

Caves of Steel: Mapping Hong Kong in the 21st Century

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The use of underground space

*Beneath the city are many man-made underground spaces comprising the basements of buildings and conduits for highways, rail links and various utility services. Given the difficulties of providing new land for surface developments and high land values, studies have been undertaken for developing rock caverns for a wide variety of uses related to the social and economic needs of the community ... during the next stage of our studies, proposals will be considered in more detail.*¹

Hong Kong's urban areas are the densest in the world. The result of a uniquely inflexible geography, unregulated economy, and unpredictable political history, the city is often represented in cramped housing conditions, unusual sectional conditions, and juxtapositions of culture. These observations have become so prevalent in works of film, photography, and art and in contemporary mappings by architects as to be read as a kind of cultural shorthand for a generic otherness that obfuscates its unique qualities.² The description of Hong Kong as heterotopic, dense, and complex contributes to a sense that it is fundamentally unmappable by traditional means, and can only be understood through reinvention of mapping techniques. Despite this important realisation, no convincing new methodology has been presented.³ The thesis of this exercise then is to propose just such an analytical framework for mapping Hong Kong as the result of simultaneously infrastructural and topological forms at play at any given moment in the city fabric.

The title of this essay is borrowed from the 1954 mystery novel *The Caves of Steel* and its sequel, *The Naked Sun*, by science fiction master Isaac Asimov. Chasing a murderer through the corridors of a dense mazelike underground city and over the vast, abandoned surface, the protagonist Elijah Bayley confronts a clash between societies of intensive confinement and extensive frontier. In such a landscape Bayley's investigations tread as much on criminology as psychology, as he peels back not only the particulars of a murder but also the spatial determinants of two societies' neuroses by effecting interfaces between them. In Hong Kong caves of steel (dense interiorised infrastructure of multi-level shopping warrens) and naked sun (vast open topology of country parks, new towns, and industrial estates) exist often in immediate proximity without means of interface.

The literary analogy to *The Caves of Steel* facilitates an observation of this phenomenon but it does not provide us with the terms for qualifying or specifying it. The distinction between infrastructural and topological space is perhaps better understood through Manuel DeLanda's application of the terms 'intensive' and 'extensive' from the physical sciences to a description of abstract space, via a reading of Deleuze and Guattari.⁴ Through Reiser 'intensive' and 'extensive' properties may be understood in the urban context as competing and collaborating infrastructural and topological conditions.⁵ These three texts, DeLanda, Deleuze and Reiser, together lay out a working vocabulary of the intensive and

extensive which is more directly applicable to urban space in Hong Kong and gives us, such as it is, the terms of a map.

From intensive/extensive to infrastructural/topological, a philosophy of space in Hong Kong

Using these new concepts we can define the sense in which the metric space we inhabit emerges from a nonmetric continuum through a cascade of broken symmetries.

Manuel DeLanda⁶

In his *Intensive Science and Virtual Philosophy*, Manuel DeLanda problematises the properties of matter and energy described by the physicist's terms: extensive, intrinsically divisible properties (weight, length, mass); and intensive, those properties only divisible through changes in state (temperature, speed).⁷ Extensive properties when split result in two properties each half the value of the original, while intensive properties result in two properties each of the full value of the original. A classic example of this is extensive duration and intensive speed: an hour split in half yields two half hours; an arrow travelling at speed x , if split midair, would yield two halves of an arrow each travelling at speed x , not at $x/2$.

Manuel DeLanda's text is an extension of the project by Deleuze and Guattari to explain the genesis of real space as a historical process rather than as essences.⁸ As part of this project DeLanda interrogates the behaviour of both matter and geometry as they appear in Deleuze and Guattari's works. Within this matrix, DeLanda understands intensive space as 'a space defined by continuous intensive properties', which via a process of progressive differentiation eventually gives rise to extensive structures 'discontinuous structures with definite extensive qualities'.⁹

Jesse Reiser problematises this project for architects by applying DeLanda's philosophical

structural to a different material paradigm. Reiser's readings of the terms intensive and extensive differs from DeLanda's, though his architectural interpretations are as steadfastly Deleuzian as DeLanda's philosophical interest.¹⁰ Reiser proposes an interpretation of intensive and extensive properties which addresses the relationship of geometry to matter directly. 'The legacy of the essentialist approach to architecture, which elevates rationality (mainly in the lineaments of geometry) above matter, precludes the productive and rich capacity of matter to define or influence geometry'.¹¹ Reiser's example of the automobile engine describes the intensive as a diagram of the limits of matter and energy operating within an envelope of functional constraints.

Given the very real limits exerted on the one hand by the envelope of the car (the extensive limit) and on the other hand, by the necessary proximity of mechanical, chemical, and electrical components of propulsion (the intensive limits), a mediating assembly such as an engine block must accommodate and incorporate these functions and influences within a limited space. In doing so it moulds tightly around cylinders and crank shafts, while sprouting numerous appendages and attachment points for the systems that feed its organs, all the while growing within a highly defined limit of the body shell.¹²

Reiser's description of the extensive, or internally constrained system of an office program describes a similar equation.

[L]ooking at the process in reverse, when intensive limits are loosened, extensive controls increase. For example, as information technologies become dematerialized (paradoxically, by becoming more intense), the typical office program ceases to have a one-to-one relationship with the technologies that function within it. Paraphernalia and function, in taking up space, simultaneously force the workplace to represent what it does. With the dematerialization

*of function, hardware shrinks, and the fit between program and space becomes looser.*¹³

Where DeLanda sees intensive space and extensive structures occupying either ends of a continuum, or 'abstract scenario leading to the birth of real space',¹⁴ Reiser inverts this reading to classify a space not based on its own properties, but on how it affects systems at work within it. Under this classification, DeLanda's 'intensive' space exerts no constraints upon systems operating within it, and would be for Reiser understood as 'extensive'. Similarly, DeLanda's 'extensive' space operates on systems overlaid on it as a set of restrictive, external constraints, making it under Reiser's construction 'intensive'.

Reiser's inversions open the door to a dangerous commingling of intensive and interior or extensive and exterior which we must swiftly shut. An interior space may well be extensive providing it is free enough of constraints to allow a given system's internal limits to govern—the universal space of Ludwig Mies van der Rohe is one of Reiser's examples—and an exterior space may likewise be intensive, if it exerts sufficient constraint to subdue internal limits.¹⁵

But if this danger can be avoided, reading these inverse texts together we can understand DeLanda's 'continuous intensive properties' to be the result of intensive constraints governing, and 'discontinuous structures with definite metric properties' to be the result of extensive constraints governing. The two states indeed do exist within continua of inversion, the one leading to the other and reinforcing the former through a process of oscillation. From DeLanda we receive a description of topology as the 'least differentiated geometry'.¹⁶ Yet it will be here that we find the most discontinuous structures.

Finally we come to a set of usable terms for our map. We choose 'infrastructural' to describe the

progressively differentiated and continuous spaces resulting from intensive or applied constraints found in Hong Kong's caves of steel, and 'topological' to describe the undifferentiated and discontinuous space of extensive or internally generated limits found under the naked sun.

We differentiate the infrastructural, space that forms as a result of intensive constraints, from the intensive, space which exerts constraints. A small plot of land reclaimed from the harbour and hemmed in by existing development and road systems is an intensive space when it exerts constraints on the construction of an infrastructural podium level shopping concourse, footbridge network and bus terminal.

A space becomes intensive only with the insertion of a second system into it; for it is only in such a case that the potential for constraint is actualised. Thus in Hong Kong we can understand that certain landscapes, such as steep hillsides, introduce governing constraints on a system of roads, while the roads' own internal limits of radius, super-elevation and slope still govern only within the envelope prescribed by the landscape. Recognising however that such landscapes bear the potential to exert intensive constraint, we may classify them as potential intensive.

The continual oscillation of these spaces, the one propagating the other indefinitely, actualises DeLanda's cascade of broken symmetries in an urban metric that neither conforms to nor purports to break down the binary conditions of traditional planning practices: interior and exterior, public and private, new and old, that persist in the mapping of Asian cities. The importance of this discovery will become clearer when infrastructural and topological measures are brought to bear as tools of analytical mapping themselves on the fabric of Hong Kong.



Fig. 1: Naked Sun; the Hong Kong Wetland Park, Tin Shui Wai, Yuen Long, New Territories. Photo courtesy of the author.

Caves of Steel

It could roof itself in, gird itself about, burrow itself under. It became a steel cave, a tremendous, self contained cave of steel and concrete.

Isaac Azimov¹⁷

Azimov's detective story plays itself out in an anxious landscape as familiar to readers of Stanislaw Lem and Kobo Abe as to those of Kafka.¹⁸ Neurosis and infrastructure go hand in hand in Hong Kong as well, which can be seen in the city's long history as a military encampment. More recently, Hong Kong's caves of steel emerge out of political, economic, and even military anxiety.

The Airport Core Program, a HK\$160.2 billion public works project completed in the 1990s, was enacted by British authorities in order to restore confidence in the city's future stability following the Tiananmen Square protests.¹⁹ The ten core projects of the HKACP are the Hong Kong International Airport at Chek Lap Kok; Tung Chung New Town; Airport Rail; North Lantau Expressway; Lantau Link bridges; Route 3; West Kowloon Expressway; West Kowloon Reclamation; Western Harbour Crossing, and Central Reclamation. Begun in 1989 under then Governor David Wilson, the HKACP is a 34km urban corridor connecting the new airport to Central Hong Kong through a string of projects organised linearly along the program's rail and road infrastructure. With the exception of the airport itself, built by the Airport Authority, the Airport Rail built by the MTR Corporation, and the Western Harbour Crossing, built under a 30-year BOT franchise, the entire project was funded and built by the Hong Kong Government. The HKACP is managed by the New Airport Projects Co-ordination Office (NAPCO), under the Works Bureau.²⁰

Naonori Matsuda has pointed out that the scale of the HKACP far overshadows the infrastructure necessary to accommodate the construction of a new airport alone, and demonstrates how the moti-

vations of the plan lay as much in an effort by the colonial government to perpetuate Hong Kong as an international metropolis after the handover of the colony to China, as in the accommodation of transit.²¹

Hong Kong's 'caves of steel' follow the same logic as the ACP, even as they may propagate at smaller scales. At the easternmost extent of the ACP, the terminus of the Airport Rail is situated in a multifunctional transportation intermode in Hong Kong Island's Central Business District. The Airport Rail Station is linked directly to the International Financial Centre (IFC) corporate, hotel, and retail complex, which itself radiates out a series of pedestrian ways that form a progressively differentiating continuity between bus, ferry and taxi terminals, the MTR urban rail system, and an older network of corporate lobbies and shopping malls.

While the IFC effectively separates many functional flows, it does so through progressive differentiations within a space of continuity, assuring for instance a single-grade journey from the Airport Express Rail terminus to the taxi queue and from the space of air travel to train travel to pedestrian travel to automobile progressively. A similar experience defines the infrastructural spaces of Kowloon, where the borders between hotel lobbies, shopping arcades, Mass Transit Rail stations, corporate office cores, commuter bus and train depots are progressively differentiated along a continuity of pedestrian access, which intensify by weaving through applied constraints of a dense context.

There is an extraordinary investment in dedicated pedestrian routes as the ether conducting these differentiations. The Airport Core Program is an infrastructural space that overcomes the topography of the harbour and the country parks, temporally by speeding travel over and past them and physically by tunnelling under them and filling them in. Routing, the defining and programming

of paths, is the defining character of infrastructural space. It is a vector urbanism defined not by qualities of an area, but by the effectiveness of a route.

The Naked Sun

Besides, what can be more open than the Harbour?

Winston Ka Sun Chu ²²

Just as the propagation of space in Hong Kong can be described as a perpetual unravelling of intensive and extensive qualities, the existence of infrastructural and topological space in discontinuous proximity is reinforced in Hong Kong by realities of geography and by a history of land management. Infrastructural and topological metrics therefore correspond to infrastructural and topological forces. The map of space becomes the generator of space and further cascades ramify.

If the infrastructural is the space of anxiety, then the topological is its opposite, a space of assertive abandon. Topological space is not simply less dense. It is the raster to infrastructure's vector, a space in which generic qualities of a given area – terms such as 'open space' and 'cultural heritage' abound – lend it intrinsic value.

Hong Kong is a territory of seven million people located on 1,104 square kilometres of land. Nearly 81% of Hong Kong's natural terrain is undeveloped. The built-up area of the city accounts for only 89 square kilometres, of which barely 67 are residential land. The result of this calculus is a density of just under one metre of residential land area per person. At the other extreme of Hong Kong's 'caves of steel' are a set of wholly extensive, topological regions. Hong Kong's density is a result less of territorial extents than of physical geography and land planning. 79.2% of Hong Kong's territory is undeveloped land. This includes the approximately 5% of Hong Kong's territory which is technically arable, of which 1.1% is used for cropping. By far the majority

of the empty land in Hong Kong is steep hillside, woodland and grassland. Nearly half of this space, 415.82sq.m, is held in country parks and special areas nearly inaccessible from urban areas.²³

For nearly a hundred years following the founding of the British colony, land policy in Hong Kong relied on two infrastructural methods for expansion: land reclamation and hillside construction. In each case, a difficult and expensive process yielded tightly constrained plots in immediate adjacency to exiting development. The only notable exception to these policies was an extensive territorial acquisition in 1898, the leasing of Lantau Island and the New Territories and later the establishment of a system of New Towns in these outlying areas to absorb an influx of immigrants that began following the Second World War and continued through the Cultural Revolution. These policies continued through more or less to the end of British rule in 1997, and it is the results of their implementation which are largely seen in form of the city today—the results of a history of dense infrastructural development along reclaimed sites in the core areas culminated in the 1990s with Metroplan, a proposal of the Strategic Planning Unit ultimately curtailed into a few large-scale infrastructure projects such as the port expansion and the Airport Core Program.

1997 is a date which is as significant for the handover of sovereignty to Communist China on July 1, as for the passing on June 30 of the Protection of the Harbour Ordinance, which froze all land reclamation in Victoria Harbour except in cases of overriding public need.²⁴ This was the end of Metroplan. The collapse of the infrastructural solution at the harbour's edge came at a time when construction on Hong Kong's steep terrain also reached a limit of feasibility under structural, economic, and social constraints.²⁵ Meanwhile, an awakening of civil society in Hong Kong following 1997 produced a series of reactionary movements ranging from a nascent preservation culture (described here as

'cultural heritage') to an increased environmental awareness manifest in objections to specific urban forms such as 'wall effect' towers, to a general public acceptance that 'open space' constitutes an unambiguous, if wholly unspecified, public good.²⁶

Each of these movements proposes an extensive revision of Hong Kong's fabric in pursuit of a political, cultural, or environmental agenda by pursuing a new spatial agenda. Recent proposals for the development of a variety of high profile sites in the city, the Central Harbour Waterfront, the West Kowloon Cultural Centre, and the former Kai Tak Airport site, reveal an altogether different psychology of space than proposals for the same sites 20 years earlier under Metroplan. Maximum development plans, a pure expression of internal limits of economics, structural integrity and buildings code pressing against the limits of intensive conditions are rejected in favour of internally generated extensive factors and undifferentiated topological forms.

Metroplan, drawn up at the wane of British rule, included broadly infrastructural aims, such as improved logistics and more even distribution of urban resources achieved through routing, a 'multichoice, high capacity transport system that is financially and economically viable'²⁷ as well as 'liberal provisions ground and grade separated pedestrian circulation systems linked, where possible, into imaginatively designed open spaces within the urban fabric'.²⁸ Extensive harbour reclamation was a showpiece of the plan, with over 1,200 hectares proposed.²⁹ The Central Harbour Front, West Kowloon and the Kai Tak site are all explicitly illustrated as three-dimensional networks of pedestrian footbridges linking podium block towers.³⁰

When Winston Chu, founder of the Society for Protection of the Harbour, writes that 'the direction of Hong Kong's future growth does not lie in the metro areas but in the New Territories',³¹ he makes explicit the implicit link between the end of land

reclamation in Victoria Harbour and the end of the infrastructural model of urban space in Hong Kong. Chu presents the harbour itself as the ultimate topological space: it is the idea of the space, rather than its function, that defines its ultimate value. 'Victoria Harbour is an extraordinary natural asset for Hong Kong, and a key cultural and historic icon of our city', these are the words of Margaret Kennedy, chairwoman of the organising committee of Hong Kong's second annual Harbour Day celebrations in 1997; 'we aim to showcase our vibrant and beautiful harbour, and to enable the entire community to enjoy it from a range of perspectives'.³² Accordingly, while attention has gone to ensuring the harbour itself is not encroached upon by further reclamation and great efforts mounted (unsuccessfully) to save existing historic structures from demolition at its shore, plans for the development of the Central Harbour front site itself bear out as undefined provisions of undifferentiated open space.

Where the infrastructural tends to be the result of *laissez-faire* regulatory environments and hierarchical planning authorities, public participation is the hallmark of these new topological spaces. The results are more general goals: in the public review process for the planning of the former Kai Tak site, 'commenters advocate for more distinct urban design concept with local character'.³³ At Kai Tak the public has called for both lower density developments and more open space, amid protest from planners that sufficient density would not be reached to support the proposed infrastructural improvements, such as the Shatin Central Link rail.³⁴ Topological forms proliferate in the official proposals, a 24-hectare multi-purpose stadium complex, cruise terminal, refuse transfer station and sewage screening plant are among the programs to be included in the development.³⁵ Publicly solicited suggestions tend towards the topological as well: convention and exhibition centre, factory outlet, car racing ground, and world exposition are all mentioned.³⁶



Fig. 2: 'Caves of Steel'; the International Financial Center Mall, Central, Hong Kong. Photo courtesy of the author.

The *Executive Summary of the West Kowloon Cultural District Public Engagement Exercise* includes rhetoric such as calls for ‘ample open space and vibrant harbour front for public enjoyment’ as well as concrete restrictions on building height and density, limiting the entire site to a plot ratio of 1.81, capping residential development at no more than 20% of the total GFA, and limiting building heights at between 50 and 100 metres.³⁷ 23 of the site’s 40 hectares are reserved for open space, while the rest will be devoted to arts and performance venues.

Unlike the investment in routing observed in infrastructural space, the space of the topological is, like DeLanda’s classifications of geometry, the least differentiated. Topological space does not perform, it simply is. It does not enact, it represents. Yet its values are, as shown in the transformation of the three proposals above, as potent factors in the evolution of space in Hong Kong as the pressures of economy and limits of geography.

Mapping in a critical context

So far, the sum total of ad-hoc local reactions to larger order forces of urban modernization has produced a local physical urbanity that is both locally distinctive and different in notable ways from that found in other regions of the world, especially in the developed West.

Peter G. Rowe³⁸

It is increasingly clear that the most highly valued spaces in global city cores are being provided with their own dedicated, high-quality infrastructural connections. These are configured to maximise the ease of connecting to other global city cores around the world. At the same time they are increasingly organised to carefully filter out unwanted connections with the surrounding metropolis—those that are judged to be ‘threatening’ or deemed to be irrelevant to the direct needs of the glocal enclave.³⁹

In situating Modernism’s endgame in Asia, Peter G. Rowe’s formulation implies that the ‘massive forces of urbanisation’ at work in Asian cities produce a modern vernacular, an urban form both unique and distinct from modernism’s western origins, but one which is generally aligned with its core principles, while Graham and Marvin see a collapse of the “modern infrastructural ideal” and a troubling stratification of urban form into hierarchical enclaves.⁴⁰ Either way, the unique map of urban space in Hong Kong fails to fit smoothly into either critical category.

New and old, empowered and exploited, public and private, global and local; none of these traditional methods for mapping divisions in Asian cities overlaps comfortably with the division of infrastructural and topological space or with the neurosis of anxiety and abandon at work within them. The lack of an existing theoretical construct for this division contributes to the difficulty in mapping we observed at the start of our exercise. Now that we have defined terms to accurately describe the conditions we observe, we seek a value system for situating them within a critical context.

Recent interest in Hong Kong’s cultural heritage focuses on preserving limited examples of historic structures or urban fabrics, but these fabrics can as easily be infrastructural, as in the case of the Central Police Headquarters complex, as topological, as in the case of the protection of the harbour ordinance. Thus a distinction between contemporary development on the one hand and traditional fabric on the other does not seem to provide a functioning critical context for the distinction between infrastructural and topological space. However, the inability for distinctions to meet neatly begins to generate a critique of its own. The newly constructed Wetlands Park in Tin Shui Wai is an excellent example of a contemporary topological facility, while the traditional urban shop house represents a classical infrastructural typology. Leslie Lu describes ‘a lack

of clear spatial divisions and boundaries between urban phenomena' that the 800m Central and Mid-Levels Escalator engenders in the older fabric through which it passes.⁴¹ 'Urban regeneration is a by-product of the escalator's impact', writes Lawrence Liauw. 'However, there is a danger that the excessive mono-typological redevelopment of towers along the escalator could backfire against its regeneration effect'.⁴² The binary poles of the infrastructural and the topological continue to oscillate.

The gap between the space of the empowered and the exploited is another common thread in contemporary urban criticism. Riccardo Patrella establishes this dichotomy as a set of 'mental maps'; one map of a 'wealthy archipelago of city-regions... surrounded by an impoverished *lumpenplane*'; a familiar entrenchment of the privileged classes against an increasingly disenfranchised and exploited other; and one map in which 'global civil society that has emerged with the information age in all the major city-regions links together across fading national boundaries to balance the myopic commercialism of the merchant class with a global social contract'.⁴³ Certain characteristics of the infrastructural engage in a calculated exploitation, in so much as they press against intensive limits to achieve maximum/minimum conditions of cost and return, as Zhang, Lau and Lee have observed.⁴⁴ Yet neither the infrastructural nor the topological is fundamentally empowered or exploited space. Rather, we again observe an oscillation between the two. Zhang, Lau and Lee describe Statue Square, an infrastructural open space developed out of the pressures of intensive forces, as an accidentally empowered space: 'Statue Square would not exist if it was not of strategic advantage for Hong Kong Bank to keep the area in front of its headquarters building open, and its function as a public urban space is only incidental to this very commercial purpose'.⁴⁵

Graham and Marvin address the increasingly

splintering public and private spheres of the city and the divisive results on urban form and organisation in their discussion of the 'highly uneven warping of time and space in highly localized and valued places' that leads to the 'tunnel effect' of the new regionalism. 'To some, these trends mean that the old territorial identity of the city economy, as the heart of its hinterland, has been totally lost'.⁴⁶ This would seem to set up a neat match for our terms, yet infrastructural space and topological space are as frequently found under public ownership as under private as under both. Neither distinction overlaps cleanly with the dialogue over either the structures of ownership or the limits of use of urban space. Hong Kong's well-known Central and Mid-Levels escalator is owned and operated by the Government of the Hong Kong Special Administrative Region. One can walk from its terminus, without touching ground, through caves of steel owned and operated by Hang Seng Bank Ltd., Hong Kong Land, The Mass Transit Railway Corporation, Henderson Group, Hysan Development Ltd., Gamon Construction Ltd.—the list of private developers, public services, and public-private partnership goes on.

The distinction between global and local spaces in 'Asia's World City' suggests a final potential context. Laura Ruggeri is correct when she observes that 'in Hong Kong it is no longer possible to distinguish what is local and what is not' in her study of a topological space, the enclave housing estates of Yuen Long.⁴⁷ Gutierrez and Portefaix come to the same conclusion in seeking to understand Hong Kong's multiple 'platforms for exchange' including the ACP.⁴⁸ The collapse of the distinction between global and local in Hong Kong occurs across both infrastructural and topological space.

While there is no single existing theoretical construct to contain the infrastructural/topological division in the space of Hong Kong, elements of a variety of contemporary urban critiques reinforce



Fig. 3: Flyover Diagram. For 5 kilometers along the North Shore of Hong Kong Island, a network of underground passages and overhead bridges link the different spaces and programs of the city in a progressively differentiated continuity. Image courtesy of the author.

the observed phenomena that we attribute to this new construct. Despite the collapse of binary dualisms that Graham and Marvin perceive through the works of Sandercock, Anegilil and Klingmann, and Gandy, the duality between infrastructural and topological space is a useful reality for understanding how to map space in Hong Kong.⁴⁹ Beyond the regional modernism proposed by Rowe, the psychological imbalances that modernism would seek to sublimate, infrastructural and topological space express.

Conclusions

We began with the thesis that Hong Kong is not, as conventionally understood, an unmappable complexity; it is just very difficult to map. We understood this difficulty in the inability to integrate the diverging categories of infrastructural and topological space, terms we defined by hopping between literature, philosophy and psychology. Seeking the integration of this spatial duality, we found a deeper need to integrate the psychological duality that accompanies it, that of anxiety and abandon. We observed these two dualities first as self-fulfilling; as the city becomes more difficult to know, the separation between the infrastructural and the topological becomes more pronounced. When placed within different critical contexts, however, we observed a more complex relationship between the two, an oscillation which approaches a mapping of Hong Kong.

There is a particular usefulness in knowing when to let go of words. The scale of Hong Kong's growth, its demonstrated feats of density, its absence of a stable ground plane or plan-based spatial order, its juxtapositions of culture – amid assurances of 'public space', and 'cultural heritage' in 'Asia's World City', all these phenomena are a potent reminder of the inability of the word to guarantee the concept. Yet Hong Kong must not be abandoned to the indescribable. To do so yields to the generic (no matter how specific we insist the particular indescribable

may be) and eventually will lead to the loss of the wonder of discovery in specific cause and effect, the value of Hong Kong as an exemplar in the study of urbanism. Mapping is the key to this specificity and words are the key to establishing the criteria for a map.

Notes

1. Hong Kong Government, 'Metroplan, the Foundations and the Framework', Strategic Planning Unit; Planning, Environment and Lands Branch. (Hong Kong: The Government Printer, January 1990), p. 44.
2. See *Great Leap Forward*, ed. by Judy Chung Chuihua (et al.), (Cambridge, MA: Harvard Graduate School of Design, 2001); see also: *FARMAX: Excursions on Density*, ed. by Winy Maas and Jacob van Rijs (Rotterdam: 010, 1998).
3. See for example Laurent Gutierrez and Valerie Portefaix, *Mapping HK*. (Hong Kong: Map Book Publishers, 2001).
4. Manuel DeLanda, *Intensive Science and Virtual Philosophy*, (London: Continuum, 2002).
5. Jesse Reiser, *Atlas of Novel Tectonics*. (New York: Princeton Architectural Press, 2005).
6. Manuel DeLanda, *Intensive Science*, p. 27.
7. Ibid. pp. 26-27.
8. Ibid. p. 22.
9. Ibid. p. 27.
10. "A universe defined by a fixed field and unchanging essences has been superseded by a matter field that is defined locally only in and through its interactions." From: Jesse Reiser, *Atlas of Novel Tectonics*, p. 23.
11. Ibid. p. 74.
12. Ibid. p. 106.
13. Ibid. p. 108.
14. Manuel DeLanda, *Intensive Science*, p. 26.
15. Jesse Reiser, *Atlas of Novel Tectonics*; see here: 'From Extensive Field/Intensive Object to Intensive Field-Object', pp. 24-30, and 'Projecting Force', pp. 208-209.
16. Manuel DeLanda, *Intensive Science*, p. 26.
17. Isaac Azimov, *The Caves of Steel*, (London: Harper Collins, 1997), p. 23.

18. Lem's *Memoirs Found in a Bathtub* and Abe's *Secret Rendezvous* are each as telling descriptions of the infrastructure of anxiety as *Caves* or *The Castle*.
19. Sung Hin-lun, *A Hundred Years of Aviation in Hong Kong*. (Hong Kong: Joint Publishing, 2003).
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24. Hong Kong Government, 'Protection of the Harbour Ordinance - Chapter 531', in *Legislations and Ordinances*. Available from: www.legislation.gov.hk
25. See for example the University of Hong Kong expansion plans in Pok Fu Lam. Linda Yeung, 'Two Camps on Campus, HKU says expansion is vital to accommodate four-year degrees; nearby residents see it as a threat to the environment', in *South China Morning Post* (27 January 2007)
26. For examples of the use of this rhetoric see: Carrie Cheng, 'We must not lose sight of our cultural heritage', in *South China Morning Post* (29 February 2008); Yi Fox and Helen Wu, 'Greens warn of growing 'wall effect' at estates planners criticised over huge high-rises that block air flow', in *South China Morning Post* (15 December 2007); NewsTrak Daily, 'Super open area planned at Hung Hom waterfront', in *Hong Kong Economic Times* (13 February 2008).
27. HKG, 'Metroplan, the Foundations and the Framework', p. 1.
28. Ibid. p. 13.
29. Ka Sun Chu, 'Direction of Development', in Yeh, *Planning Hong Kong*, p. 294.
30. HKG, 'Metroplan, the Foundations and the Framework', p. 25; p. 39; pp. 42-43.
31. Ka Sun Chu, 'Direction of Development', in Yeh, *Planning Hong Kong*, p. 301.
32. Agnes Lam, 'Thousands pay tribute to 'Vibrant Harbour'', in *South China Morning Post* (19 November 2007).
33. Hong Kong Planning Department, 'Report of Stage 2 Public Participation: Outline Concept Plans', in *Kai Tak Planning Review*, (June 2006), p. 29.
34. Ibid. p. 16.
35. Ibid. pp. 21-37.
36. Ibid. p. 39.
37. Hong Kong Government, 'West Kowloon Cultural District Public Engagement Exercise', in *Executive Summary: Background of the West Kowloon Cultural District Project*. Available from: http://www.hab.gov.hk/wkcd/pe/eng/doc/CC_Report_eng/3_executivesummary.pdf
38. Peter G. Rowe, *East Asia Modern: Shaping the Contemporary City*. (London: Reaktion, 2005), p. 94.
39. Stephen Graham and Marvin Simon, *Splintering Urbanism: Networked Infrastructures, Technological Mobilities and the Urban Condition*. (London: Routledge, 2001), p. 313.
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