Title:	**21st Century Vertical Lifestyles - Intergenerational, Integrated Communities**
Author:	Stephan Reinke, Director, Stephan Reinke Architects Limited
Subjects:	Architectural/Design Urban Design
Keywords:	Connectivity Sky Garden Skybridges Urban Design
Publication Date:	2016
Original Publication:	Cities to Megacities: Shaping Dense Vertical Urbanism
Paper Type:	1. Book chapter/Part chapter 2. Journal paper 3. **Conference proceeding** 4. Unpublished conference paper 5. Magazine article 6. Unpublished

21st Century Vertical Lifestyles - Intergenerational, Integrated Communities | 21世纪的垂直生活方式—多世代、融汇整合的社

Stephan Reinke
Director | 创始人

Stephan Reinke Architects Limited
Stephan Reinke 建筑师有限公司

London, United Kingdom
伦敦，英国

Stephan has worked in the international arena for almost 30 years, and has in-depth professional practice experience in Europe, the Middle East, North America and the Far East. As a UK, EMEA practitioner, he has extensive mixed-use, residential, urban planning, hospitality and commercial experience. Stephan was the Principal in Charge for the the Marriott mixed-use complex at West India Quay, the 60-level Piccadilly Tower and Urban Regeneration Scheme in Manchester, 10 Trinity Square Hotels/Residence in the City of London, and the 40-level Raffles Riverside Tower Hotel Complex in Moscow, Russia.

Stephan在国际建筑设计舞台上工作了近30年,并在欧洲、中东、北美洲和远东地区拥有资深的专业实践经验。作为一名英国及欧洲、中东和非洲地区的建筑设计实践者,他有着大量的混合用途、住宅、城市规划、酒店和商业项目设计经验。Stephan曾是西印度码头万豪酒店混合用途综合体、曼彻斯特60层皮卡迪利酒店和城市再生方案、伦敦金融城三一广场10号酒店/住宅楼、以及位于俄罗斯莫斯科40层莱佛士河畔阁酒店综合体的主要负责人。

Abstract | 摘要

How does the 21st Century youth culture of social media integrate and merge with an ever increasing tech savvy senior population? As our cities and urban environments become increasingly dense and tall, the challenges and opportunities for vertical communities become integral to sound urban design. This fusion of dense, tall and intergenerational living is an emerging typology in London, with long standing exemplars and progressive new thinking in Hong Kong. The definition of intergenerational is something where multiple generations of people intermingle or come together. Both London and Hong Kong offer examples of how we are shaping a dense vertical urbanism. Many urbanists and architects in the 1920s predicted that suburban migrations would give way to sprawl, other urban "futurists" believed that people would be living and thriving in high-density vertical cities. In 1928, architect Harvey Corbett proposed that everything from homes to green spaces would be stacked in the ultimate megacity; as we now find in HK and London. Our primary objective is to explore dense, vertical environments and urban case studies in HK and London; that weave together disparate age groups and changing lifestyles, into a vibrant urban fabric.

Keywords: 21st Century Lifestyle, Hong Kong, Intergenerational, London, Urban Design

随着精通科技的老年人口日益膨胀，21世纪社交媒体的青年文化是如何与之融为一体的？随着我们的城市和城市环境日渐密集高耸，垂直社区所面临的挑战和机遇对于健全城市设计而言至关重要。如今，伦敦兴起了一种建筑模式，既融合了密集高耸、多世代的生存方式，同时又吸收继承了香港的悠久典范和先进的思维模式。所谓“多世代”，指的是不同世代的人口杂居或共享日常社区生活的环境。西欧和中国都为我们提供了如何实现密集型垂直城市体系的范例。 20世纪20年代的许多城市规划专家和建筑师曾预言，向郊区的迁移会导致城市无计划的扩张，而其他城市“未来主义者”则相信人们会在高密度的垂直城市中繁衍生息。1928年，建筑师Harvey Corbett提议将从住宅到绿地的所有一切都放在终极巨型城市，正如我们在香港和伦敦所见到的一样。我们的主要目标是探究密集、垂直的城市环境和香港、伦敦的城市案例研究，这些将不同年龄层次和变化的生活方式编织融入进了充满生机的城市肌理。

关键词：21世纪的生活方式、香港、代际、伦敦、城市设计

Introduction

How can we create opportunities for a 21st Century youth culture of social media to integrate and merge with an ever increasing tech savvy senior population? As our cities and urban environments become increasingly dense and tall, the challenges and opportunities for vertical communities become integral to sound urban design. This fusion of dense, diverse and intergenerational living is an emerging typology in London, with long standing exemplars and progressive new thinking in Hong Kong.

The definition of intergenerational is an environment where multiple generations of people intermingle or share a daily community life. Both Western Europe and China offer examples of how we are shaping a dense vertical urbanism.

引言

随着精通科技的老年人口日益膨胀，我们该如何创造机遇，实现21世纪社交媒体的青年文化与他们的融合？随着我们的城市和城市环境日渐密集高耸，垂直社区所面临的挑战和机遇对于健全城市设计而言至关重要。如今，伦敦兴起了一种建筑模式，既融合了高密度、多样化、多世代的生存方式，又同时吸收继承了香港的悠久典范和先进的思维模式。

所谓“多世代”，指的是不同世代的人口杂居或共享日常社区生活的环境。西欧和中国都为我们提供了如何实现密集型垂直城市体系的范例。

20世纪20年代的许多城市规划专家和建筑师曾预言，向郊区的迁移会导致城市无计划的扩张，而其他城市“未来主义者”则相信人们会在高密度的垂直城市中繁衍生息。1928年，美国建筑师协会会员

Figure 1. Penton Place, London (Source: Stephan Reinke Architects)
图1. 英国彭恩街（来源：Stephan Reinke Architects）

Many urbanists and architects in the 1920s predicted that suburban migrations would give way to sprawl, whilst other urban "futurists" believed that people would be living and thriving in high-density vertical cities. In 1928, architect Harvey Corbett FAIA proposed that everything from homes to green spaces would be stacked in the ultimate "megacity"; we are now seeing in HK and London.

Our primary objective is to explore dense, vertical environments and urban case studies in HK, London and other Asian Megacities; that weave together disparate age groups and changing lifestyles, into a vibrant urban fabric.

The future shaping of dense vertical urbanism will demand intergenerational solutions in tall building environments (Figure 1).

The China Tradition: Vertical, Connected (Han Dynasty Towers)

The interconnected nature of work life, generational cohabitation and links above ground level has a long and respected history in China. This spatial understanding of the workplace, daily life and family structure extend back to the Han Dynasty (Figure 2).

Excavated from the tomb zones in Macun Village in Jiaozuo City of Henan Province, the pottery granary tower is a seven-storey joint building decorated with color paintings.

Pottery granaries and stoves were the most common and honored funerary objects used across Han dynasty China. This reflects the importance of this building design and typology in the community. The notion of

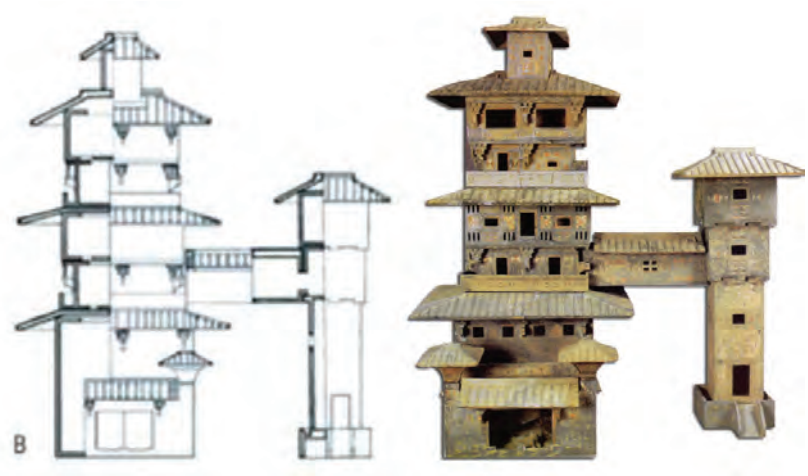

Figure 2. Han Dynasty pottery granary tower (Source: Stephan Reinke Architects)
图2. 汉朝陶瓷谷仓塔（来源：Stephan Reinke Architects）

（FAIA）、建筑师Harvey Corbett提议将从住宅到绿地的所有一切都放在终极“特大城市”中；如今，我们可以在香港和伦敦亲眼见证他的提议。

我们的主要目标是探索香港、伦敦和其他亚洲特大城市的高密度垂直环境和城市案例；这些垂直环境通过整合不同的年龄组和不断变化的生活方式，形成活跃的城市结构。

未来打造这种密集型垂直城市体系，需要在高层建筑环境中寻求多世代解决方案（图1）。

中国传统：垂直分布、贯通相连（汉朝塔楼）

在中国，建筑将工作、生活、多代同居融为一体，拥有源远流长的历史，对工作场所、日常生活和家庭结构的空间理解可以追溯到汉代 （图2）。

中国河南省焦作市马村的陵区挖掘出土的陶仓，一座彩绘装饰的七层连体建筑。

陶仓和陶灶可谓中国汉代最常见、最尊贵的陪葬品。这反映了该建筑的设计和建筑类型在当时社区中的重要性。垂直整合和贯通相连的概念成为了文化社区的一部分。

美国建筑师协会会员（FAIA）Harvey Wiley Corbett – 未来城市

二十世纪二三十年代汽车的兴起，引得美国和英国的民众纷纷对郊区生活趋之若

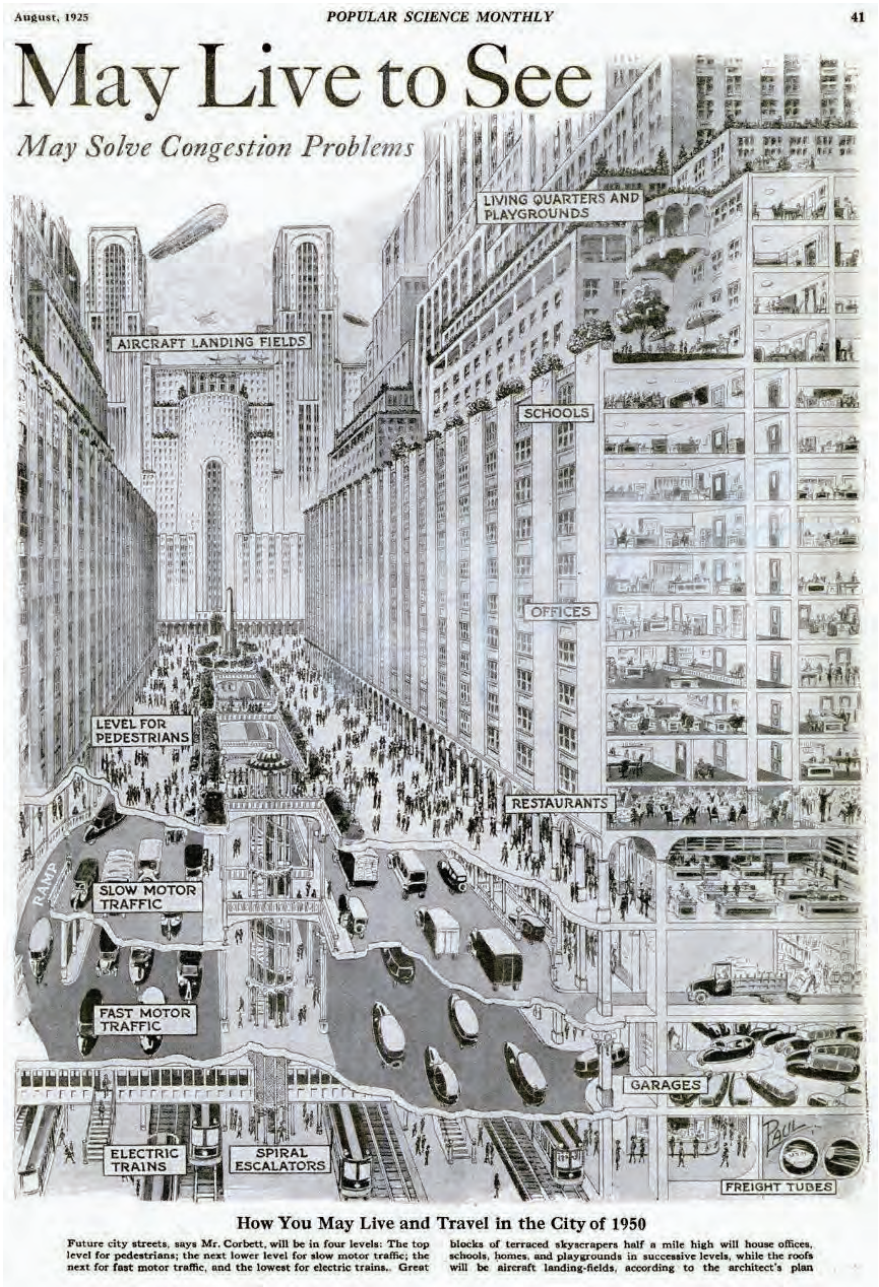

Figure 3. Popular Science: May Live to See, May Solve Congestion Problems (Source: Stephan Reinke Architects)
图3. 科技新时代：愿你能亲眼见证拥堵问题的解决（来源：Stephan Reinke Architects）

vertical Integration and connection is illustrated here as part of the culture community.

Harvey Wiley Corbett FAIA – Future Cities

With the rise of the automobile during the 1920s and 30s, suburban living became far more appealing to Americans and Britons. Partly due to industrialization, urban and inner city residents sought to escape increasingly crowded environments and with newly paved roads and auto ownership, taking on a commute was a good compromise for extra space and comfort. This prediction by urbanists and architects, which eventually transpired, was in contrast to oppositional urban "futurists" who balked at the idea of decentralization, believing that Americans would thrive instead in high-density vertical cities. Architect Harvey W. Corbett's "May Live to See, May Solve Congestion Problems" proposed that everything from homes, offices, schools, green spaces and even aircraft landing fields would stack on top of each other to create the ultimate metropolis.

The image created for the magazine piece depicts the American city of 1950. In the Popular Science article attached to the illustration (Figure 3), it's written:

> "Unlike many other experts, Mr. Corbett does not believe that the future will bring the 'decentralization' of our big cities. On the contrary, long study of modern trends in architecture, city planning, and business and social life has convinced him that our cities will become more crowded. And, facing this contingency, he believes we of

鳖。有一部分是出于工业化的原因，城市居民和市中心居民试图摆脱日渐拥挤的环境，随着道路的四通八达以及私家车的普及，通勤成了人们享受额外空间和舒适度所作出的妥协。城市规划专家和建筑师所做的预测（这些预测最终应验了），与对立派城市"未来主义者"形成鲜明对比，后者反对城市分散化观点，相信美国人会在高密度的垂直城市中繁荣兴旺。建筑师Harvey W. Corbett在《愿你能亲眼见证拥堵问题的解决》（May Live to See, May Solve Congestion Problems）一文中提议，将住宅、办公室、学校、绿地乃至飞机着陆场地等所有一切都摞在一起，打造终极大都市。

这幅为杂志绘制的图片展示了1950年的美国城市。图片（图3）旁边的《科技新时代》（Popular Science）文章写道：

> "跟许多其他专家不同，Corbett先生不相信未来我们的大城市会'分散'。恰恰相反，针对建筑、城市规划、商业和社会生活的现代趋势的长期研究使他相信，我们的城市会变得日益拥挤。面对这一可能性，他相信我们这一代人现在应该开始规划建筑和高速公路，同时考虑到应对未来人口和交通的问题。"（《科技新时代》，1925年）

虽然当时被视为科幻小说，但其中某些元素的确成为了现实。正如城市规划专家Stephen Fesler所言："一楼的餐厅和零售商店可以发挥积极、迷人的功用，吸引城市居民前来。二楼则将用于住宿、专业服务、教育、育儿、休闲等必要设施。令人惊讶的是，Corbett认为人们会把屋顶和阳台用作花园。你可以想象一下！"（Fesler，2015年）

当然还有对应对过度拥挤的垂直城市体系的预测，现在这无疑已成事实。

英国皇家建筑师协会（RIBA）Ebenezer Howard爵士 – 《未来花园城市》

（Garden Cities of Tomorrow）

由英国皇家建筑师协会的Ebenezer Howard爵士撰写的著作——最早出版于1898年的《明日：一条通向真正改革的和平道路》（To–morrow: A Peaceful Path to Real Reform）和之后1902年再版的《未来花园城市》（Garden Cities of To–Morrow）——引发了花园城市化运动。

花园城市和城市规划协会（Garden Cities and Town Planning Association）将花园城市定义成"为健康、生活以及产业而设计的城市，它的规模能足以提供丰富的社会生活，但不应超过这一程度；周围要有乡村地带环绕；城市的土地归公众所有，或者由委员会受托代社区进行管理。"（De Soissons，1988年）

this generation should begin now to plan buildings and highways with an eye on the problem of handling people and traffic of the future" (Popular Science, 1925).

Although viewed as science fiction, certain elements did come to fruition. As The Urbanist's Stephen Fesler points out: "On the ground, restaurants and retail would prevail as the active, engaging uses that city dwellers would be accustomed to. Upper floors, meanwhile, would also contain the necessities for living, professional services, education and child-rearing, and leisure. Strikingly, Corbett believed that people would put rooftops and terraces to use as gardens and parks. Just imagine!" (Fesler, 2015).

There is also of course the prediction of vertical urbanism in response to overcrowding, which is very much a reality today.

Sir Ebenezer Howard RIBA – Garden Cities of Tomorrow

Originally published in 1898, as To-morrow: A Peaceful Path to Real Reform and subsequently reprinted in 1902, Garden Cities of To-Morrow, authored by Sir Ebenezer Howard RIBA, gave rise to the garden city movement.

The Garden Cities and Town Planning Association had defined a garden city as "a town designed for healthy living and industry of a size that makes possible a full measure of social life but not larger, surrounded by a rural belt; the whole of the land being in public ownership, or held in trust for the community" (De Soissons, 1988).

Howard proposed a vision of towns free of slums whilst benefiting from the amenities of urban life with the ready access to nature typical of rural environments, as illustrated in his "Three Magnets" diagram (Figure 4).

The main features of Howard's scheme were:

(1) the purchase of a large area of agricultural land within a ring fence;

(2) the planning of a compact town surrounded by a wide rural belt;

(3) the accommodation of residents, industry, and agriculture within the town;

(4) the limitation of the extent of the town and prevention of encroachment upon the rural belt;

(5) the natural rise in land values to be used for the town's own general welfare.

Within the context of a capitalist economic system, this movement sought to balance individual and community needs. Two English towns were built as garden cities, Letchworth and Welwyn.

Old Hong Kong

Hong Kong has had a long history of changing control and continual expansion, both horizontally and vertically, beginning with its incorporation into China during the Qin dynasty (221–206 BC), before it's life as a British Colony from the early 1800s to the 1930s (Figure 5) in the advent of the Opium Wars. It was during the late 19th Century

Howard提出了一个没有平民窟的城市设想，正如他的“三磁铁”所示（图4），一方面民众能使用城市生活的便利设施，另一方面还能享受乡村环境的自然气息。

Howard计划的主要特色包括：

（1）在围栏中购置一大块农业用地；

（2）设计一个被广大乡村地带环绕的紧凑型城市；

（3）城市中的居民区、工业区和农业区；

（4）限制城市的范围，防止侵占乡村地带；

（5）土地价值的自然增长用于城市自身的公共福利。

在资本主义经济体制的大环境下，该运动试图达到个人需求和社区需求之间的平衡。英国诞生了两座花园城市：兰屈瓦兹（Letchworth）和惠灵（Welwyn）。

香港老城区

香港，一座历经政权更迭、纵横不断扩张的城市，早在秦朝（公元前221–公元前206）时并入中国，鸦片战争结束后沦为英国殖民地（图5），这段殖民岁月从19世纪早期开始，直至20世纪三十年代结束。19世纪末香港抓住机遇，一跃成为东亚最早工业化的地区之一。

作为城市有机增长的极端案例，臭名昭著的九龙寨城是全球人口最为密集的城区之一。它的建成并非出自哪一位建筑师之手，也没有仰仗哪一类法律或安全法规，而是随着时间的流逝，一座建筑加叠在另

Figure 4. The radiant city diagram, illustrating the urban tenets of the Garden City Movement (Source: Stephan Reinke Architects)
图4. 城市辐射图：花园城市的城市原理图解（来源：Stephan Reinke Architects）

Figure 5. Hong Kong in the early 1900s (Source: Stephan Reinke Architects)
图5. 八十年代早期的香港（来源：Stephan Reinke Architects）

that Hong Kong seized the opportunity to become one of the first parts of East Asia to undergo industrialization.

An example of organic urban growth at its extreme, is the infamous The Kowloon Walled City, one of the world's most densely populated district which was built gradually—building on top of building—over time (Figure 6), without a single architect ever being involved or indeed any type of laws or safety codes. A former Qing dynasty fortress, it never fully came under the regulation of the British colonial government in Hong Kong. As a result, it became a haven for drugs, crime and prostitution until it was eventually demolished in 1993. Compelling images were captured by photo journalist Greg Girard.

> "Quite often houses were built by building onto the next building, punching out walls to use their staircases," said Girard. "A lot of them didn't have access to air or open space, because they were enclosed in the center of the structure" (Harding, 2015).

A typical resident Law Yu Yi, aged 90, lived in a small and humid third-floor flat with her son's 68-year-old wife off Lung Chun First Alley. The arrangement was typical of traditional Chinese values in which the daughter-in-law looks after her in-laws.

Hong Kong, Shenzhen and Guangzhou Now and Pearl River Region

Although a city with a long history, the architecture of Hong Kong has continually looked ahead. It has more buildings above 35 m (or 100 ft) and more skyscrapers above 150 ft than any other city in the world.

In recent years, The Pearl River Delta Region has been created an economic entity created by national and/or provincial authorities for achieving certain planning vision and carrying out policies of Hong Kong with two other cities, Shenzhen and Guangzhou, as well as other smaller cities and towns in the low-lying area surrounding the Pearl River estuary where the Pearl River flows into the South China Sea. Larger than Switzerland in size, it is one of the most densely urbanized regions in the world and one of the main hubs of China's economic growth, and set to be an emerging megacity.

As the high-rise gated community appeared in the Pearl River Region, the design and environment of new neighborhoods has spawned a new model of isolated walled compounds. The quest for an alternative to recover a more connected environment of the "neighborhood" is explored in vertical courtyard communities, as a means of providing spatial cohesion and a more integrated neighborhood.

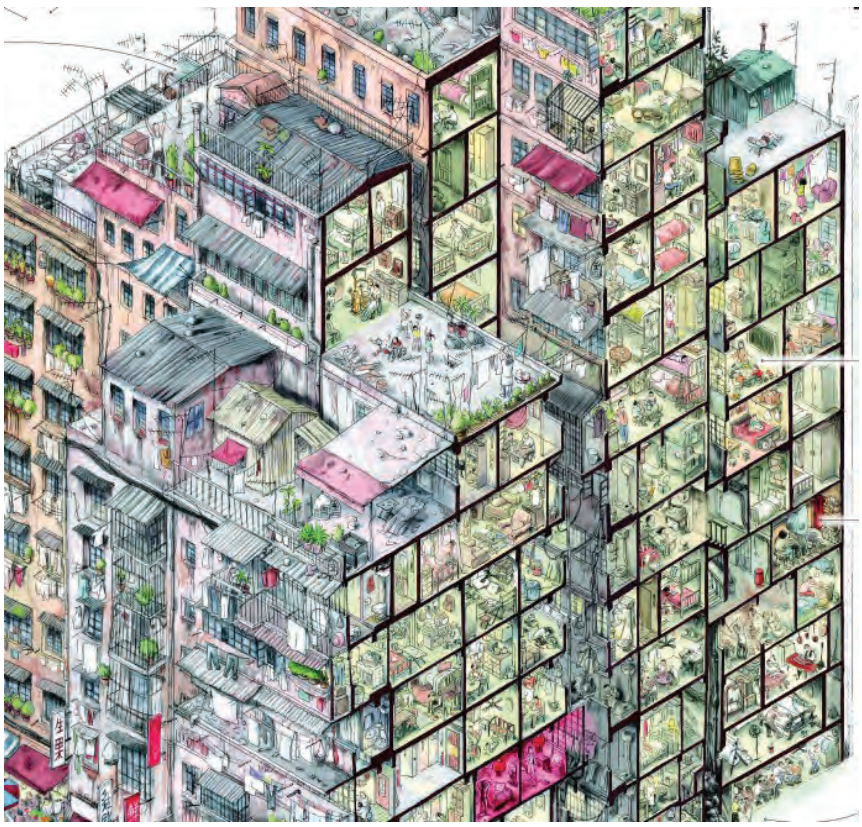

Figure 6. The Kowloon Walled City (Source: Stephan Reinke Architects)
图6. 九龙围墙城市（来源：Stephan Reinke Architects）

一座建筑上逐渐形成的（图6）。这座曾经的清朝堡垒从未被真正纳入过英国在港殖民政府的统治之内。因此，这里成为了毒品、犯罪和卖淫嫖娼的天堂，直到1993年遭到清拆。摄影记者Greg Girard捕捉到了许多引人注目的画面（图4）。

> 他表示："这里的房屋常常是压在另一间房子上，凸出来的墙壁就被用作楼梯。许多房屋由于处在建筑结构的中心位置，完全接触不到空气或开阔空间。"（Harding，2015年）

九十岁高龄的罗婉怡（Law Yu Yi）是一位典型的九龙寨城居民，跟她68岁的儿媳妇住在龙俊1号公寓三楼一个窄小潮湿的房间内。这种儿媳妇照顾公婆的生活方式体现了典型的中国传统价值观。

如今的香港、深圳和广州以及珠江地区

虽然香港的历史悠久，但这里的建筑却不断面向未来。在香港， 35米以上的建筑数量和150英尺以上的摩天大楼的数量位列全球首位。

珠海注入中国南海的这片区域被称为珠三角地区。近年来，珠三角地区在中国政府以及/或省政府的安排下成立经济区，以便在香港、深圳、广州三地，还有珠三角地区周边低洼地区的其他小型城镇实现特定计划愿景并落实相关政策。珠三角地区的面积比瑞士还大，是全球最为密集的城市化地区之一，同时也是中国经济增长的主要枢纽之一，将成为一个新兴的特大城市。

随着高层封闭式社区在珠江地区的出现，新邻里关系的设计和环境催生了一种新型模式——采用墙壁分隔、各自独立的建筑群。替代方案则是复原一种邻居关系更为密切的环境；人们在垂直庭院社区中探索这种替代方案，以营造空间凝聚力以及更为融洽的邻里关系。

当代范例：

1. 新加坡达士岭组屋（The Pinnacle at The Duxton）
2. 新加坡晴宇（Sky Habitat）
3. 北京当代万国城（Linked Hybrid）：斯蒂芬•霍尔建筑事务所（Steven Holl Architects）；2008年，北京
4. 香港行人天桥
5. 韩国首尔交叉大楼（Corss Towers）

Contemporary Exemplars:

1. The Pinnacle@Duxton, Singapore
2. SkyHabitat, Singapore
3. Linked Hybrid. Steven Holl Architects. 2008 Beijing
4. Hong Kong Sky Bridge System/Central Elevated Walkway
5. Cross Towers, Seoul

1. The Pinnacle@Duxton, Singapore

At 50-stories, The Pinnacle@Duxton continues the evolution of high-rise high-density living whilst addressing a number of pragmatic, financial, social issues, and responds sensitively to a myriad of planning constraints. The result is a sustainable and livable urban high-rise high-density living and creates an innovative typology of public communal spaces. These spaces are intended for the interaction of all age groups.

The Pinnicle@Duxton is a public housing project in Singapore. The seven-tower blocks housing 1,848 apartment units are placed in the most open and porous way, creating portals that frame the city skyline. The layout eliminates overlooking between units; optimizes views, connections, air and light flow; minimizes western exposure to reduce solar heat gain; and includes the conservation of large mature trees. A large forecourt for the towers was created, maintaining visual connectivity with the existing Tanjong Pagar Community Club, which is a major community node for this neighborhood.

On the 26th and 50th story, continuous Sky Gardens weave through the seven tower blocks. Twelve Sky Gardens are conceptualized as separate landscapes like a Sky Gym, Hillock, Crater, Meadows, Lounge, Beach. They function as an extension of the living environment for residents, forming almost 1 hectare of new land. Designed with children playgrounds, an outdoor fitness gym for the elderly, landscape furniture resembling beach deck chairs and outdoor sofa sets; they provide diverse spaces for community interaction. They also function as areas of refuge during fires and allow the sustainable sharing of mechanical services.

The individual apartment units are designed with demographic change in mind – from newlyweds to homes with kids, then teenagers and later grandchildren. This demonstrates how the design is intended to accommodate a diversity of generations to dwell within the same building.

2. SkyHabitat, Singapore

SkyHabitat is a recently completed residential complex located in Bishan, Singapore. By breaking down the scale of a typical tower block, the design forms a three-dimensional matrix of homes with private terraces, balconies, and common gardens. Two 38-story structures are connected by three bridges, or 'sky gardens' (Figure 7), providing residents with a variety of areas for common recreation and congregation, which can be enjoyed by older generations, young families and young professionals alike.

3. Linked Hybrid, Beijing

The 220,000-square-meter pedestrian-oriented Linked Hybrid complex (Figure 8),

Figure 7. SkyHabitat, Singapore (Source: Stephan Reinke Architects)
图7. 新加坡的空中栖息地（来源：Stephan Reinke Architects）

Figure 8. Linked Hybrid, Beijing (Source: Stephan Reinke Architects)
图8. 混合链接，北京（来源：Stephan Reinke Architects）

1. 新加坡达士岭组屋（The Pinnacle at The Duxton）

总共50层的达士岭组屋推进了高层高密度住宅的演变，解决了诸多实用性、财政和社会问题，同时敏锐地应对了无数规划难题。最终建成的高层城市住宅楼不仅具备高密度、可持续、宜居的特点，还推出了创新性的公共空间类型，将这些空间用于不同世代群体的交流互动。

达士岭组屋是新加坡的一项公共住宅项目。七栋大楼共有1848个公寓单元，采用开阔、透光的方式排列，构成城市天际线的靓丽地标。几幢大楼的布置避免了住宅单元之间的俯瞰对视，优化了视野、空气、光线和彼此连通，最大程度地减少西晒，以降低吸收的阳光热量，并且切实保护成年树木。组屋的楼前开辟出一大片前庭，在视觉上保持与现有丹绒巴葛民众俱乐部（Tanjong Pagar Community Club）的连通，成为了当地社区的主要社区节点。

七幢摩天大楼分别通过第26层和第50层的空中花园彼此连通。12座空中花园构成了独立景观，比如空中体育馆、丘陵、火山口、草地、休息室、沙滩。这些花园占地近一公顷，成为居民生活环境的一大延伸。它们被设计成儿童游乐场、老年人户外健身场、类似沙滩躺椅和户外沙发的景观家具，为社区互动提供了多姿多彩的空间。它们还能充当火灾时的避难所，实现机械服务的可持续共享。

各个住宅单元按照考虑到的人口变动进行设计，从新婚夫妻到有小朋友的家庭、有青少年的家庭再到之后有孙子辈的家庭。这说明组屋的设计宗旨是要让不同世代的民众居住在同一幢建筑中。

2. 新加坡晴宇（Sky Habitat）

晴宇位于新加坡碧山，是一座近年完工的住宅综合体。晴宇打破了传统摩天大楼的设计，创造了三维立体外形，将住宅与私人露台、阳台和普通花园结合在一起。两幢38层高的大楼经由三架天桥或“空中花园”（图7）连接起来，为居民休闲娱乐、聚会放松提供了各色空间，是老年人、年轻家庭以及年轻职业人士的理想住处。

3.北京当代万国城（Linked Hybrid）

北京当代万国城（图8）毗邻北京老城墙，占地22万平方米，是一个便于步行的综合体。该建筑创造了全新的通透城市空间，四面八方都向公众敞开，吸引他们的目光，这与中国当前的私密化城市发展可谓南辕北辙。该项目采用围合贯穿的不同空间层，塑造出电影般的城市公共空间，搭配上连接各幢大楼的众多连桥和连廊，创造出当代万国城这样一个“城中开放城”。该项目力求促进互动交流，鼓励在商业、住宅、教育、娱乐的公共空间内的

situated adjacent to the site of old city wall of Beijing, is counter to the current privatized urban developments in China creating a new permeable urban space, inviting and open to the public from every side. Filmic urban public space; around, over and through multifaceted spatial layers, as well as the many passages through the project, make the Linked Hybrid an "open city within a city." The project enables interactive relations and encourages encounters in the public spaces that vary from commercial, residential, and educational to recreational. The entire complex creates a series of three-dimensional urban open spaces.

The ground level offers a number of open passages for all people (residents and visitors) to walk through. On the intermediate level of the lower buildings, public roofs gardens offer tranquil green spaces, and at the top of the eight residential towers private roof. All amenities on the ground level – including a restaurant, hotel, Montessori school, kindergarten, and cinema – have connections with the green spaces surrounding and penetrating the project. The elevator displaces like a "jump cut" to another series of passages on a higher levels. From the 12th to the 18th floor a multi-functional series of sky bridges with a swimming pool, a fitness room, a café, a gallery, auditorium and a mini salon connects the eight residential towers and the hotel tower. This wide range of amenities shows how the development services a diverse range of residents.

4. Hong Kong Sky Bridge System/Central Elevated Walkway

As a city, Hong Kong is impossibly dense and smothered by unsympathetic hilly terrain, which has led to the growth of some truly unique urban spaces. The city's love affair with segregated pedestrian routes started in the 1960's, when the Hong Kong Land Company built an aerial walkway called the Central Elevated Walkway, an extensive footbridge network spanning Admiralty, Central and parts of Sheung Wan, near Victoria Harbour in Hong Kong, with an initial objective to connect one of its luxury hotels to the second floor of a shopping mall. The resulting influx of well-heeled tourists meant that higher rent could be charged on the second floor shops, so naturally they began to do this on whatever project they could. This also inspired the government to build walkways connecting public transit hubs, meaning it could easily separate the movement of vehicular traffic from pedestrians. Since then, the network has continuously grown incrementally, as needed, by both the government and business owners.

These networks, though built piecemeal, owned by different public and private stakeholders, and adjacent to different programs and uses, form a continuous space of variegated environments that serves as a fundamental public resource for the city.

5. Cross Towers, Seoul

Situated at the southeastern edge of the Yongsan master plan designed for a Korean development group, the Cross Towers will contribute to the developing skyline of Seoul.

Both the upper and lower bridges introduce rooftop sky gardens accessible to residents, allowing for outdoor activities, while a courtyard at the heart of the development is an integral part of the overall architectural design. Key to this development are the community spaces provided. Dramatic views towards the neighboring towers and visual connections across the courtyard from the retail zone create an exciting space for the residents and visitors. The outdoor landscape is envisioned to draw from the charm of traditional courtyards combined with the modernity of the project. Pedestrians at the arrival deck which connects the towers at ground level can enjoy impressive views to the bridges above and to the submerged courtyard below.

The development will offer over 600 high-end residences and amenities, including a library, gallery space and a kindergarten. This design ensures that the tower apartments have optimal conditions towards sun and views. The bar units are given value through their spectacular views and direct access to the roofscapes, activating the outdoor realm. The exterior façades are developed to correspond to the different orientations and solar conditions, creating a diverse façade which varies from the viewer's vantage point and the position of the sun. Ultimately, all these factors create the perfect social environment for a diverse mix of residents.

Penton Place, Central London

In central London, our work at SCRarchitects to create 'Intergenerational Vertical Communities' is informed by a diverse professional team of leading edge specialists in planning policy, townscape and heritage constraints and the council design review process. In addition, inclusive design,

偶遇。整个综合体就是一个三维的城市开放空间组合。

首层为人们（住户和来访者）提供了众多横穿建筑的开放通道。低层建筑中间层区域的公共屋顶花园提供了静谧的绿地空间；而八个住宅塔楼上的私人屋顶花园则为顶层的公寓专享。首层所有的公共设施，包括餐厅、宾馆、蒙特梭利学校、幼儿园和电影院，都与项目周围或中间的绿色空间相连。而电梯就像电影中的跳跃剪辑一样，将人们从底层的城市走廊剪切到高空中的连廊。在建筑的12到18层之间架着一组多功能的天桥，包括游泳池、健身房、咖啡厅、展览馆、会议厅和小沙龙。该空中走廊使八个住宅楼和宾馆塔楼彼此相连。广泛的公共功能展示出该综合体如何服务五花八门的住户。

4. 香港行人天桥系统/中区行人天桥系统

作为一个城市而言，香港拥有令人难以置信的密集程度，此起彼伏的山地地形更是加剧了窒息感。这孕育出了一些独一无二的城市空间。这座城市与行人天桥的缘分始于20世纪60年代。当时香港置地公司建造了“中区行人天桥系统”。这套大型行人天桥网络系统连通金钟、中区和上环部分区域，毗邻维多利亚湾，最初的目的是连接置地公司旗下的一座奢侈酒店和购物商场的二层。天桥让富有的游客蜂拥而至，二层店铺的租金也随之水涨船高，之后人们就尽可能地在各种建筑上修造天桥。这也鼓励了政府建造连通公交枢纽的行人通道，如此一来就能轻松地把行人和机动车辆分开。因此政府和企业主们开始不断大量建造行人天桥网络。

这些行人天桥网络虽然是分散建起来的，属于不同的公私利益相关者，毗邻不同的建筑项目，却在多样化环境中始终占有一席之地，构成了香港的基础公共资源。

5. 韩国首尔交叉大楼（Corss Towers）

韩国首尔交叉大楼坐落于由韩国某开发集团开发的龙山区总体规划的东南侧，将会为首尔的美丽天际线再添一笔。

上下两座横桥让住户可以往返于屋顶的空中花园，进行室外活动；而大楼中心地带的庭院则是整体建筑设计中必不可少的部分。交叉大楼的关键在于其提供的社区空间。在这里住户和游客不仅可以领略邻近摩天大楼的壮丽视野，还能饱览从零售区到中心庭院的贯通景致。户外景观将融合传统庭院的迷人魅力与大楼的现代风尚。行人走在首层连接双塔的甲板上，可以同时感受到上层桥梁和下层庭院令人印象深刻的景观。

大楼将提供600多套高端住宅以及图书馆、画廊和幼儿园便利设施等。这一设计确保了大楼公寓拥有出色的光线和视野。酒吧单元是一个加分项，这里不仅景色一流，还能直通屋顶，为您打开户外世界的

sustainability and climatic analysis are all straightforward practices in the design development program (Figure 9).

Generally in London, a true international megacity, town planning policy aims not only to reflect a program of diversity and social mobility but also an integrated, interactive, supportive community (Figure 10).

This "London Environment" made up of diverse social and economic priorities is a guide to creating a 21st century model for mixed intergenerational developments. The notion of integrating an aging population who seek an urban existence with the natural presence of young professionals and working families, together with small but significant groups of "key workers," i.e., nurses, emergency services, education and community professionals and students from the four corners of the planet are the key components of our intergenerational vertical community.

The issue in housing Britain's expanding ageing population is also at present one of the most acute social and economic challenges. While the population of those aged 15 to 64 in the UK is expected to increase by an average of 29,000 per year, the population of those over the age of 65 is estimated to balloon by almost 10 times that number.

Consequently, a key economic advantage of intergenerational mixed housing is that as well as providing housing for older people who have accumulated some wherewithal, it assists in providing new housing for younger people currently priced out of the housing market. Additionally it provides the major social advantage of placing older people within a mixed community; often the community where they have lived their entire lives. Diversity, by any and every definition; is essential to the 21st Century City.

At Penton Place, SCRarchitects are collaborating with a unique and principled London University, 100 years old that specialises in Asian, African and Middle Eastern Studies together with a progressive Central London borough.

This enables the primary design goals in urban design, social contribution and architecture to be inculcated into the design, development and delivery model.

Infrastructure is a key building block in an intergenerational mixed development and our site is located within 600 metres of one of Europe's busiest and newest transport, multi modal hubs; Kings Cross, St. Pancras.

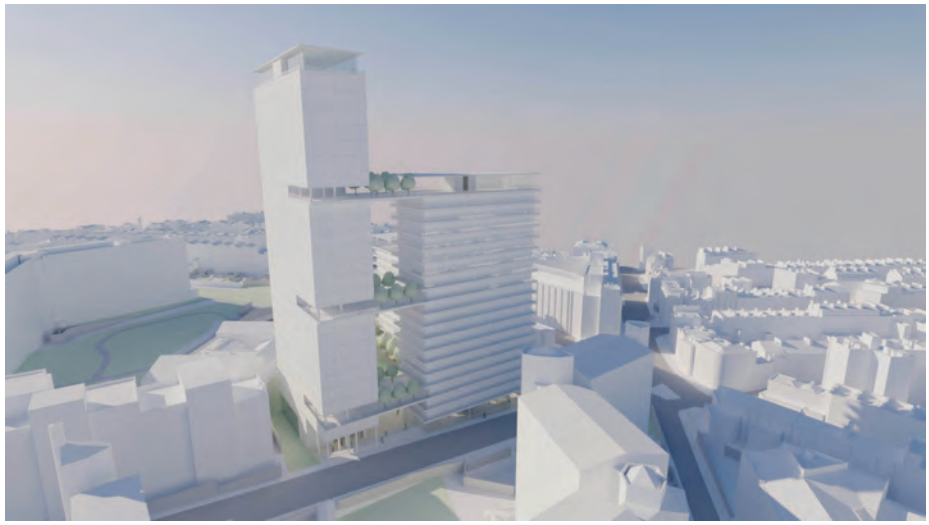

Figure 9. Penton Place, London (Source: Stephan Reinke Architects)
图9. 英国彭恩街（来源：Stephan Reinke Architects）

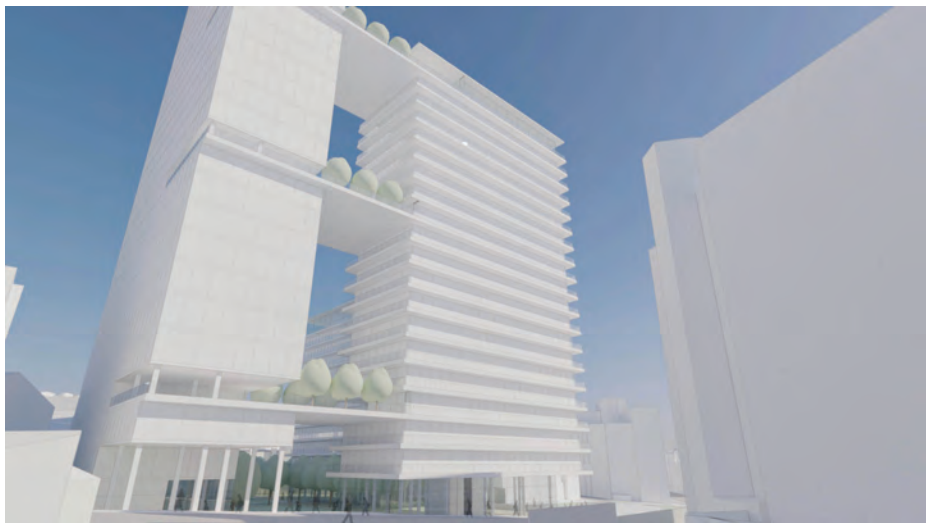

Figure 10. Penton Place, London (Source: Stephan Reinke Architects)
图10. 英国彭恩街（来源：Stephan Reinke Architects）

大门。建筑的外部立面能够应对不同方向和不同光线状况，这样人们能够随着观察位置和太阳位置的变化，欣赏到多种多样的建筑立面。所有这些因素最终铸就了一个住户多样融合的完美社交环境。

彭恩街，伦敦市中心

我们的SCRarchitects建筑事务所位于伦敦市中心，致力于打造“多世代垂直社区”，多元化专家的团队由规划政策、城市景观、建筑遗产限制和委员会设计审核流程方面的一流专家组成。此外，设计发展项目采用通用化设计、可持续性和气候分析等实践操作（图9）。

在伦敦这座真正的国际特大城市中，城市规划政策一般不仅要反映多元化和社会流动性项目，还要体现融汇整合、互动交流、支持互助的社区（图10）。

“伦敦环境”囊括了各种社会和经济重点，是创建21世纪多世代混合建筑模型的指南。我们的多世代垂直社区的关键在于整合以下人群：寻求在城市中生活的老龄人群；年轻职业人士和工薪家庭；人数少但作用大的“关键岗位”群体，如护士、急救服务专家、教育专家、社区专家；以及来自五湖四海的学生。

为日益膨胀的老龄人口找到安身之处，是目前摆在英国面前最为尖锐的社会和经济挑战之一。英国15–64岁人口的数量每年预计平均增长29,000人，而65岁以上人口的增长数量预计会是上述数目的将近十倍。

因此，多世代混合住宅的一大关键经济优势就在于不仅可以向积攒了一定财富的老龄人口提供住房，还能够帮助目前住房市场上买不起房的年轻一代入手新居。此外，多世代混合住宅贡献了一大社会好处，那就是把老龄人口放到混合社区内，通常来说这些混合社区是老年人一辈子生活过的地方。“多元化”理念，无论从何种层面定义，都将是21世纪城市的关键所在。

在伦敦的彭恩街上，SCRarchitects正在与独树一帜、原则性强的伦敦大学以及不

This leading edge transport centre is served by international high speed rail, UK and domestic heavy rail, light rail, underground tubes, London buses and of course he ubiquitous London black cab.

This extraordinary mix of opportunities, rigorous design review, council and institutional collaboration and advanced infrastructure offers a unique urban design and architectural canvas, to create an Intergenerational, Interconnected Vertical Community, even in Central London.

The program calls for great and grand public spaces and features a new 60 x 90 meter London Square and 20 x 30 meter "younger sibling square" adjacent. Our historical research indicated that on this site until 1910, there was a small cul-de-sac known as Percy Square, in consort with open permeable double height foyers and magnificent cantilever entry areas with a truly grand open air stair entering the site from Penton Rise.

The three residential building components sit above a lower ground level which features shops, cinemas, a fitness centre and workshops.

This composition of three building elements forms the public space and our international, integrated vertical community. The buildings step down from the tallest slender bar to lower element reflecting the scale, context and heritage of the neighboring urban fabric (Figure 11).

The tallest element is a slender 30-level student accommodation building, orthogonal to a 20-level family residential component of 80 two- and three-bedroom family apartments linked to a 12-level component of 70 one- and two-bed apartments for seniors, young families, key workers and millennials.

The three slender residential towers are fully linked by a highly permeable ground plane with public squares, an 8-meter-high green wall and multiple entries. This formula repeats itself at Level 3, Level 8, Level 19 and the high roof level at 30.

Full floor plate sky terraces connect all three buildings at these levels with walk through public spaces, gardens, children's area, outdoor exercise space and outdoor lounge seating areas. London is, of course, in Northern Europe, not Singapore, so covered areas, lush plantings for protection, pavilion structures and recycled natural gas fire hearths are provided.

Figure 11. Penton Place, London (Source: Stephan Reinke Architects)
图11. 英国彭恩街（来源：Stephan Reinke Architects）

断开拓进取的伦敦市开展合作。伦敦大学在亚洲、非洲和中东地区研究方面拥有百年历史。

这使得城市设计的主要设计目标、社会贡献和建筑得以凝聚到设计、开发和交付模型中。

基础设施是一个多世代混合建筑的关键部分，我们距离欧洲最繁忙、最新的多式联运交通枢纽之一——国王十字圣潘克拉斯站（Kings Cross, St. Pancras）——只有不到600米距离。

这座顶尖的交通枢纽设有国际高速铁路；英国和国内的重轨、轻轨、地下铁；伦敦巴士以及无处不在的伦敦黑色出租车。

各种机遇、严格的设计审核、委员会和机构协作以及高端基础设施的完美融合，构成了一幅独特的城市设计和建筑蓝图，甚至在伦敦中心区创建了一个多世代、互相连通的垂直社区。

这一项目倡议设立大片公共区域，要有一个60x90平方米的新伦敦广场，周边还要有20x30平方米的姊妹广场。我们的历史研究表明，1910年之前，这里只有一小块地方，叫做帕西广场，拥有开放式双层门厅，入口区域采用富丽堂皇的悬挑结构，一条宏伟开阔的露天楼梯连通Penton Rise路。

三座住宅楼的地下一层设有各色店铺、电影院、健身中心和工坊。

三座住宅楼的糅杂融合构成了公共空间以及我们国际化的整合垂直社区。这里的建筑有的高耸细长，有的低矮敦厚，折射出周遭城市结构的规模、环境和传统传承（图11）。

彭恩街上最高的建筑是一座细长的30层高的学生宿舍楼，跟旁边一座20层高、设有80间两居室和三居室家庭公寓的住宅楼形成直角；再旁边坐落着一座12层高的建筑，拥有70间一居室和两居室的公寓，住户包括老年人、年轻家庭、关键岗位工作者以及千禧一代（生于1980–2001年的人群）。

三座细长的住宅楼通过透水性良好的底层平面完全连同起来；在这片区域上有着公共广场、一座八米高的绿化墙以及多个入口。住宅楼的3楼、8楼和19楼以及30楼顶层屋顶采用同样的构造。

这几层还设有横贯整个楼层的空中露台，连通三座住宅楼，住户可以由此经过公共空间、花园、儿童游乐区、户外锻炼区以及户外休息区。与新加坡不同，地处欧洲北部的伦敦会提供建筑面积、茂盛的绿化带、临时建筑物以及循环再生的天然气火炉。

我们的空中露台设计不仅有助于促进融合、社交和偶遇，还实现了公共空间的加倍化，让住户领略伦敦圣潘克拉斯站的遗产景点和21世纪新伦敦的壮丽景致（图12）。

结论

我们的确要负起责任，创建适合各类年龄层、各类家庭类别的垂直社区。支持各楼层的多样性对于实现一个健康的21世纪而言至关重要。虽然一些地区适合建立垂直

Our Sky Terrace design not only promotes integration, social exchange and serendipity but also creates a two times multiplier for public space and provides spectacular views and vistas across London's heritage sights at St. Pancras and the emerging 21st Century London (Figure 12).

Figure 12. Penton Place, London (Source: Stephan Reinke Architects)
图12. 英国彭恩街（来源：Stephan Reinke Architects）

Conclusion

It is surely our responsibility to create vertical communities for all ages and family types. Supporting diversity on all levels, is critical to a healthy 21st Century City. While creating vertical communities and elevated walkways might be suitable in some places, they have been proven to detrimental in a number of locations. Usable connected sky terraces can be more successful, creating urban places and urban destinations. The key appears to be to design things to complement our connections to create sustainable density and promote an urban solution mixing the generations, the sky terrace and the public square as one interconnected spatial experience.

社区和行人天桥，但是在许多地方这些建筑已被证实存在危害。相反，相互连通的实用空中露台却更为成功，能够打造出都市空间和都市休闲场所。关键在于设计要能填补我们连通方面的空白，创造可持续的密度，推进融合各世代人口、空中露台和公共广场为一体的城市解决方案。

References:

Corbett, Harvey W. (1925). **Popular Science: May Live to See, May Solve Congestion Problems.** Available at: http://press.lemaar.com/illustration-spotlight-the-cities-of-tomorrow-as-seen-from-1925/ (Accessed 1 May 2016).

De Soissons, Maurice. (1988). **Welwyn Garden City.** Cambridge: Publications for Companies.

Fesler, Stephen. (2015). **Futurism: Did They Get It Right?.** Available at: https://www.theurbanist.org/2015/08/12/futurism-did-they-get-it-right/ (Accessed 1 May 2016).

Frampton, Adam. (2012). **Cities Without Ground.** Oro Editions.

Guo, Qunghua. (2010). **The mingqi Pottery Building of Han Dynasty China 206 BC - AD 200.** Architectural Representations and Represented Architecture. Sussex Academic Press.

Harding, Charlotte. (2015). **The Lost Labyrinths of Kowloon Walled City.** Available at: http://www.bjp-online.com/2015/03/kowloon-walled-city-greg-girard/ (Accessed 1 May 2016).

Howard, Sir Ebenezer. (1902). **Garden Cities of To-Morrow.** The MIT Press

Rackard, Nicky. (2013). **The Lost Labyrinths of Kowloon Walled City.** Available at: http://www.archdaily.com/361831/infographic-life-inside-the-kowloon-walled-city (Accessed 1 May 2016).