

AR2222 FINAL PAPER – ARCHITECTURE + NATURE

Tropical Perfection

Gardens by the Bay and the Control of Nature in Singapore

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“Gardens by the Bay brings to life NParks' vision of creating a City in a Garden. The Gardens captures the essence of Singapore as the premier tropical Garden City with the perfect environment in which to live and work - making Singapore a leading global city of the 21st century.” (Gardens by the Bay 2013, emphasis mine)

The Gardens by the Bay have been lauded as a world-class attraction, a masterpiece of construction which has won international recognition – and multiple awards – for their design and sustainability. They have also been described as “hypernature,” an ostentatious and theatrical display of controlled nature (Heathcote 2013). Either way, the Gardens represent a particularly interesting case study to examine Singapore's relationship with nature and its position as a tropical country. This essay will first pursue two different tracks of discussion – one regarding the construction of the ‘tropical’ as an colonial idea and the other the role of green spaces in the city – and later tie them together in a critique of the Gardens by the Bay, in particular the two iconic conservatories. This paper will explore the thresholds between the biomes and the tropical realm, and between the urban city and the Gardens as a whole, revealing a seemingly contradictory impulse to locate the Gardens in the tropics, while simultaneously transcending climatic limitations to transport the visitor into foreign locales.

The origins of ‘modern’ tropical architecture is often traced back to its institutionalisation in the mid-20th century as a distinct field (Chee, Chang and Wong 2011). At its most basic, tropical architecture is concerned with developing an architectural style suited to the unique challenges of the tropical climate. This includes consideration of the tropic's heat and humidity, as well as the quicker rate of decay for materials and faster growth of fungi (Bay and Ong 2006). How do we create a comfortable living and working environment in the tropics – and furthermore do so in a sustainable, low-footprint way?

But beyond its practical aspects, we should not forget that the roots of the tropical lie in the imaginative constructs of the colonial period – constructs that framed the tropics as fundamentally ‘Other.’ Tropical nature has commonly been represented in Western discourse by images of exoticness and untamed savageness (Gerassi-Navarro 2012), ideas which remain powerful even in the postcolonial period.

More problematically, the colonial construction of the ‘tropical’ is linked to an ideological thought-system that imposed values on lands and peoples and helped to justify colonial rule. Tropical climates were largely seen as inhospitable, even threatening to the health of Europeans, capable of causing both physical and mental harm to the body (Manson 1898).

The characters and essential 'natures' of the native inhabitants were regarded as irrevocably shaped by the climate – they were feeble, lazy, indolent and degenerate, made that way because the heat and humidity had sapped their energy and brain-power. The climate had thus made native societies developmentally backwards, in need of the 'civilisation' that colonisers would bring. The tropics could possess beauty, but it was, at the same time, always menacing because it was believed that long-term residence could cause 'racial degeneration' in Europeans (Arnold 1999).

To escape the unrelenting heat and the ignominy of living amongst the 'natives,' the British in India often built hill stations in the cool highlands as retreats – these were sites that allowed them reprieve from the tropical climate and the opportunity to recreate the physical and social conditions of their homeland (Kennedy 1996). What is of note here is how the journey to the hill station was often described in a manner evocative of a religious pilgrimage, emphasising the almost magical experience of transition from the "heat of the plains" to the "relief" of "cool evenings" in the mountains (ibid.). That transition becomes the extended 'threshold' between two different worlds – the vast, oppressive tropical lands and the isolated English communities which, while physically located in India, were differentiated as superior by their cooler surroundings and visual replication of traditional English towns.

von Meiss identifies three functions of the threshold, namely the utilitarian, protective and the semantic (1990). Understanding its semantic value is particularly useful: here, the threshold takes on meaning as a passage that signals the differing "character and values" that lie in the world behind and the one ahead (von Meiss 1990). The threshold is thus about the relationship between two places – drawing on concepts of separation/connection and boundary/transition – a definition that we will return to later in the essay.

The idea that the tropical climate threatens health and stifles productivity has not disappeared in the postcolonial era. Former Prime Minister Lee Kuan Yew was a notable proponent of air-conditioning, unironically declaring it the most important invention of the 20th century, one which "changed the nature of civilisation by making development possible in the tropics" (Gardels 2009/2010). This somewhat dramatic statement makes it clear that there is still a link between climate and 'civilisation,' where the ability to overcome heat and humidity is both the enabler and signifier of modernity and development.

What, then, to make of the tropical garden? If the tropics were a wild, exotic but potentially threatening environment to would-be colonisers, the garden represents an attempt to tame

nature and bring it under control. Gardens are man-made spaces where nature can be contained and displayed to best effect. They are also a testimony to a people's "ethos" and "cultural attainment," and thus another indicator of the society's level of civilisation (Savage 1997). Jim Eyre, director of Wilkinson Eyre Architects (the firm responsible for the Gardens), argues that Singapore has inherited a "love of gardens and gardening" directly from the British (2013). If the garden acted as a "*cordon sanitaire*" – a sanitary barrier – protecting Europeans from the dangers of the "enveloping jungle" – the landscape of the tropical – what does the garden represent to us today? And how does the Gardens by the Bay fit into these understandings of the tropical?

The Gardens by the Bay must be understood as the culmination of Singapore's greening programme, a multi-million project that epitomises the shift from the 'Garden City' to the 'City in a Garden.' The Garden City project, began in the 1960s, is frequently attributed to former Prime Minister Lee Kuan Yew and his desire to differentiate Singapore from its neighbours and improve its international standing (Auger 2013). It was also suggested that greening would beautify the city and improve the quality of life of its inhabitants. This alludes to an older conception of the 'Garden City' - Ebenezer Howard's utopian vision of harnessing nature and green spaces to alleviate the overcrowded and unhealthy living conditions of the urban city (1898). Dr Tan Wee Kiat, CEO of the Gardens by the Bay, evokes 19th century British and American ideas about public parks when he refers to the Gardens as a "green lung" in the city and draws a comparison to Central Park in New York (Foreword 2012). In this conceptualisation, green spaces are envisaged as places of leisure and restfulness, separate spaces that provide a refuge from urban living.

Since the late 1990s, however, Singapore has shifted towards the 'City in a Garden' concept. This reversal locates the entire city in a green environment, dissolving the boundaries between our built environment and 'nature.' Green spaces would no longer be distinct 'enclaves' but part of an integrated system, effectively extending their positive effects to the whole city. If gardens are about containing nature, the 'City in a Garden' scheme also, implicitly, signifies an extension of Singapore's control over the natural environment, where the entire city is now located in a pleasant but completely regulated space. More positively, the new initiative implies a sense of communal ownership – where the provision of green spaces had been a 'top down' government initiative before, NParks were now looking to intensify the public's involvement (Auger 2013).

Gardens by the Bay has been designated the “jewel” in this programme (Ministry of National Development 2008), the ultimate sign of Singapore’s commitment to greening. The Gardens, on a whole, were envisioned as a “seamless green promenade around Marina Bay” where “pervasive greenery is linked and integrated with the urban fabric” (President’s Design Award 2015; Baker, Competition 2013). In line with the ‘City in a Garden’ vision, the Gardens have been positioned in the heart of the city, creating a “people’s garden” (Auger 2013), where encompassing ‘greenness’ is interwoven with urbanity and – at least for the outdoor gardens - made free and accessible to the public.

In many ways, the Gardens eliminate thresholds between urban living and green space; they are comprehensively integrated not just physically but in their metaphorical and economic functions. The Gardens are recreational gardens, but not simply isolated reprieves from the urban city – rather, they are unmistakably modern constructions, symbols of urbanity in their own right. Economically, they not only benefit residents of the city but draw international visitors, helping to vitalise the Marina Bay district and increase land value in the area.

Furthermore, the Gardens have been firmly situated in the local context by their marketing as the essence of the specifically *tropical* Garden City (Gardens by the Bay 2013). The Bay South Gardens are cited as tropical gardens that are “uniquely Singapore,” reflecting our natural and cultural histories (President’s Design Award 2015). The idea of the ‘tropical’ has, arguably, been employed to evoke a sense of lushness and exoticism, designating Singapore as an ‘oasis’ or ‘paradise’. The ‘tropical’ label serves as a unique selling point that differentiates Singapore as a city and, consciously or unconsciously, draws upon the colonial construct of a mysterious and exotic ‘Other’ to make Singapore a more alluring destination.

Dr Tan suggested that the Gardens could only exist in the specific context of our tropical climate, saying that “it is difficult to imagine Gardens by the Bay anywhere else – if you had winter and other seasons it would not be sustainable...We have perpetual summer.” (Auger 2013) It is interesting to note the self-evident link drawn between our location in the tropics and the sustainability of the Gardens. This highlights their exceptionality, but seems to obscure the enormous confluence of financial and technological prowess that made them possible. It has been suggested that the construction of such massive and unnatural environments, in Singapore’s climate, can never be considered sustainable (Atelier Ten 2012). Singapore, however, has continuously emphasised the Gardens’ exemplary standards of sustainability, using this buzzword to position itself as “responsible global citizens” setting a high benchmark for the rest of the world (Tan, Foreword 2012).

Yet even as we speak of the Gardens as tropical creations woven into the fabric of urban living, a conundrum emerges in the form of the two biomes that, along with the Supertrees, are their most iconic features. How do we reconcile the vision of 'a City in a Garden' with the huge glass conservatories that hover on the skyline, advertising their artificiality rather than blending in? And how do we understand their interior displays of artificial environments and non-tropical plants in light of the Garden's supposed role as representative of the "tropical Garden City"?

Even as the 'tropical' is played up as a unique selling point of the Gardens, there is a simultaneous view of the tropical climate as a problem that has to be overcome. This was not just a top-down decision; Dr Tan notes that the public, when solicited for feedback, had "clamour[ed] for comfort," which led the development team towards conservatory construction (Singapore's Spring 2013). The quest for visitor comfort was evidently one of the top design priorities in the construction of the Gardens; Singapore's "heat, humidity and rain" were seen as impediments to visitors, especially in the mornings and afternoons. In the outdoors gardens, this meant considerations of topography, wind direction and shade provision (President's Design Award 2015). In the conservatories, temperatures are controlled for "optimal human comfort," allowing large events and conferences to be staged in a cooler, superior environment "compared to the heat outside" (President's Design Award 2015; Grant, Flower Dome 2013). This suggests the continuation of the colonial idea that tropical climates are fundamentally inhospitable and must be overcome to ensure health and productivity. There is an irony here in the emphasis on 'tropicality' while simultaneously suppressing its defining features – the heat and humidity – which are dismissed as sources of discomfort.

If the Gardens as a whole were supposed to integrate 'seamlessly' with its built surroundings, the conservatories were designed to stand out. Their architects refer to them as "alien" structures, and every effort has been made to emphasize the transition from outside to the interior (Bellew 2013). The biomes themselves are spectacles, intended to be attention-grabbing, awe-inspiring and clearly visible to the visitor from a distance. The threshold into the conservatories is the hub - a "prelude" and "warm-up space" to the biomes, placed outdoors and under shade so as to increase the "drama" of entering into the bright and cool interior environment (Grant, The hub 2013). Visitors arrive from the humid tropical exterior, pass through an "intentionally compressed and dark entrance space" and emerge into the sunlight, cool temperatures and visual extravaganza within (Grant, Flower Dome 2013). This

deliberately intensified experience calls to mind the journey of the British to their hill stations; the striking change of 'climate' is the first indicator that they have entered a world that is not only physically but also 'ideologically' different from the outside.

What does the world inside the conservatories represent? The biomes bring visitors into 'artificial natural' environments; the Flower Dome simulates the Mediterranean climate while the Cloud Forest features a man-made mountain and temperate rainforest habitat. This is, first and foremost, a display of power, showcasing Singapore's ability to deposit visitors into completely foreign landscapes that are spatially located, almost casually, in the heart of a tropical city. More importantly, the Gardens neatly parallel but easily outdoes colonial efforts to come to terms with the tropical environment. While the British had to undertake an arduous journey to the hill station to escape the oppressive climate, Singapore has harnessed technology to overcome the undesirable characteristics of the tropics and thus the factors that supposedly limited its inhabitants. Furthermore, it has been able to, in turn, appropriate and 'domesticate' distant and exotic lands and bring them to Singapore where they can be easily viewed and experienced. The Gardens are, thus, the ultimate symbol of modernity and progress, signifying Singapore's determination to surpass any limits placed on it – whether those imposed by nature, by its colonial past, or by the expectations of the rest of the world.

Coming full circle, the description of the Gardens by the Bay that preceded this essay is, perhaps, the most telling. The Gardens are representative of a Singapore that is both "tropical" in nature and a "perfect environment" – one that has overcome the inherent limitations of the tropical climate and furthermore done so in a sustainable way that meets international standards. The Garden City campaign has showed Singapore's ability to bring nature under control and construct a (theoretically) flawless environment and sophisticated society; the Gardens go one step further by displaying a mastery of even alien environments, highlighting Singapore's global reach and power. Perhaps we should view the Gardens by the Bay not as self-contradictory, as I suggested in the introduction, but instead as a supremely clever ploy. It has managed to harness the image of the 'tropical' as an enticement to would-be tourists, while simultaneously employing technological and financial power to bring visitors beyond the physical locale of the tropics into foreign worlds.

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