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Conceptualising the vertical landscape: The case of the International Finance Centre in the world's most vertical city[1]

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This article introduces the crucial yet much overlooked dimension of verticality to landscape-related research through a case study of one of the most iconic skyscrapers in Hong Kong, the world's most vertical city. A tripartite analytic model is proposed to examine the dialogical interaction between the discursive and material landscapes in a vertical layout, while at the same time to explore the intricate interrelations among social actors, practices, functions of space, levels of access and forms and functions of semiotic resources, all within one single site of varying levels of verticality. In the process, the study reveals the vertical space as a highly stratified and hierarchical system, and underlines the value of taking a functional approach to verticality in order to deepen our understanding of its indexical social meaning and its role as an active agent both in reflecting and shaping social stratification in today's globalised and consumerist world.

本文探討景觀研究中,一項重要而常被忽略之元素 — 垂直性。在世界最垂直的城市 — 香港,我們透過一案例,分析香港其一最具標誌性的高樓大廈,從而提出一個三部份的縱向分析模型,以檢視話語景觀與物料景觀,在 一個垂直的空間中的交流及相互作用。與此同時,我們探究在此一垂直的 空間中,社會行動者、社會行為、空間功能與使用權限,及話語資源的形態及作用,其錯綜複雜的相互關係。在此過程中,本研究揭示垂直空間的高度分層性及階級性,並突出在全球化及消費主義下,我們如何透過以功能為重的研究方法,更深入了解垂直性的指引社會含意,及其於反映及同時塑造社會分層化的重要角色。[Chinese]

KEYWORDS: Geo-semiotics, Hong Kong, linguistic landscape, semiotic landscape, vertical landscape, vertical semiotics

INTRODUCTION

In his bestseller *The World is Flat*, Friedman (2007) portrays a world in which technological changes have 'flattened the playing field' by equalising opportunities among individuals. Long before this metaphor of flatness was made popular in the understanding of globalisation, what might be referred to as a 'flat earth' approach has dominated the discourse of academic disciplines on spatial geographies as in geopolitics, urban design and critical urban research. It is therefore unsurprising that this discursive flattening is also found in other academic domains where landscape is a prime concern, as in

research on linguistic landscapes, and more generally, on semiotic landscapes.

The persistent neglect of the vertical landscape in 'an overly flat discourse' (Graham and Hewitt 2012: 72) as seen in these disciplines, however, is at odds with the human spatial experience, which is essentially three-dimensional and volumetric. Furthermore, such neglect overlooks the fact that high-rise architecture has become an iconic and ubiquitous feature in contemporary cityscapes in an increasingly urbanised world. Of course, tall buildings are nothing new. By the late nineteenth century, multi-storey structures were already in place, at least since the Home Insurance Building in Chicago – often regarded as the world's first modern skyscraper – was completed in 1885. However, it was not until the last decade or so, when computing power brought about major technological advances in architecture and engineering, that the construction of supertall buildings of theoretically unlimited heights became possible (Al-Kodmany 2011). While it remains to be seen whether supertall buildings will become the future architectural norm, it is generally expected that skyscrapers will continue to grow in number, scale and height. A call for the study and theorisation of verticality in landscape-related research is therefore not only essential but pressing.

In this regard, nowhere in the world is a more fitting research site for understanding the vertical landscape than Hong Kong. Situated at the south- eastern tip of China, Hong Kong is characterised by a unique landscape combining hilly terrain with a deep harbour. Of the 1105 square km of total land area (Hong Kong Lands Department 2014), approximately 45 percent possesses an elevation of at least 100 metres above sea level.[2] The bulk of this rugged landscape is thus composed of steep slopes, rendering it relatively unsuitable for development. Only about a quarter of the land is currently developed for residential, commercial, industrial and other urban uses. The remaining three quarters is mainly composed of woodland, grassland and wetland which are scattered across the territory (Hong Kong Planning Department 2014). With a population of over seven million people (Hong Kong Census and Statistics Department 2014), Hong Kong is the eighth most densely populated urban area in the world (Demographia 2015: 108). High- rise and high-density buildings are therefore a direct response to the large population in a small city of distinct topography. This is unlike in Dubai, for instance, where the aim of vertical expansion is not to address land-shortage problems but to showcase the city's wealth and to mark its global position (Al-Kodmany 2011).

Hong Kong is unique in terms of both its scale and pattern of verticality. Among the Pacific Rim regions, Hong Kong was the first to begin the development of tall buildings in the 1970s. In less than half a century, Hong Kong has become the city with the highest number of skyscrapers in the world, surpassing New York and Dubai (The Skyscraper Center 2015). Almost 90 percent of the city's population live in high-rise buildings (Wang and Lau 2013). Compared with New York and Chicago which are both archetypal vertical cities with skyscrapers highly concentrated at the core, Hong Kong is exceptional in the sense that verticality is not only found at the centre but also across the whole city (Chau 2011). Hong Kong, on several counts, can hence be regarded as the world's most vertical city, making it an ideal location for researching the vertical dimension of

linguistic landscapes.

RESEARCHING THE DISCURSIVE AND MATERIAL LANDSCAPES

Landscape-related research in linguistics and semiotics primarily concerns the ways in which the physical landscape is defined and communicated *discursively* in space through the use of language and other semiotic resources. Such research has long been strongly oriented to the study of public spaces in urban contexts. This is evident, for example, in the first definition of the term *linguistic landscape* by Landry and Bourhis (1997: 25), which focused on such urban signage as 'advertising billboards' and 'commercial shop signs'. Similarly, when conceptualising the notion *semiotic landscape*, Jaworski and Thurlow (2010: 2) emphasised how language, as one of the available semiotic resources, interacts with such urban modalities as 'architecture and the built environment', in defining a place. Given the overwhelming majority of research in linguistic and semiotic landscapes in urban areas, it has been suggested that *cityscape* might be a better word for the subject under investigation (see, for example, Gorter 2006; Spolsky 2009).

Despite this strong orientation to the study of the urban linguistic and semiotic landscapes, there has been a curious absence of scholarly attention to verticality. Previous studies thus far have mainly dealt with signs at street level, overlooking the relationship between signs and skyscrapers or underground railways, structures which increasingly characterise cities and urban life. Studies of the linguistic and semiotic landscapes of Hong Kong are no exception. Largely conceptualising the city as a horizontal surface, these studies have explored the interrelationship between particular regional areas of Hong Kong and patterns of signage, while addressing such issues as multilingualism, language proficiency and post-colonialism.

In this former colony of Britain, Chinese and English remain the official languages after its handover to China in 1997. The language policy of the Hong Kong government is to promote 'biliteracy and trilingualism' amongst the population. Cantonese is the mother tongue or usual language of an overwhelming majority (88–90%) of the predominantly ethnic Chinese population, while Mandarin has recently overtaken English as the second most commonly spoken language (48% vs. 46%) (Hong Kong Census and Statistics Department 2011, 2016). A recent linguistic survey showed an increasing trilingualism amongst younger speakers in the city (Bacon-Shone, Bolton and Luke 2015). In addition, census data shows that Hong Kong is home to twenty-four minority languages, each spoken by at least one thousand residents. These include Filipino, Indonesian, and other Asian languages (Hong Kong Census and Statistics Department 2016). The extent of multilingualism in the horizontal landscape of the city is hence a common research theme.

In a study of signs on residential buildings in Hong Kong, for example, Jaworski and Yeung (2010) showed the differences in semiotic choices as displayed in property-name signs among three broad geographical areas of varying degrees of affluence. In the working-class neighbourhood, there were more monolingual Chinese signs when compared with the more affluent areas, and signs were more functional in nature. By contrast, signs from the most privileged neighbourhood were more likely to be monolingual in English and were more decorative in nature, invoking a sense of grandeur. Similar differences were also found in Finzel (2012),

who studied the linkage between the language choice of shop signs and the language proficiency of shopkeepers in two geographical areas of Hong Kong. It was found that shops in the old working-class district had more monolingual Chinese signs and had staff who spoke little English. In the middle-class district, more monolingual English signs were found and the employees were able to converse in English at the shops. These findings indicate that the horizontal linguistic landscape of Hong Kong, specifically, the language choice on signs, is sensitive to the socio- economic background of the local residents.

Focusing more on the postcolonial influence from mainland China on the linguistic landscape of the city after the change of sovereignty, Lai (2013) examined signage at four geographical sites in Hong Kong with differing proximity to the border with mainland China. It was found that the closer the site was to the border, the more frequent was the use of simplified Chinese on signs. As simplified Chinese is the form of written Chinese used in mainland China but not in Hong Kong, its presence on signs nearer the border may signal the impact of 'mainlandisation'. The linguistic divide at this intra- national border is also the topic of interest in Danielewicz-Betz and Graddol (2014) and Graddol and Danielewicz-Betz (2015), who found that Hong Kong and Shenzhen, its closest neighbour across the border, were distinct in their language landscapes in terms of romanisation, lexical choice and preference for the exonormative variety of English. Traditional Chinese, simplified Chinese and English can thus each be seen to have a distinct visual identity in the city. Following Scollon and Scollon (2003: xii), we consider *emplacement*, i.e. 'the physical location of language in the world', to be central to the understanding of any sign. We further argue that the meaning of a sign is dependent not only upon where it is placed *horizontally* but also, equally importantly, where it is placed *vertically*. The inclusion of this missing z-coordinate on the map of landscape research thus presents a crucial yet long overdue perspective, allowing the landscape to be seen in full in three-dimensional space.

It is with this focus that we now turn to studies of the material landscape to see how insights into verticality from such disciplines as architecture, geography and urban studies can inform a more comprehensive understanding of the discursive landscape. Partly overlapping with the discursive landscape, the material landscape mainly concerns the ways in which the physical landscape is defined and communicated *materially* in space through the use of architectural and other physical forms. Two material design features peculiar to the vertical landscape of Hong Kong are of particular relevance here: the *multiple intensive land use* (MILU) model and the *podium* form.

In response to the continuous arrival of immigrants from mainland China since the early 1960s and the economic boom in the 70s and 80s, the government in Hong Kong introduced a Buildings Ordinance in 1970 to permit the design and construction of tall buildings for mixed use. This urban development policy resulted in low-rise shop-houses giving way to high-rise buildings, which forever changed the skyline of Hong Kong. Over the years, new building regulations have been enforced not only to increase the overall floor-to-area ratio of such mixed-use buildings but also the non-domestic proportion, allowing developers to enlarge the retail floor area at the lower end of a building for higher rental returns. Since then, Hong Kong has seen the proliferation of increasingly multi-functional high-density skyscrapers, with an oversized podium as a characteristic, if not defining, feature.

In these so-called composite developments, offices or residential apartments are housed together with facilities for other uses within one single tower block. The most common uses identified in representative MILU projects in the city are residential, commercial, recreational, community facilities and transport facilities (Lau, Giridharan and Ganesan 2005). A mixed-use tower in Hong Kong is thus in essence a microcosm of the city, a synthesis of public and private spaces for different social practices performed by a range of social actors in one vertical structure. In this respect, the now ubiquitous podium form in these MILU projects has been hailed as a form of public space with social significance (Shelton, Karakiewicz and Kvan 2011). Elevated above the ground, the podium is a horizontal transfer structure at the base of a skyscraper, whose orientation and width differ from that of the skyscraper's tower (Skyscraper Dictionary 2013–2014). As a raised platform often encompassing several floors to support the weight of the tower above, the podium regularly serves the important function of demarcating public and private spaces. Under the roof of the podium, commercial and transport facilities such as car parks, transport interchanges and shopping arcades are commonly found. Above the deck rise the stacks of commercial or residential towers. In the case of the latter, the podium terrace is reserved for recreational and communal facilities including landscaped gardens, playgrounds and sports amenities, all of which are often used exclusively by the gated communities of residents living in the towers sitting atop the podium.

These two interrelated design features characterising much of the vertical dimension of the contemporary material landscape of Hong Kong have profound implications for its discursive landscape. In the discussion which follows, we explore the means and forms in which the vertical landscape can be visually defined and communicated by focusing on one of the most recent and representative composite urban projects at the business and finance hub of Hong Kong, namely the megastructure of the International Finance Centre. Through this case study, we illustrate the dialogical interaction between the discursive and material landscapes in a vertical layout. In the process, we address the more critical issues surrounding social actors, practices, types of space and levels of access in order to reveal how the vertical landscape reflects and at the same time shapes the changing socio-economic and ideological fabric of the city in the rising tide of globalisation, consumerism and mainlandisation.

THE INTERNATIONAL FINANCE CENTRE (IFC)

Located at the heart of Central, the central business district of the city on reclaimed land, the International Finance Centre (IFC, branded in lower case as 'ifc') is one of the largest MILU projects in Hong Kong. As part of the Airport Core Programme, the ifc project was initiated in the early 1990s to connect the Hong Kong International Airport, which is situated on an outlying island, to the financial core of Hong Kong via an express train (Figure 1).

Jointly developed by a consortium of property developers and financiers, the ifc complex is a commercial, retail and hotel development sited on the waterfront. The major components of the complex were completed in three phases from 1998 to 2005: two office towers, a shopping mall, and a hotel. With a total gross floor area of 4,700,000 square feet on a total site area of 430,000 square feet, this megastructure is claimed to offer 'a truly inspiring working,

shopping and living experience' (International Finance Centre Management Co. Ltd 2015: 'About us').

The 39-storey Tower 1 (known as One ifc) and the 88-storey Tower 2 (known as Two ifc) provide high-quality office space to accommodate up to 20,000 office workers. The major tenants of the office towers include some of the world's leading banks and international financial institutions. These two skyscrapers are linked by the ifc mall, which occupies a four-level podium, with more than 200 stores featuring mid-range to high-end international brands. Also connected to the podium is a 5-star hotel. With 399 guest rooms and 519 serviced apartments, the luxury hotel offers top-of-the-range accommodation options for both short and long-term stays.

On the first floor of the podium, access on foot to a number of neighbouring commercial buildings and public facilities, including a post office and ferry piers, is provided by a network of covered elevated walkways and footbridges.

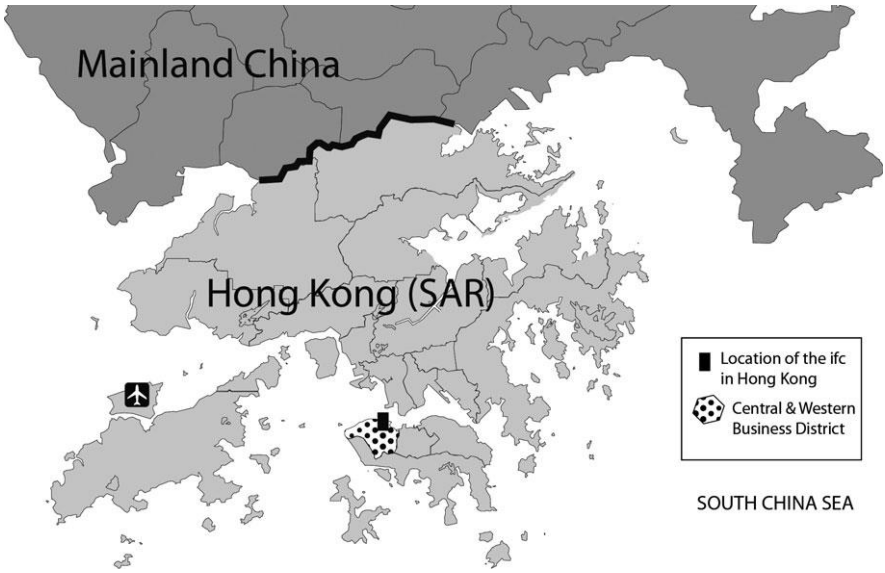

Figure 1: Map showing the location of the ifc in Hong Kong

On top of the podium sits a roof garden, open to the public, with bars and views over the harbour. Below the podium lies the ground floor and a six-level basement. One part of the basement houses the car parks of the two office towers, offering 1,800 parking bays. Another part of the basement is Hong Kong Station, which belongs to the only railway and metro company of the city. The station occupies the ground floor and four stories underground. In the basement, its facilities include a metro station, an airport express station, a station car park with 277 parking bays, and a number of shops and restaurants. On the ground floor, the station provides facilities for in-town check-in for flights. Outside the station, a public transport interchange, a taxi stand, and two designated pick-up/drop-off areas for vehicles are located at various points on the ground floor of the complex. Figure 2 presents a full

viewof the ifc complex.[3]

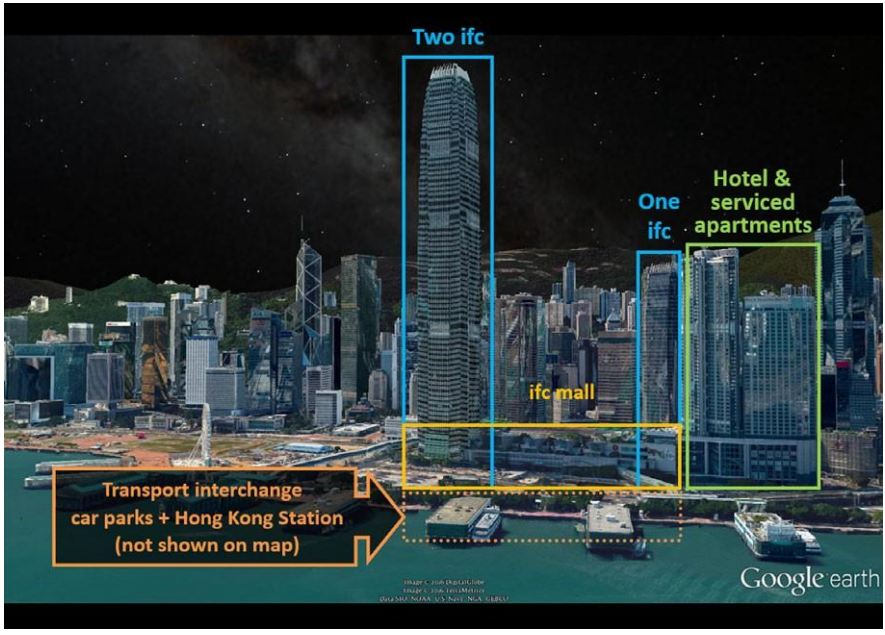

Figure 2: ifc by the waterfront (GoogleEarth, DigitalGlobe, TerraMetrics 2016)

A PROPOSED ANALYTIC MODEL OF VERTICALITY FOR THE STUDY OF THE IFC COMPLEX

Our interest in exploring the vertical semiotics of the ifc complex was motivated by years of experience interacting with the site personally as residents of the city. Following the informal observations that we made individually over the years, we embarked on a nine-month study (July 2015 – March 2016) which included six intensive site visits with numerous minor calls to collect data, observe patterns, and record any notable changes or trends. The site visits involved note-taking, photographic and video documentation, and unstructured interviews with social actors using the site. Based on our study of the data collected in the fieldwork, we propose an analytic model of verticality, illustrated by the ifc complex and organised at three levels of abstraction as stated below (see Figure 3, from left to right):

- the actual architectural structure, which includes seven infrastructuralcomponents within the ifc complex;
- the *physical* vertical layout, which consists of four levels of verticality fromthe basement to the tower;
- the *functional* vertical layout, which distinguishes the main activitiescarried out within the spaces.

Our analytic model theorises vertical space as a highly stratified and hierarchical system, in which the access of social actors to different vertical levels is unequal and power-invested. As such, the degree of vertical mobility of social actors within a site indexes their (lack of) right to access and use space, as well as physical and semiotic resources, for particular social

practices. While the tripartite model presented is based on the study of the ifc complex, its conceptualisation from the local, micro material plane on the left to the global, macro physical and functional planes on the right allows one to move from token instantiation to type generalisation. The model can thus be used to account for structures and sites of varying degrees of complexity where the vertical landscape is a subject of interest. A bungalow, for example, typically occupies only the ground level as a private living space. A traditional shop-house found in many parts of Southern China and Southeast Asia uses the ground as a public space for commercial purposes and the two to four upper floors at the tower level for private residential functions. In big cities in Japan, underground shopping streets form an extensive network at the basement level, allowing commercial activities to be conducted in a weatherproof environment while facilitating commutes on foot at the same time. These different architectural, physical and functional vertical configurations all have important implications for the forms and functions of resources used in the linguistic and semiotic landscapes. Our function-oriented approach thus highlights the need to conceptualise verticality as physical functional segments, rather than simply in raw vertical distance, to better understand how space turns into place, and the role of the discursive and material landscapes in such transformation.

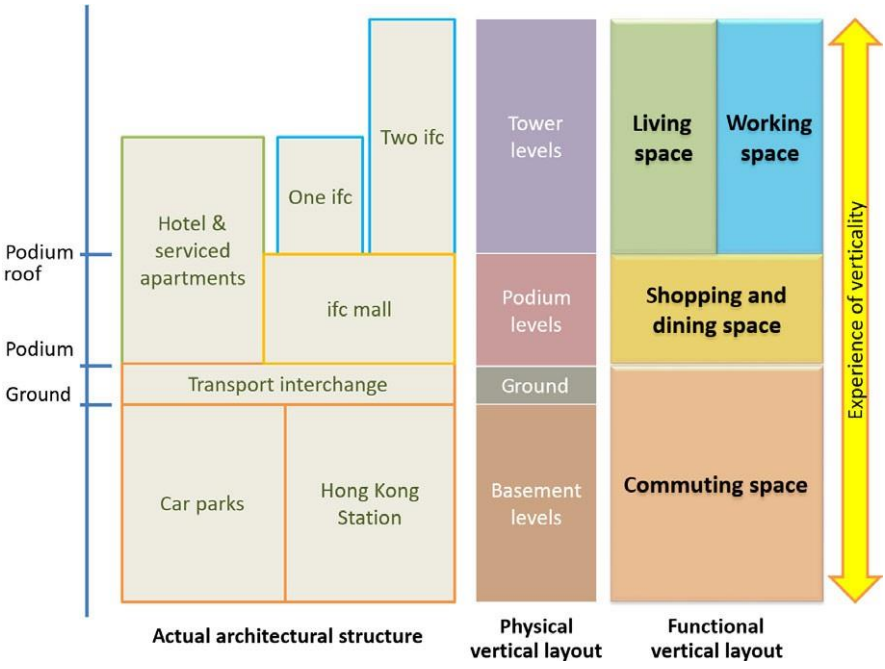

Figure 3: Analytic model of verticality for studying the ifc complex

In the following analysis, we explore the relationship between the experience of verticality and the distribution of social actors and social practices involved. We relate this, in turn, to the form and function of the semiotic resources and material facilities employed, as well as the degree of access to the space. Our analysis does not seek to provide an exhaustive inventory of

all the signs found at the site, as any such attempt to completely exhaust a place in constant interaction with social actors in motion is futile if not impossible, particularly when the arbitrary nature of sign counting (Spolsky 2009) and the mobility and capriciousness of signs (Sebba 2010) are taken into account. Instead, we limit our focus mainly to the key patterns of signs erected by the most powerful stakeholder(s) in the space concerned, often its owner or management company. Given the focus of the present study on the theorisation of spatial verticality, using a more qualitative approach, supplemented by quantitative findings of more clearly definable signs, is considered more appropriate. We take space, rather than sign, as the main analytic unit, and organise our analysis into four sub-sections according to the physical vertical layout as presented in Figure 3. To illustrate, we use signs representative of the semiotic patterns discussed to highlight the characteristics of the architectural structure, vertical physical level and functional space concerned.

EXPLORING THE VERTICALITY OF THE IFC COMPLEX

The basement levels

The six-level basement consists of two infrastructural components: the car parks and Hong Kong Station, which are both owned and managed by the railway company. It is predominantly a commuting space for private car owners and railway users to travel to and from other locations, resulting in massive traffic flow of both vehicles and passengers. As such, signs providing information are prevalent at the basement levels, mainly for giving directions to a number of internal and external sites. Figure 4 shows a typical informing sign in this commuting space, representing hundreds of other signs showing similar semiotic patterns.

Figure 4: Hanging sign at Hong Kong Station

Representing the voice and corporate identity of the railway company, such informing signs with a standardised visual design are not only found in this station but also horizontally across all metro stations in the city. Instantly recognisable as property of the metro operator, these signs are characterised by the consistent use of a combination of semiotic resources maximising readability to highlight the ideational meaning (cf. Jaworski and Yeung 2010), i.e. the propositional content of the message. Upper case in coloured boxes highlights the type of information displayed (EXIT), and distinguishes the sign from other similar signs specifying the same type of information

inside the station (EXIT E). Large and clear white fonts are shown against a highly contrastive black background on a durable but economical plastic surface to display textual information indicating, in both Chinese (國際金融中心一期) and English (One ifc), the major site(s) nearest the exit concerned. Thick white arrows point at specific directions to index places exophorically (Scollon and Scollon 2003). Together, these semiotic choices of colour, formatting, size and width serve to enhance legibility, allowing commuters to locate sites of interest and exits easily and quickly by referring to the set of signs with the same visualand textual styles within the station.

Such design features of a large number of informing signs, combined with numerous access facilities in the material landscape such as lifts, escalators and automatic doors, reflect that the basement is mainly a commuting space allowing a very high level of public access and movement, but not for prolonged stay. In addition, while the signs are bilingual, the relative size and placement of Chinese and English on the signs suggest a stronger emphasis on the former language, with the use of the traditional Chinese script at the top in a bigger font, and English at the bottom in a smaller font. This language arrangement may serve the pragmatic purpose of facilitating quick reference for most commuters in a predominantly ethnic Chinese population.

While the basement is primarily a commuting space, the concourse areas within the station are filled with small shops, offering commuters the opportunities to buy or eat quickly without the need to leave the commuting space. The signs associated with these shops, together with the hundreds of advertising posters lining the station walls, are primarily promotional or commercial. Like the informing signs, such shop signs give precedence to Chinese by positioning the Chinese shop name before or on top of its English equivalent (Figure 5), though the orthographic differences in Chinese characters and English letters sometimes mean that one language may occupy more space for the same name even if a similar font size is adopted for both languages. These promotional signs will be compared with those in the ifc mall in the ensuing discussion of the podium levels.

Figure 5: Outlet of a pharmacy chain within the basement station area

The ground level

The ground floor of the ifc complex houses a public transport interchange for buses and minibuses, a taxi stand, and two designated pick-up/drop-off areas for vehicles. It also provides entrances to the car parks and Hong Kong Station, with in-town check-in facilities for air passengers. Similar to the basement, the ground is principally a commuting space. It is, however, more geared towards public and private vehicles than individual commuters. Of the four vertical levels at the ifc site, the ground is the one with the smallest area of enclosed space. The public transport interchange, for example, is covered but not enclosed. The taxi stand and the pick-up/drop-off areas are largely unsheltered. This level is therefore the most susceptible to weather conditions such as extreme temperatures, rain and typhoons. Here, an average commuter's experience is likely to be even more transient than in the basement.

While traditionally the street level is a pedestrian realm, this is not the case for the ifc complex. In the material landscape, pedestrian access to other streets, through pavements and pedestrian crossings, is limited, leaving the ground almost exclusively for vehicular use (cf. Xue, Zhai and Roberts 2010). In the discursive landscape, signs here are mostly informing but the density of signs giving directions to various places for pedestrians is much lower than that found in the basement. Instead, there are road signs for drivers and bus route signs for commuters, in addition to the mobile advertising signage on public vehicles in motion (cf. Sebba 2010). As the ground level is officially designated as a traffic interchange, a number of operators and service providers are responsible for signage, leading to less standardised forms. Figure 6 shows a corner of the public

transport interchange which illustrates this heterogeneity.

Figure 6: Heterogeneity in the public transport interchange (lower part of the figureshows close-up shots of the two left-hand signs)

Three signs from three different sources are juxtaposed in Figure 6, from left to right: the ifc mall, the hotel and a minibus company. These signs show different design features such as font size and style, colour, material texture and language preference. The leftmost two will be discussed later in relation to other vertical levels. Of particular interest here is the minibus sign on the right which shows details of three minibus routes to some of the most expensive residential areas in the city. In large contrastive dark fonts on an orange inexpensive plastic surface, the sign emphasises Chinese more than English in both size and position. As the affluent residents in such upscale areas are not likely passengers on these minibuses, one might speculate that this choice is pragmatically motivated by the linguistic background of local workers commuting there, including security guards, cleaners and handymen. This preference, however, may also be attributed to the usual language of the sign producer, i.e. the local minibus company, rather than the sign recipients.

Apart from local workers, our fieldwork shows that another major group which routinely travels on these minibus routes comprises domestic helpers, who are mostly from Indonesia or the Philippines. As the two largest non-Chinese ethnic groups in Hong Kong, each constituting 1.9 percent of the

population (Hong Kong Census and Statistics Department 2011), Indonesians and Filipinos are mostly employed as domestic helpers in the city, often receiving only the statutory minimum wage. Despite the fact that the usual language of many Filipinos in Hong Kong is English and most foreign domestic helpers are unable to read Chinese, their communicative needs do not seem to be prioritised by the minibus sign here, or by the many Chinese-oriented public transport signs placed in this interchange. English seems marginalised here, perhaps because of the lower economic status of one key group of readers of the sign. This is in contrast to the emphasis on English at the podium levels, which is to be discussed in the ensuing sub-section.

The podium levels

The four-level podium is comprised mainly of the ifc shopping mall, which is linked to the lower levels of the hotel and serviced apartments. It is a shopping and dining space, offering a high-end consumer experience to shoppers and diners. In this respect, the tenants of the mall can be considered among the most powerful stakeholders of this space. In the podium, signs serving promotional, or commercial (Scollon and Scollon 2003), functions are ubiquitous. Unlike the informing signs in the commuting space below which commonly make use of strategies such as arrows to index directions in the locality through situated semiotics (Scollon and Scollon 2003), almost all shop signs in the ifc mall are essentially decontextualised, showing the same brand names, logos and associated design features regardless of the geographical location of the shops around the world. Individually, this enhances brand recognisability and establishes a consistent corporate identity worldwide for each retailer. Collectively, this creates a horizontal homogenised commercial discursive landscape in shopping malls all over the globe (cf. Kelly-Holmes 2010). Signs at the podium levels highlight the interpersonal, rather than ideational, meaning of communication (cf. Jaworski and Yeung 2010), emphasising the affective aura of the message. This is the case not only for the promotional shop signs representing global corporates, but also for the less common informing signs in the podium erected by the local ifc management company. While smaller in number, such informing signs in the discursive landscape serve a crucial role in encouraging public access, movement, and hence footfall, to the mall, by giving directions to both internal and external sites. Together with such facilities as lifts, escalators, covered pedestrian walkways and sheltered footbridges in the material landscape, they maximise both horizontal connection externally with neighbouring buildings and infrastructures, and vertical connection internally with other levels to the shopping mall. Compare the hanging sign in Figure 7 with the one serving similar informing functions in Figure 4 and note how readability gives way tostyle in this shopping and dining space.

Figure 7: Hanging sign at the ifc mall

On the hanging sign in Figure 7, small black fonts, with unconventional capitalisation, and thin arrows are engraved on a sleek silvery metallic plate to create a contemporary stylish look. These design features are consistently employed on all signs put up by the ifc mall management, including the one on the ground floor in Figure 6, to portray and reflect the luxurious image of this shopping and dining space. The English top–Chinese bottom (Figure 6, bottom left) or English first–Chinese next (Figure 7) order on all these signs reflects a greater emphasis on English, which is consistent with the stronger presence of English on shop signs here, when compared with those in the shops and restaurants in the basement metro station. Indeed, monolingual non-Chinese shop signs, mostly in English and other Western European languages using the Roman alphabet such as French and Italian, are the norm rather than the exception in the shopping mall, not only for the global brands but also the local retailers (Figure 8). Table 1 shows this marked contrast in language preference on shop signs at these two vertical levels.

Figure 8: Outlet operated by the same pharmacy chain as in Figure 5 in the ifc mall

Table 1: Language on shop signs on the shopfront*

ifc mall (podium)		Metro shops (basement)
Total number of shop signs	208	71
Signs with Chinese characters	9 (4.3%)	39 (54.9%)

*The shop signs refer to the most noticeable sign denoting the brand on each shopfront, themajority of which are located at the top. Counts are based on our site visit in January

2016.

As a high-end shopping arcade repeatedly achieving record-high rental rates in the central business district, the ifc mall is filled with jewellers, watch retailers, luxury fashion and cosmetics brands, with a total sales figure of over US$1.2 billion in a year (*South China Morning Post* 2013). It can be assumed that the prominence given to English and other European languages on signage appeals to the target customers of the ifc mall, who belong to the high- income middle class or above. In contrast, the tenant mix of the metro shopping area downstairs consists mostly of fast-food restaurants, convenience stores and bakeries, which involve small transactions. Chinese thus appears to be more preferred in the station frequented by the less affluent commuters. The two languages, therefore, seem hierarchically structured, with English having a higher market value than Chinese at the podium. It should, however, be noted that this language preference does not only serve the pragmatic purpose of better communicating with expatriate customers who only speak English or other Western European languages. Indeed, mainland Chinese tourists generate 30 percent of sales in the mall (Gu 2013). English thus also has a symbolic value here – as a marker of prestige, quality and sophistication, in addition to its connotation of 'a global commercial culture' worldwide (Blommaert and Maly 2014: 202).

The tower levels

The architectural structural components concerned here are the two residential towers of the hotel and serviced apartments, which constitute mainly the living space, and the two commercial towers of One ifc and Two ifc, which constitute mainly the working space. At the tower levels, public access is considerably much more restricted than the floors below, though the means of access control varies in relation to the type of space involved.

At the 5-star hotel and serviced apartments, access by guests from the podium entrance to the guest rooms on the 9th to 45th floors is subtly facilitated and achieved discursively through the use of informing signs, and materially through the use of key-cards in the lifts, without the presence of physical barriers or manned gates. Figure 9 shows an informing sign placed beside a lift, which illustrates the pattern of signs erected by the hotel management.

Figure 9: Sign on the wall beside a lift at the hotel

Similar in design to the informing signs at the ifc mall, the signs at the hotel also highlight the interpersonal dimension of communication: small white fonts are engraved on a dark metallic plate to create a luxurious yet non-intrusive ambience. The difference is that many informing signs at this luxury accommodation are in English only, and more conventional capitalisation is used. Again, English seems to play a more symbolic than pragmatic role here, as most of the guests are actually mainland Chinese (*Leaders Magazine* 2015). Further, the English-only signs here may serve a

gatekeeping function by keeping out social actors whose linguistic competence is incompatible with the space. By contrast, the informing sign indicating the staff entrance of the hotel on the ground floor is bilingual with Chinese at the top (Figure 6, bottom right) and emphasises ideational meaning through its more basic overall design. This is a case where the deployment of semiotic resources by the same authority varies vertically depending on readership, with the ground-floor staff entrance contrasting with the podium guest entrance.

For the office towers, access of the white-collar workers to One ifc and Two ifc is facilitated and achieved rather differently from that in the living space. For authorised entry, multiple access points are provided at the basement, ground and podium levels via lifts to the office towers, making it possible to bypass the intermediate levels to access the towers directly from the basement. At the same time, regulatory signs erected by the management companies of the office towers abound at the boundaries, not only to specifically prohibit unauthorised parties from trespassing and loitering, but also to strictly forbid photography and filming. Indeed, the difficulties we have experienced as researchers in studying the tower level are testimony to its scrutinised nature, and more importantly, the exclusivity of access to these higher levels at the site. Our repeated attempts to access the office towers for research purposes were denied. On many occasions, we were questioned and prohibited from taking photographs or videos from *outside* the gated areas of the office towers by security guards. Even our endeavours to approach an automatic teller machine and company directories placed outside the gated areas during the non-office hours were met with surveillance and refusal. It was only when our role as social actors changed to potential property buyers that we were able to have a glimpse of an apartment showroom inside an office tower, accessible only by a lift servicing a restricted number of levels, while being fully escorted by the property agent at all times. Figure 10 shows an entrance to the One ifc office tower.

Figure 10: Entrance to One ifc

The sign placed by the entrance in Figure 10 is representative of signs at the entrances to the office towers in terms of language preference. English is the slightly more prominent language, through its consistent placement on top of or before Chinese. The stronger role of English on signs in the two office towers can also be seen in the company directories, as the company names are arranged alphabetically in English and all company names are shown in English but not always in Chinese. Table 2 summarises the language choice of company names on the directories of the office towers.

Table 2: Language of company names on the directories of One ifc and Two ifc

	One ifc	Two ifc
Total number of company names (all in English)	54	105
Company names in Chinese	20 (37.0%)	63 (60.0%)

While English may be favoured on the company directories symbolically for its high economic value and pragmatically for the highly-educated international office workers, an increasing number of tenants of the office towers are in fact financial institutions from mainland China. Indeed, mainland corporates accounted for one-fifth of the Grade A office floor space leased in the central business district where the ifc is located (Jones Lang LaSalle 2016). Accordingly, the office towers see the rising presence of Mandarin-speaking financial professionals, as 'Mandarin is fast becoming the de facto language in Hong Kong's financial services industry' and native mandarin-speaking mainlanders are recruited at the expense of Cantonese-speaking locals (Mortlock 2016). Despite the growth in mainland Chinese tenants and employees at the office towers, traditional Chinese rather than simplified Chinese is still used on all the main signs erected by the tower management.

In relation to the texture of signs, the working space makes use of noticeably less expensive material for its signs (Figure 10) when compared with the living space. Through their simpler design, the signs at the working space pay more attention to the ideational meaning of the message, i.e. to prohibit certain behaviours and to maintain a high level of security for the tenants, most of which are major global financial institutions. Apart from the use of regulatory signs in the discursive landscape to control access, a number of facilities in the material landscape are also employed. These include CCTV cameras, physical barriers and manned gates allowing access only through smart cards, registration desks for visitors, dedicated lifts for different floor zones for limited access and for creating additional gateways, as well as a facial recognition system for access and lift operating control in non-office hours (Wong and Lam 2005). Vertical segregation demarcating the working space from the rest is thus explicit and highly visible both discursively and materially. This is in marked contrast to what is observed earlier in the living space, where access is controlled also through signs and facilities, albeit via subtler means. In both cases, careful arrangements are made to ensure that the working and living spaces, which are the most difficult to access practically owing to their distance to the ground, are conveniently linked to the lower floors but remain insulated and undisturbed by the public access downstairs.

DISCUSSION

As a prime example of MILU projects in Hong Kong, the ifc complex illustrates the interaction between the discursive and material landscapes, and the intricate interrelations among social actors, practices, types of space, levels of access and forms and functions of semiotic resources, all within one single site of varying levels of verticality. The site thus reveals a highly stratified and hierarchical vertical system, and the realisation of such stratification is linguistic, cultural and social-economical.

Linguistically, stronger emphasis on Chinese is found on the signs at the basement and ground levels, while English is more prominent at the podium and tower levels. This, however, does not map simplistically onto a Chinese-English cultural dichotomy in relation to the social actors interacting with the spaces. Instead, we observe the use of the Chinese-oriented lower levels by Filipino and Indonesian domestic helpers among others, while the English- oriented higher levels are increasingly occupied by well-to-do mainland Chinese. As such, the linguistic and cultural stratification are in close connection with the socio-economic stratification, reflecting a society full of inequalities, influenced by the major driving forces of globalisation, consumerism and the more local process of mainlandisation. The lower levels are for commuting mainly by the less affluent communities. By contrast, the higher levels are elite spaces for shopping, living or working for the wealthier communities. The semiotic choices including language, therefore, appear to be motivated *pragmatically* downstairs and *emblematically* upstairs. At the lower levels where traffic and movement of a large number of social actors is involved, Chinese is prioritised pragmatically as the usual language of most of the population. As the more efficient language here to locate and to inform (cf. Cook 2015), its practical value is higher. Signs at these levels are more rudimentary in design, highlighting the ideational meanings and reflecting the socio-economic background of their recipients, who are more likely to be from the middle class or below. At the higher levels where an image of prestige, quality and luxury is the prime concern, English is prioritised emblematically as the global lingua franca symbolising consumerism and internationalisation. As the more appealing language to promote and attract, its market value is higher here. Signs at these levels are more elaborate in design, focusing more on the interpersonal meanings and reflecting the income level of their recipients, who are more likely to be from the most privileged social class of the city and beyond. It is thus evident that language use is hierarchical in the vertical model. However, such hierarchical ordering is not absolute but is sensitive to the social function and value of the language in that particular vertical space, in close relation to the cultural and socio-economic background of the social actors interacting with the space.

An important implication arising from such multi-layer stratification is the simultaneous social segregation realised vertically at the site through the different degrees of mobility and access of social actors. Only the most privileged and powerful groups, mostly highly-educated and/or high-income financial professionals and hotel residents, are able to move freely across *all* vertical levels of the site to access and consume the associated physical and semiotic resources and to benefit from the full functionality of the spaces. They are at the top of the social hierarchy pyramid, smallest in number but enjoying the highest level of mobility, access, privacy and security, while gazing down and surveying the general population from

height. The majority, including us as researchers, are excluded from the gated communities of the towers and can only raise our gaze to conjecture the inaccessible heights of the powerful.

Of course, height has long been a symbol of power and status in many cultures, as realised metaphysically in the idea of a three-layered universe consisting of the heavens, earth, and the underworld. Gods inhabit the heavens and the mountain tops, to which ordinary mortals must raise their gaze. Similarly, imposing structures such as the Acropolis, the Great Pyramid of Giza or the great medieval cathedrals of Europe have all symbolised power through height materially. However, the association between height and prestige, almost always taken for granted as universal (see, for example, Graham 2016), is indexical rather than iconic and must be understood in relation to the segmented nature of verticality, the function of the space involved, as well as the geographical location, i.e. the horizontal dimension, of the space. In many European cities, it is the low-rise detached dwellings in affluent suburbs that are considered more prestigious, while the high-rise tower blocks in less privileged neighbourhoods are often used as council housing. Similarly, in an ancient colosseum or a modern theatre, it is the seats in the front rows closest to the stage that are for the most important people or the costliest, whereas the higher levels further away from the stage provide seats to social groups of lower status or which are cheaper in price. In the case of the ifc complex, upper floors in the office towers generally command higher rents because of better views. In the podium shopping mall, however, it is the lower floors, or the floors closest to the ground, which are with most footfall and hence most expensive to rent. In other words, the indexical value of elevation is relative to each volumetric space rather than absolute. Height has no iconic universal meaning in itself. This demonstrates the polycentric nature of space (Blommaert 2007) and again highlights the value of taking a functional approach to verticality in the analytic model.

A further point which needs to be considered in relation to the social segregation discussed above is the omnipresence of movement and flow, and the multiple and changing roles of social actors. While spaces are stratified, they are also interconnected, not only vertically but also horizontally. As noted earlier in the podium level analysis, horizontal external connection of the shopping mall with neighbouring buildings and infrastructures is achieved and maximised through informing signs and covered walkways and footbridges, which offer shelter from heat and storm. These resources in the discursive and material landscapes together aim to attract commuters, pedestrians, office- workers and hotel guests to the weatherproof mall and to transform them into potential consumers. Moving from one space to another thus often involves role-changing. Importantly, social actors interact with the discursive and material landscapes in such spaces at different times of the day, week or year and/or in different languages with different goals and intentions, making the spaces active, dormant or hectic. Some such encounters, as in the working and living spaces, are more permanent, while some others, as in the commuting and shopping and dining spaces, are more transient. A commuter travelling at rush hour in the basement on typical weekdays, for instance, may be an employee working at an investment bank in the office tower upstairs during working hours, and occasionally go to a bar in the podium as a consumer after work. One's linguistic repertoire and communicative strategies thus need to adapt to interact with the corresponding space. As such, the

resources used in the discursive and material landscapes at different vertical levels, signs included, not only vary in terms of their key target recipients but also their regular peak times of use in a day, week and/or year. While beyond the scope of the present study, this is an area which merits further research, calling for a much finer, richer and more socially-oriented approach than any quantitative studies of signs would allow.

CONCLUSIONS

Rather than living in an idealised flat world where an equal playing field is created for every individual, we increasingly and perhaps regrettably find ourselves in a world that is vertically stratified as a result of urbanisation. In the present case, such stratification is realised linguistically, culturally and social-economically. Through a case study of the vertical semiotics of an iconic skyscraper, this article has demonstrated how verticality, as a much ignored dimension in landscape-related research, can enrich our understanding of the intricate interplay between the discursive and material landscapes, while addressing such key issues surrounding social actors, practices, levels of access and functions of space in the process. Offering a novel and crucial dimension for landscape-related research in the increasingly vertical contemporary society, our analytic model has shown the power of incorporating the notion of vertical landscape into the current research paradigm, not simply as a contextual background but as 'an agentive force in sociolinguistic processes' (Blommaert 2007). Placing verticality at the centre stage but also exploring its relationship with horizontality, our study underlines the explanatory value of the tripartite analytic model in dissecting and segmenting vertical space functionally in relation to social actors, practices and access, instead of simply measuring and examining height in metres or floors. It also suggests the potential of applying the model to the study of other sites with different configurations of verticality, allowing comparison and generalisation to be made at the material, physical and functional levels, in order to identify key patterns of association between different physical vertical levels and their major functions, and the ways in which the material and discursive landscapes constitute and are constituted by the space concerned. This opens up a new research agenda, providing a three-dimensional perspective which may lead to a redefinition of the very notion of landscape in sociolinguistic research.

NOTES

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2. More accurately, elevations in Hong Kong are measured in terms of 'metres above Principal Datum' (mPD), which is a point 1.230 metres below the average sea level (Hong Kong Civil Engineering and Development Department 2012).

3. An interactive map indicating the location of the ifc and its connectivity with the surrounding area is available here: http://ifc.com.hk/en/mall/location/

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