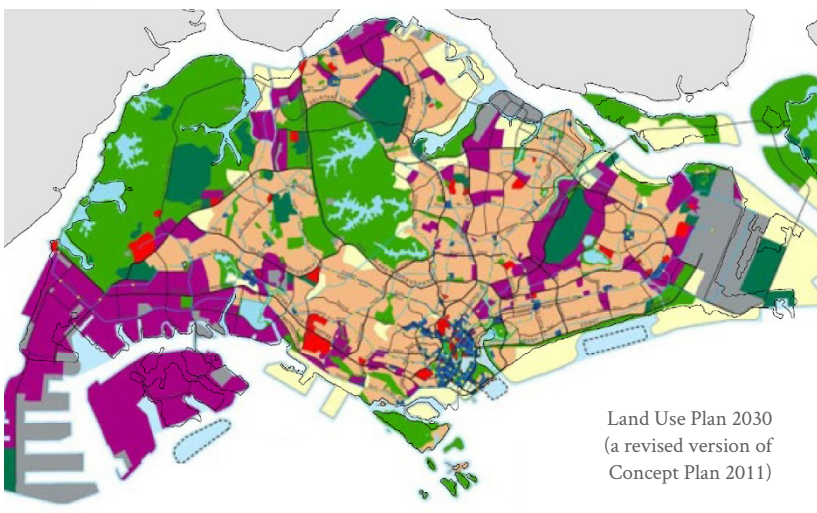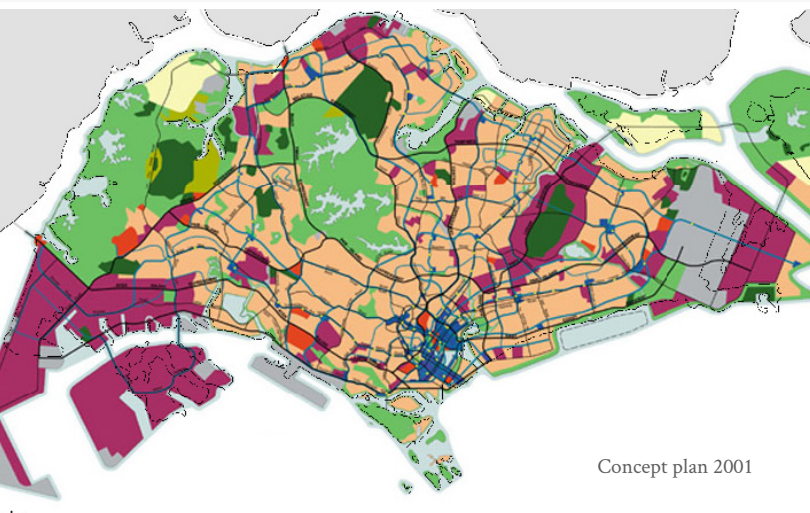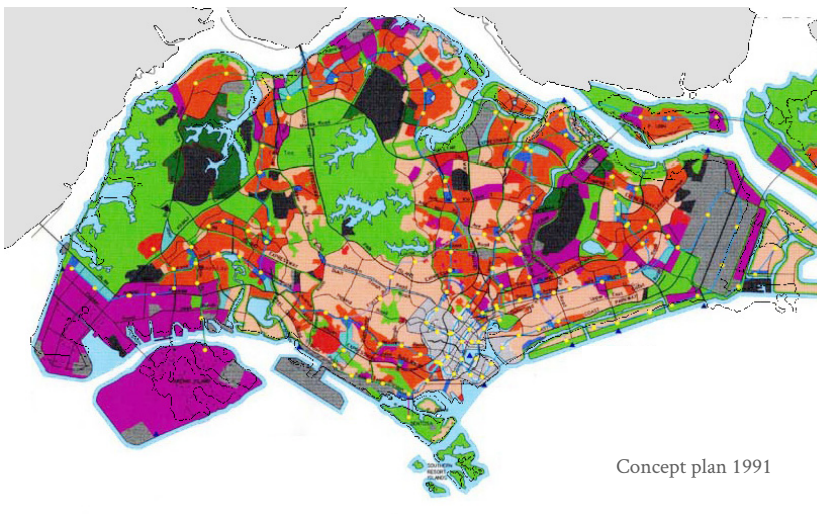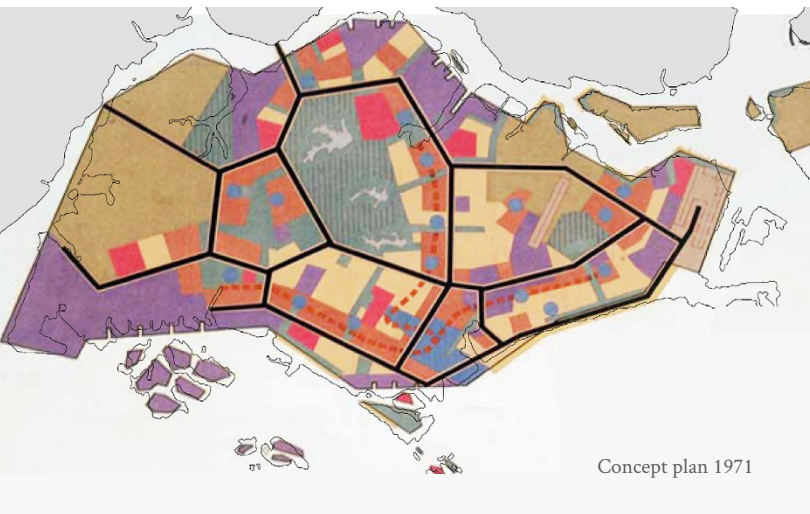

28. HOWARD'S GARDEN CITY OF TOMORROW

South America, parts of Asia and in Australia. Indeed, Singapore has incorporated various facets of the Garden City concept over time, beginning with its Concept Plan of 1971. Since then building codes, land-use plans and projects have made adequate provision for greenery to become integral part of urban development. One of the exceptional aspects of Singapore as a Garden City is the density of its development in comparison to the relatively low density of many other Garden Cities. In fact, in this respect it stands apart from earlier criticism levelled at Garden Cities because of destruction of the countryside, poor movement circulation and a lack of convenience. In many places the concept also

29A. LETCHWORTH IN THE U.K.

29B. WELWYN IN THE U.K.

Concept plan 1971

Concept plan 1991

Concept plan 2001

Land Use Plan 2030
(a revised version of
Concept Plan 2011)

Residential	Agriculture/Open Space	Special
Commercial	Infrastructure	Reserve
Industry	Institution	Waterbody

km
0   2.5   5   10

30. SINGAPORE'S STRATEGIC LONG-TERM LAND USE AND TRANSPORTATION PLANS

devolved, unfortunately, into dull dormitory towns with few redeeming features. Looking at Singapore's Concept Plans of 1971, 1991, 2001 and 2011, tropes of Howard's earlier plans can be found. First, there is the division of land into zones, particularly separating industry from the other uses. Second, there is the large catchment areas at the centre and both eastern and western sides of the island, which

provide for extensive natural conservation areas, as well as public parks and recreation areas. Third, there are the major expressway and transit corridors that form the armature of connection between and among satellite communities and new towns. Fourth there is the idea of self-contained communities and in a manner similar to the Garden City ward and centre arrangement proposed by Howard in 1902.

The overall scale of the Singapore Concept Plan, however, is also close in degree and kind to the Plan for Greater Berlin of 1910. This was also the result of a competition, won by Herman Jansen, but including other prominent proposals and diagrammatic considerations of large urban areas. At the time Berlin was undergoing strong urban growth, carrying the population from around one million inhabitants in 1900 to around four million by 1910.[14] This was causing considerable overcrowding and congestion, not to mention the administrative fragmentation that had become a significant problem resulting in the unification under 'Greater Berlin'. What also loosely emerged was the model of the German Metropolitan City, something of a modern advancement on the smaller Garden City. Notable in this regard were the diagrams and layouts proposed by Bruno Möhring, Rudolph Eberstadt and Richard Petersen in their third placed scheme.[15] Möhring was an architect. Eberstadt an economist and Petersen was a traffic engineer. Their urban diagrams, similar to Howard's Garden City concentric ring depiction, juxtaposed a concentric and radial arrangement of green spaces and other uses as a developmental pattern for the modern metropolis. Residential and industrial uses, both very prolific in Berlin at the time were to be separated and an organic link between the city and its green landscape was to be established. These and other later planning developments in Berlin, even after World War I were to more clearly establish the framework for the large-scale modern urban metropolitan city of which Singapore is more recently of a similar kind.

Eventual success in tree planting and greening schemes during the early days of the Republic resulted in the formalisation of the City in a Garden concept as part of the vision of the Garden City Action Committee in 2004.[16] More explicitly this refers to urban environments where the built man-made elements appear to be located in a green landscaped garden.[17] A fundamental philosophy behind the vision was to bring people close to greenery in a city and to integrate it more closely
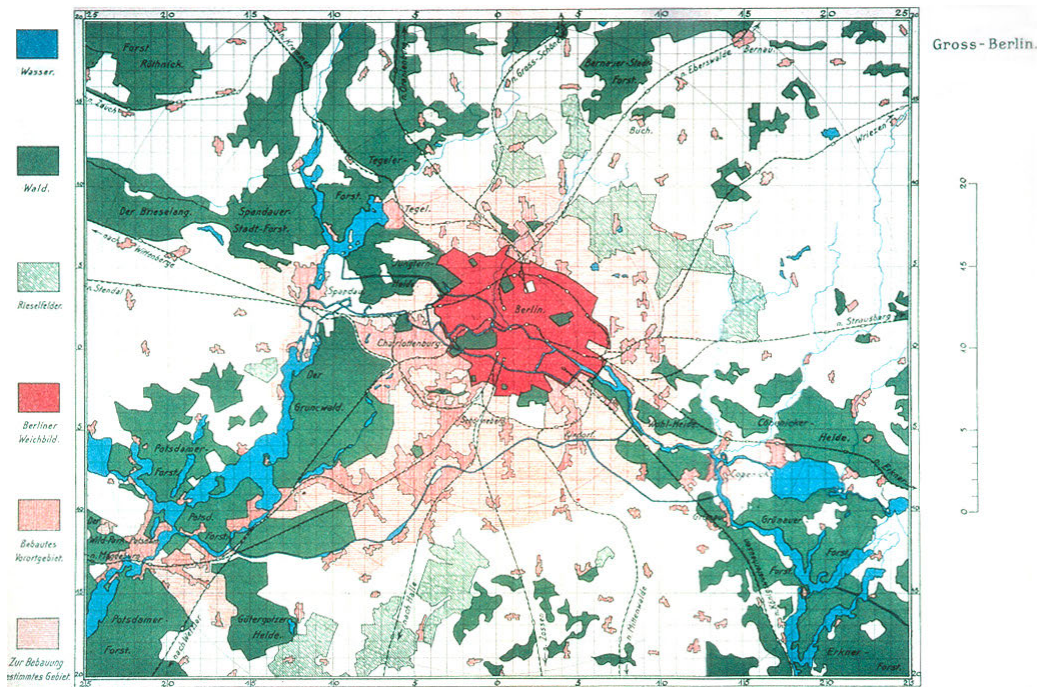
31. THE 1910 BERLIN PLAN

44
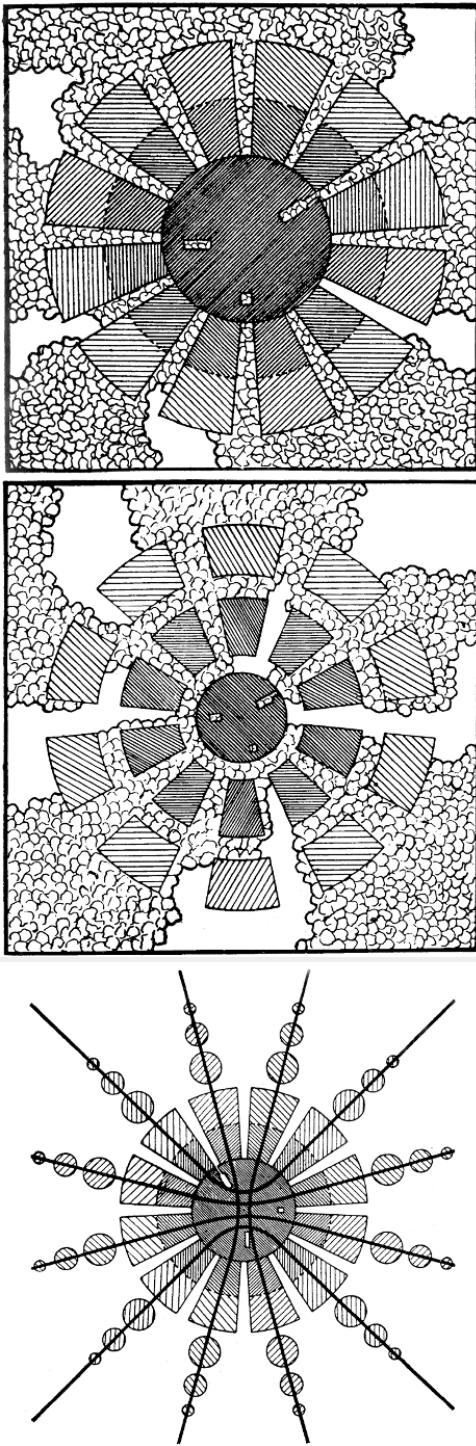
32. MÖHRING, EBERSTADT AND
PETERSON ET AL.'S DIAGRAMS OF
THE BERLIN METROPOLIS

with urban components of the environment. It also resulted in a definitive 'blue-green' plan for Singapore, along with streetscape greening plans. Attention also became focused upon the quality of landscape rather than simply its quantity. This change can be seen immediately, for instance, in the variety of plants in streetscapes and in park connectors conveying a continuous network of green spaces, in lieu of more fragmentary patches. The strategic thrusts behind a City in a Garden were six-fold. First, was to establish world-class gardens. Second was to rejuvenate urban parks and enliven the streetscape. Third was to optimize urban spaces for greenery and recreation. Fourth was to enrich biodiversity in an urban environment. Fifth was to enhance competencies of the landscape and horticultural industries. Finally. it was to engage and inspire communities to co-create a greener Singapore.[18]

A further turn away from Singapore as a Garden City and as a City in a Garden is the recent re-casting of the city-state as a 'City in Nature'.[19] In this scenario the vegetated aspects between and among buildings are seen to be more typically tropical and naturally emblematic of the primeval forests of the pre-colonial era. Concomitantly, road rights-of-way within urban areas are to shrink, making way for transit and for larger, somewhat more unruly landscapes to form. Simultaneously, the amount of wildlife, including animals, birds, and insects, are perceived as conforming to natural cycles of growth and development, as well as becoming more visible. An aim is to make Singaporeans more comfortable with day-to-day contact with nature and to strengthen the relationship between the natural and constructed aspects of the city's urban environment. Of course, the transformation also trades on those juxtapositions of 'gardens' and 'city' that went before. In this final rendition, if it comes to pass fully, all will be somehow present and the tropical character of Singapore will be more emphatically evident, as well as sensually and visually present.

33. VISION OF A CITY IN NATURE

c.

METAPHORICAL PERSPECTIVES

As a metaphorical perspective about habitation and, indeed, versions of civilizations, 'city' and 'garden' as broad categories have become intertwined, with the concepts of one term resonating against concepts of the other in order to somehow frame an appropriate and desirable path to be followed. A metaphor, after all, is when something is regarded as being representative or symbolic of something else, especially something abstract or complex. According to some scholars the word 'garden' is more an artifact of speech, whereas 'landscape' is associated with text. Nevertheless, the use of either or both terms can be the 'silent language of imperialism' as it tends to unify and naturalize the world to which it is applied. There, the tropes and narratives of garden and landscape tend to fall into several categories. The first are 'narrative tropes' involving conventionalized settings linked with particular events, which evolve repeatedly in a culture and that are also often associated with a nostalgic past of harmony with

nature. In particular pastoral tropes are examples of this association. The second category involve 'genre narratives', usually associated with origins, foundational myths and foci on places.[20] Ideas, for instance, of Eden, Paradise and similar restorative narratives quickly come to mind. In many, if not most uses, of such metaphorical perspectives the aims are bound up with simplification of otherwise complex conditions and circumstances for the purposes of control or imbuing political meaning and for identity construction. Here, there is nothing necessarily nefarious about such deployments. As anthropologists often tell us we do tell ourselves stories in order to make ourselves feel alright. It is a very human manner of coping and of explanation.

One of the better known narratives of this kind is American pastoralism and the pastoral idyll. As one observer commented, "America was discovered before it was conceived…To become a reality America had to become a state of mind as much as a place, an entity whose identity and existence depended upon its meaning".[21] To the early settlers it appeared as a green gaze of virgin land, both magnificent and terrifying. This frightening 'New World' shared but also proved to be the grounds for reconstruction of a renewed civilization. Such vastness, however, lacked a meaningful context, making necessary the projection of a new yet familiar meaning. The religious motif of a 'New Jerusalem' allowed the early settlers to establish a mythical vision of America where the landscape would conjure up reassuring biblical images. The latter, in turn, would project the early settlers toward a future in which garden and city would be in harmony. The poetic descriptions of newly discovered America thus strengthened the idea of the 'New World' as a place where urban-pastoral society could live.

34. AMERICAN PASTORALISM: RICHMOND FROM THE HILL ABOVE THE WATERWORKS.

35. A MOTIF OF THE MODERN TECHNICAL TEMPERAMENT

The American urban-rural dichotomy is thus reflected in the mythical, ideal and metaphorical reality of 'Pastoralism' and its later dialectic with the so-called 'Modern Technical Temperament'.[22] Both of these fictitious and constructed visions of American splendor served the gradual construction of an identity of the American people, perennially divided, or so it seemed, between the idyll of boundless conquest of nature and the explosive force of technological advancement. In effect, Pastoralism proved to be an ideological motif that tended towards an idealized dimension of habitation that exceeded daily reality. Moreover, here the origins of Pastoralism at large date back to 'cultural primitivism' exemplifying the knowledge that derives from contact with nature but also with the moral and spiritual growth of the subject living in natural circumstances. Furthermore the concept of Pastoralism has at least two different connotations. First, it can be 'popular and sentimental' meaning that the primitive and rural realities of the countryside contrast sharply with those of the city. Or it can be 'imaginative and complex' by acting as an element of mediation between civilization

and nature, the city and the countryside, nature and art, and so on.[23] In this form, according to some historians, Pastoralism represents a form of 'semi-primitivism'. In fact, it mediates more or less halfway between nature and civilization. It is, in short, "a third term between humanity and nature that is the identity between people and the natural world".[24]

With the advent of mass production, the United States moved towards a 'modern technical orientation' and temperament and the notion of Pastoralism became opposed to it as it linked to the specificity of place, production and so on, and away from simply the experience of civilization and nature. This gave rise to Modern Pastoralism which developed more palpably in the broad swaths of suburban metropolitan development during the mid-twentieth century. However, Modern Pastoralism, as such, cannot be considered a utopia but rather as an ideology. Essentially, it defined the symbolic functioning of the cultural artifacts of a 'Middle Landscape' in the form of a tradition of the past as a symbolic mask of the commodification

that was undercutting its true essence.[25] The more egalitarian ideals of a heroic past, real or implied, also masked the regressive social realities of the time, when segregation and economic elitism were dividing the country. "Drawing on the promise of an open landscape and pastoral sensibilities and rhetoric, proponents of this perspective have linked city and countryside to describe or envision America as a healthy, harmonious and urban-pastoral society combing the best of both worlds".[26]


36. COMPLEX PASTORALISM IN THE LACKAWANNA VALLEY
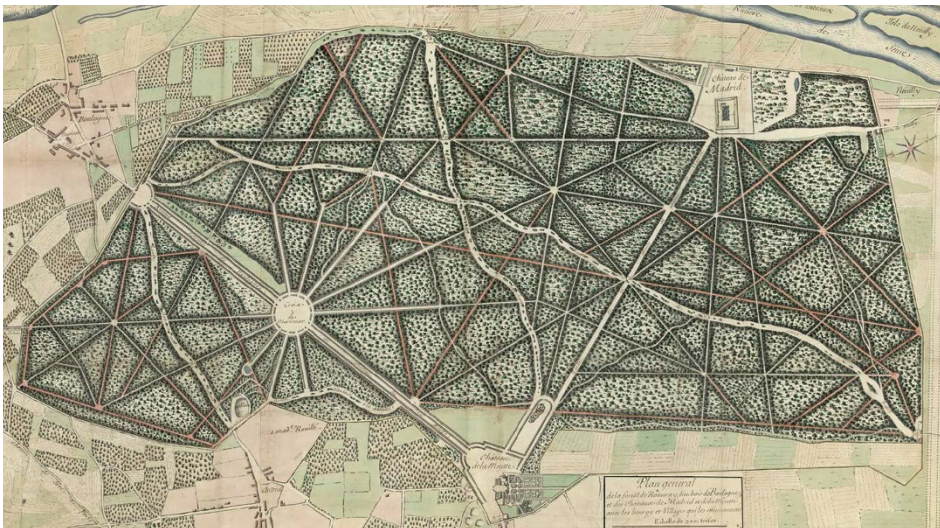
37. FOREST IN THE CITY – CITY IN THE FOREST

In Europe, earlier on during the eighteenth century, the city was already seen as a 'natural' entity and, more specifically, compared to a forest. Marc-Antoine Laugier, for instance, wrote in his essay about architecture of 1753 that "we must look at the city as a forest" and his 'primitive hut' also defined the universal and natural origins of architecture, placing itself as a universal foundation myth.[27] Indeed, this image of a city as a forest persisted, so that almost two centuries later in 1955 Ludwig Mies van der Rohe was to say "there are no cities, in fact, anymore. It goes on like a forest. That is the reason why we cannot have the old cities anymore, that is gone forever, planned city and so on."[28] The medieval city centre of Paris at the beginning of the nineteenth century probably appeared as a forest although more likely a jungle to Baron Haussmann, when he decided to regularize the urban pattern and to introduce tree-lined avenues. His plan for Paris introduced a new order to the city through greenery, a new theatrical quality that was composed by a sequence of urban scenes: the court, the garden and the forest. In fact compare Haussmann's city making to Le Nôtre's gardens of Versailles, where nature was seen as an almost solid mass through which pathways and fountain areas could be cut.[29] Furthermore, early designs for the Bois de Boulogne on the outskirts of Paris recall the urban interventions of Haussmann in these regards. Garden or park design, therefore, could be seen as a metaphor for city making as the city was treated as a forest or jungle that needed to be rationally and healthfully organized through a set of boulevards and avenues. The abundant use of trees inside the city also reinforced the idea of a city as a large garden and park. Moreover, this process of rationalization took place at different scales throughout nineteenth century Europe. Green spaces were a part of private villas at a small scale, large urban parks became a reality for all cities and pleasure gardens were provided hosting different urban social classes.
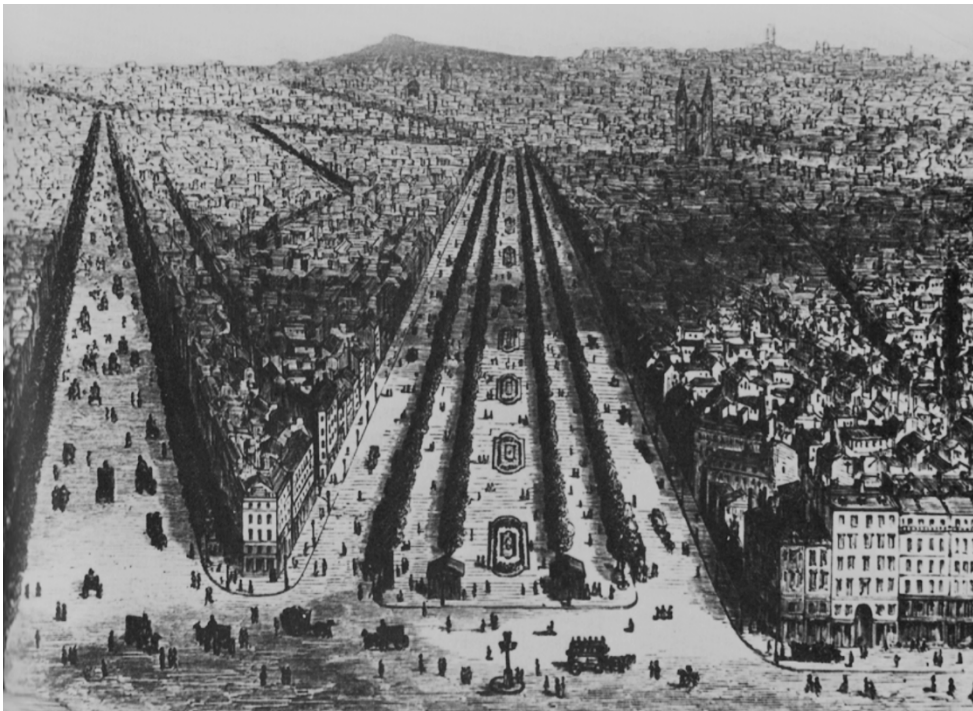
38. HAUSSMANN'S BOULEVARDS IN PARIS

In Italy, as Carnemello notes, "a characteristic of the garden and its space is to always represent a transitional element from various other aspects of the construction of the territory. Although reflecting urban culture, the garden is a transition between architecture and nature, between city and countryside, a transition between the house, the countryside and the wild nature – parts related to each other by gradual passages."[30] In fact, the Italian garden has historically united both *venustas* and *utilitas*, as vegetable gardens were often part and parcel of villa amenities since the ancient Romans. This connects back to the garden as a unifying element between different territorial scales. Again quoting Carnemello, "if we consider the garden as the highest formal expression of agriculture, it unequivocally belongs to the process of urban expansion, as both a complement to the urban palazzo in the case of the villa – expression of a singular form of expansion of the city in the countryside – and as part of the same process of formation and growth of the city, in the relationship between built spaces and free spaces, whether or not these are arranged as gardens."[31] Allegories about 'good government' and 'clean living' were also played out against images of the city - *citta* - as a vibrant organized whole and the countryside – *campagna* – as a verdant cornucopia of nourishment and sustenance. Ambrogio

Lorenzetti's murals in Siena's Palazzo Pubblico are evidence to this effect.

Being rooted in the Italian tradition, the interaction and even unitary conception of the residential building and its garden explains why the Garden City Movement was embraced by neo-industrial and paternalistic authorities for the making of new neighborhoods on the outskirts of major Italian cities during the twentieth century. These garden neighborhoods – *quartiere giardino* or *borgate giardino* were considered successful as they were commensurate with national traditions of city building, rooted in principles of community and mediation between the town and the countryside.[32] The Quarterie Garbatella in Rome of 1920 to 1922, for instance, is an early example and is composed of dwellings distributed over two stories – *villini* – each with its own private garden and vegetable patch. The dwellings themselves were faithful to a picturesque vernacular vocabulary called baracchetto, or little baroque, which further underlined the overall nostàlgic tone of the development. Similarly, the Citta Giardino, again in Rome of 1920 along the Aniene was an even bigger and more literal Garden City. Both examples and others like them were successful cases of the mediation between the city, the cultural values embedded into the Italian landscape and the tradition of garden design.[33]

39. THE ALLEGORY OF THE EFFECT OF GOOD GOVERNMENT ON CITY AND COUNTRY

40.GARBATELLA, ROME

SINGAPORE'S CHANGING METAPHORIC LANDSCAPE

Following its early settlement during the first decades of the nineteenth century, Singapore went the way of many British colonial possessions with a focus on trade but also on local agricultural production. This was so much so that Singapore tragically lost almost all of its remarkable primeval forests and natural vegetation as noted earlier. In certain painterly images and cartographic representations of the day, an almost English countrified view of the broader landscape emerges with open fields, croplands. Patches of trees and homesteads dotting broader vistas moving well out beyond into the island's hinterland. This imagined rather than fully real perspective, for nothing could have been further from the diminishing reality of the tropical forest, exemplified a nostalgia for the home country far away and helped sustain a narrative trope about farming and living on the land. Not pastoralism like the Americans, for Singapore was more about crops, this state was, nonetheless, as if the landscape of the island was truly being remade. It was less the case of a conceptual binary between 'town' and 'country', as it was an almost complete makeover of the 'country' component.

41. SINGAPORE'S EARLY COUNTRIFIED LANDSCAPE

As mentioned about Singapore during the past half century or so, the coupling of terms qualifying city has moved from 'Garden City', implying putting the 'garden' component into the city; to a 'City in a Garden', which more literally describes the idea of a city within a garden; and then on to a 'City in Nature', where the notion of garden is re-qualified as wilder, more natural and presumably heading back towards the original primeval forests. At much the same time the concept of 'city' has been expanding in function, ambition and diversity. Moreover, as with other metaphors involving 'green' components, by naturalizing complex conditions, problems become seemingly simplified, the identity narrative of Singapore is reinforced, a promise of entertainment or recreation is provided, and economic profit is fostered. Furthermore, the trend from Garden City to a City in Nature mirrors the circumstances of Singapore during this time. On the heels of vast destruction of natural and garden-like circumstances,

as well as rounds of cleaning up, bringing the garden into the city would seem to follow both logically and practically. With tree-planting and the like, it would also engage many Singaporeans in a joint effort and begin to convey a sense of pride in their environment. Furthermore, as the Housing and Development Board's program gained momentum and success, the sheer need to offset the built and constructed environment with something more natural, and no doubt softer, became more and more obvious. Then because of the persistence of these efforts, Singapore became tangibly greener to the point where the scale tipped, as it were, to Singapore being able to be perceived as a garden more broadly into which city building was occurring. The most recent turn to a 'City in Nature', although not fully realized, points to the special character of Singapore as a place, within the branding that is also taking place, and the authenticity and distinction which needs to be more fully involved. Singapore is, after

all, tropical and with the idea of genre narratives, introduced earlier, this implies a certain kind of nature. It is one that is wilder, more jungle-like, biodiverse, and sensually engaging.[34]

In the story and intertwining of 'blue' and 'green' the idea of nature also resonates better with today's circumstances and times, strongly tinged politically and otherwise with the goodness and righteousness of sustainability, ecological relationships and even senses of survival. Also, while on the matter of water independence and sustainable sources, the hydrologic and water re-use cycles engage a certain autonomy, natural circumstances, biodiversity and how the 'green' relates technically to the 'blue', as it were. Further, it can result in less costly maintenance and enhancement of the environmental 'friendliness' of the operations of the water systems.[35] Certainly, many individual families cannot exert the same impact as a more pervasive natural phenomenon. Nor can an expansive garden survive without the strong ecological underpinnings to be found in nature. In this trend, however, several consequences and issues can be seen to occur. First, the acceptance of a 'City in Nature', or a literal state close to it by Singaporeans needs to be cultivated and developed. Anecdotally, it seems that many enjoy attractions and benefits of nature but also dislike and wish to avoid less attractive aspects. As one naturalist observed, while people like butterflies and butterfly gardens, they do not like the caterpillars that accompany them.[36] Second, particular forms of buildings and public infrastructure are clearly going to be favored over others in making a "City in Nature", including green wall and roof structures, dedicated traffic lanes for cyclists, pedestrians, joggers and people out in nature generally. Also the width of some roadways will likely shrink and public open spaces will be rendered in more natural ways. With the right kind of adaption by inhabitants, all of this could be and probably will be an exciting, healthful and trend-setting condition. Given the constant tropical circumstances of Singapore, it may also mean that

the isolation of communities may lessen or become more consolidated with concomitant shifts in fruitful use patterns and arrangements of live, work and recreate.

The metaphor, if not reality, of a 'City in Nature' also presents a segue into the concept of 'hyperobjects' and those entities of such vast temporal and spatial dimensions that they defeat traditional ideas about what a thing is in the first place. Immediate examples include the health of the biosphere and events like climate change. The term is used by object-oriented philosophy adherents like Timothy Morton.[37] It was first coined in 1967 in computer science to refer to n-dimensional, non-local objects. In the work of Morton the concept is brought to bear to problematize environmental theory from the standpoint of ecological entanglements and overcoming the bifurcation of nature and civilization, or the idea that nature exists as something apart from but sustaining society. By contrast, the claim is made that we are embedded in nature. Morton also uses the term 'dark ecology' to apply to the irony, ugliness, and horror of ecology, as well as the term 'nets' to refer to the interconnected uses of all living and non-living things including the idea of infinite connectedness and infinite distinguishing differences.[38] Taken in *extremus*, Singapore's 'City in Nature' could be seen to participate in a hyperobjective state, especially with the emphasis on ecological circumstances, natural progressions of things and relationships with and among people and things. Moreover, 'clean and green' seems likely to take on a new meaning in the sense of being unadulterated and completely natural, including potentially elements of Morton's 'dark ecology'. The early specter of this eventuality would also make Singapore unique in the world. It would remain to be seen, however, whether such a state would have the desired edifying effects on Singaporeans as the earlier metaphors of combinations of 'city', 'garden', and 'green'. Many probably think not. On par though, in the span

of a little less than two centuries Singapore has moved, metaphorically speaking, from attempts at an almost total makeover of the island in the image of an English countryside on to the quintessentially modern idea of the 'Garden City' and now on to the less conceptually bifurcated and more complicated relational complexes of a 'City in Nature', with its biophilic and potentially hyperobjective associations.

42.THE UNCANNY INTIMACY AND STRANGENESS OF HYPEROBJECTS

e n d n o t e s

1. Lee Kuan Yew. 2012. *From Third World to First: The Singapore Story 1965=2000, Memoirs of Lee Kuan Yew, vol, 2* (Singapore: Marshall Cavendish), p.200.

2. Boon Siong, Neo. 2009. *A City in a Garden – Developing Gardens Singapore: Centre for Governance and Leadership*, (Civil Service College), p.2.

3. Lee, p.309.

4. Lee Kuan Yew. 1968. Opening Speech of the "Keep Singapore Clean" (Singapore Conference Hall, 1st October, National Archives of Singapore).

5. Boon Siong, p.5.

6. Boon Siong, p.6.

7. Lee, 2012, p.300.

8. Lee Kuan Yew, 2011. *Hard Truths to Keep Singapore Going.*

9. Boon Siong, p.78.

10. Chou, Cynthia. 2014. "Agriculture and the End of Farming in Singapore" in Timothy P. Barnard, ed. *Nature Contained: Environmental Histories of Singapore* (Singapore: NUS Press), p.233.

11. Chou, p.234.

12. Howard, Ebenezer. 1965 (1890). *Garden Cities of Tomorrow* (Cambridge, Mass: The MIT Press).

13. Miller, Melvin. 2010. *English Garden Cities: An Introduction* (Chicago: University of Chicago Press).

14. Richie, Alexandra. 1998. *Faust's Metropolis: A History of Berlin* (New York: Carroll and Graf Publishers, Inc).

15. Sutcliffe, Anthony. Ed. 1984. *Metropolis 1890-1940* (Chicago: University of Chicago Press).

16. Neo, B.S., Gwee, J. and Mak, C., "Growing a city in a garden", in Gwee, J. (Ed.), *Case Studies in Public Governance - Building Institutions in Singapore* (Singapore: Routledge, 2012).

17. Boon Siong, 2010.

18. Interview with Dr Lena Chan and Mr. Lim Liang Jim on 22 June 2017

19. Yeo, H. and M Chng. 2017. *Building a City in Nature* (Singapore: Centre for Livable Cities, CLC Insights 24).

20. Potteiger, M. and J. Purinton, 1998. *Landscape Narratives, Design Practices and Telling Stories* (New York: John Wiley and Sons, Inc).

21. Machor, J. L. 1987. *Pastoral Cities, Urban Ideals and the Symbolic Landscape of America* (Madison: The University of Wisconsin Press), p.27.

22. Rowe, Peter G. 1991. *Making a Middle Landscape* (Cambridge, Mass: The MIT Press).

23. Marx, Leo, 1964. *The Machine in the Garden: Technology and the Pastoral Ideal in America* (New York: Oxford University Press).

24. Rowe, p.221.

25. Rowe, p.200.

26. Machor, p.5.

27. Laugier, Marc-Antoine. 1753 (1977). *An Essay on Architecture, Translated by Wolfgang and Anni Hermann* (Los Angeles: Hennessey and Ingall).

28. Interview with Mies van der Rohe by J. Peter in Lambert, Phyllis. ed. 2001. *Mies in America* (New York: Henry N. Abrams).

29. Jordan, D. P. 1995, *Transforming Paris: The Life and Labors of Baron Haussmann* (New York: Free Press).

30. Carnemolla, Adriana. 1989. *Il Giardino analogo, considerazioni sull'architettura dei Giardini* (Rome: Officina Edizioni), p.42.

31. Carnemello, p.180.

32. Tagliaventi, G. 1995. *Citta Giardino: Cento Anni di Teoria Modelli Esperieze* (Rome: Gangemi Editore).

33. Tagliaventi, p.30f.

34. Potteiger, M. and J. Purinton, 1998 and Yeo and Ching, p.5f.

35. Interview with Professor Leo Tan and Dr. Darren Yeo, Biological Sciences Department, NUS on 17 August 2017.

36. Interview with Mr. Khew Sin Khoon, CEO of CPG Consultants on 8 February 2017.

37. Morton, Timothy.2013. *Hyperobjects: Philosophy and Ecology after the End of the World* (Minneapolis: University of Minnesota Press).

38. Morton, p.65f.