

SUPER-PODIUM: HONG KONG'S NEW MULTI-FUNCTIONAL HOUSING BASE

NANCY MARGARET SANDERS
University of Florida School of Architecture
231 ARC, Gainesville, FL 32611, USA
e-mail : nms@ufl.edu

Abstract

This paper presents the work of the University of Florida 2004 Hong Kong-China Program, where three faculty along with senior and graduate students conducted on-site analysis of the phenomenon of the *podium* - a big-box, multi-level housing base that incorporates a complex program of amenities. The type is a creative response to the housing market, bringing every amenity from food markets to cinemas to shopping malls to the doorstep of high-rise tower dwellers. Left unchecked, however, podium developments produce a type of high-rise sprawl that abandons the ground plane and threatens the quality of life at street level. As the studio documented the tension between over-inflated podium forms and the intimate scale of the street, it attempted to reclaim the forgotten middle-ground of the city where people ultimately make their place and conduct their daily lives. Through hypothetical podium designs, the work presented here seeks to invert, unfold and unravel the hermetic black hole of the super-podium, and offer guidelines for urban design principles and open-building strategies for this ubiquitous Hong Kong building type.

Keywords : Urban design, Sustainable neighbourhoods, Hong Kong housing, High-rise housing, Open building, Innovative teaching methods.

1. Introduction

During the University of Florida School of Architecture 2004 Hong Kong-China Program, three faculty and 21 senior and graduate students conducted on-site analysis of the urban phenomenon of the *podium* - a big-box, multi-level housing base that incorporates a complex program of urban amenities, now influencing housing developments throughout densely populated cities in Asia. The podium-type, evolving from economies of maximizing large sites for profit, remains an unfinished project of urbanism and place making. Spanning the space of several blocks, the podiums of Hong Kong's New Territories are monumental, overbearing, and unapologetic to existing urban fabric. In clusters of up to 12 towers rising more than 50 stories each and with eight units on a floor, a single block such as *Park Central* in Tseung Kwan-O houses 12,000 or more inhabitants. High-rise podium housing is a highly marketable strategy for developers. It is also arguably a creative response to programming, bringing every amenity from fresh food markets to cinemas to shopping malls right to the doorstep of high-rise tower dwellers. Left unchecked, however, these developments produce a type of high-rise sprawl that abandons the ground plane and threatens the quality of life at street level. As we documented the disparity between over-inflated podium forms and the intimate scale of traditional urban fabric, we found ourselves interested in that which might reside between the small and the large scale, as it is within this forgotten middle-ground that people make their place and conduct their daily lives. (Fig.1) While aiming to amplify the promise of the podium as a dynamic and functional response to changing lifestyles, our research aims to bridge the disparities between a life conducted indoors in one developer's hyper-mall and a life conducted in the organic and free space of street and square.



Fig.1 Intimate scale streets in the old fabric of Sai Kung village (left) vs. pedestrian un-friendly super-scale housing infrastructure of New Territories podium-cities (right).

1.1 Background of the Podium Type.

The housing context in Hong Kong over the last decade, defined predominantly by high-rise towers set on multi-story, multi-functional podia, has evolved out of a successful combination of speculation on the podium economic model; proliferation of the podium as a typological model due to codes of practice; and advertising propaganda relating to the podium-city lifestyle. The phenomenon of Hong Kong's super-speculation stems from policies of land development, but is also tied to specifics of the tower-type itself: the extruded modified cruciform. The modification of the cruciform tower over time has been a drive toward increasing the peripheral surface area within as compact a plan as possible. This increases the quantity and the compaction of units and increases open views, which are highly marketable. Large revenues and returns to both government (through large land-parcel auctions) and private developers are generated, and in an economic and environmental sense, the type has been a very successful construct. Extruded fifty or more stories into the air, podium blocks instantly concretize into built form a planning logic of minimized building cost and maximized real estate potential and house a growing population with extensive natural land area preserved. The proliferation phenomena stems from the super-podium's ability as a type to satisfy demands of growth at great speed and efficiency. Tower construction is typical of southern China's rapidly developing cities: poured-in-place reinforced concrete construction with exposed beams and the typical proliferation of extruded bay windows – a developer response to maximizing code allowances. Thick transfer slabs within the podium allow an appropriate structural grid for parking and transportation levels, but pose a challenge in the design of the podium elevation and limit the potential to open it up sectionally to sky and roof.

In a span of only a few decades, the tower blocks have provided improvements over cramped living conditions still fresh in the memories of two generations of people. In 1954 Hong Kong established a resettlement department to replace thousands of squatter communities, populated by post-war Chinese immigrants, with base-minimal housing. The Housing Authority was also formed, and tens of thousands of people were accommodated in the 6-story gallery slab typology, an extreme application of minimum existence housing. As described by Roger Sherwood in his *Housing Prototypes*, the slab consisted of single room dwelling units for extended families without private kitchens or baths. Only a single door and one window opened onto the breezeway. The cruciform tower block of today represents measurable improvement over these quite recent prototypes. Today's monolithic super-podia and their clusters of modified cruciform towers, are representative of high standards of living and achievement. In the densely populated region of Hong Kong, they also offer real solutions to environmental land use issues and economies. Although criticized from beyond as homogenous vertical sprawl, they are also simply called *home* by millions of people and offer them amenities, conveniences and access to light, fresh air and open (although vertiginous and random) views. (Fig.2) Low income public housing estates and high-end developments alike increasingly share the podium block model, (although the latter often distinguish themselves with classical decoration and more lavish amenities).

Although the region's on-going economic slowdown, together with changing ideals in housing, brings the possibility for new and more varied typologies, including adaptive re-use of existing non-residential buildings, the podium block is a persistently expanding phenomenon. Architects and planners have few

precedents to follow in establishing good urban neighborhoods with the rapidly expanding type. Developers turn to advertising agencies to create the *illusion* of design innovation, while architects merely decorate an ever expanding and impenetrable box. (Fig.3)



Fig.2 From 6-story 1-room 'gallery slabs' to 50-story mock palaces: 1960's housing: horizontal and urbanistically ordered (left- photo from Roger Sherwood *Housing Prototypes*) and today's modified cruciform towers: housing of the sky: vertiginous and urbanistically random (right).

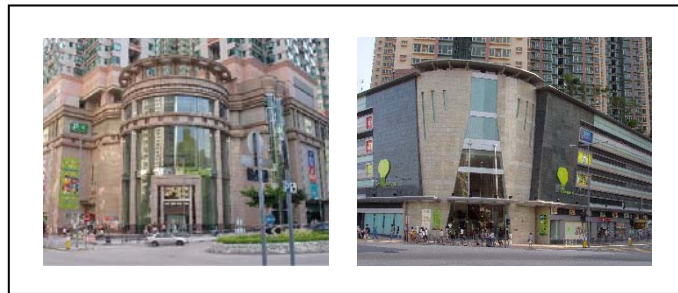


Fig.3 Hong Kong's podium as a decorated template: classical left and contemporary right.

However, as discussed in the article by Sharon and Kevin Coullinane (2003), a culture of huge negative equity now anchors the current generation of home owners, like never before, to their property, and forces an opportunity to construct a sense of social belonging not seen in the super speculation era that created the super-podium and the universal repetition of the cruciform tower block. The economic slowdown provides an opportunity to begin to ask the same questions of Hong Kong's *vertical* sprawl as planning experts do of repetitive suburban sprawl in other parts of the world. In questioning sprawl in his book *Parallax* (2002), visionary architect Steven Holl asks, "is sprawl a spontaneous spreading of democracy or the political accumulation of unprecedented ignorance?" To begin to approach the question of sprawl and develop guidelines for sustainable and humanistic neighborhoods associated with the podium block model, six urban problems and five urban potentials of the type were identified through the studio research:

2. Urban Problems of Podium Typology

1. Massive solidity and impenetrability of the block: The massive structural scale required of the base of 50 story towers leads to a poor street scale, an abandoned ground plane, and a lack of walkability on the podium block perimeter. In accommodating parking garages, taxi stands, and bus stations to serve the tens of thousands living above, the design of the ground plane poses challenges for negotiation of traffic and pedestrians. The perimeter of the podium, a veritable pedestrian wasteland, tends to be a decorated garage and offers nothing to the urban streetscape. (Fig.4) Massive transfer slabs, several meters thick, also pose problems of scale on the elevations of the podium and limit possibilities to puncture the roof plane and create light wells and volumetric connections between podium roofscape and internal spaces.



Fig.4 Abandoned pedestrian ground plane

2. Incongruous juxtaposition with existing fabric: Swallowing large tracts of fabric or land and disrupting existing urban form or traditional patterns of settlement, super-podia create an acute urban discontinuity. The super-podium will also cause ongoing problems associated with large-scale redevelopment.

3. Interiority and gatedness: Flat owners seek an understandable degree of security in accessing their residences. This creates conflicting circulation needs for residents and the general non-resident public within the podium. Typically, large areas within the podium are devoted to public and commercial space while some areas are cordoned-off as highly marketable private facilities for residents. These abrupt thresholds of separation pose difficulties in designing the podium block as an organic urban continuum. Robert MacLeod discusses the problem in his essay (2003) on public space in Hong Kong : "this is a simulated public realm, akin to the cultural condition Jean Baudrillard describes in the 'Ecstasy of Communication', a contemporary electronic world – and, in [Hong Kong's] case, a subsequent synthetic public realm...having no place for authentic publicness or privateness."

4. Lack of natural light and ventilation: Much like in a megamall, the deep interior space of the super-podium is not penetrated by natural light and air, except at the roof-scape. Again, the massive transfer slab between towers and base, makes it even more difficult to incorporate atria, skylights or open-air apertures.

5. Random orientations: As podia become larger and larger, they tend to become designed from an internal point of view. Also, as they span large blocks - and even consume multiple blocks - it becomes more difficult to acknowledge adjacent relationships or create urban clarity and order. Thus super-podia become random in their orientations to context.

6. Uniformity of towers: Besides creating a monotony of repetition and a loss of individual identity, the uniformity of towers, all set permanently upon a structural podium base, creates long-term difficulties where re-development might be needed. In his article on Podium redevelopment problems, Joseph Francis Wong (2003) explains that since towers are typically not varied in their relationship to ground and podium within a block, partial redevelopment and transformation over time is difficult, if not impossible.

3. Urban Potentials of Podium Typology

1. Infrastructure/transport interface and commuter convenience: The podium has the potential to be understood as essentially infrastructural and urbanistic. Some 55% of residents in the New Territories commute to work on Hong Kong Island or Kowloon (Hong Kong Census and Statistics Dept., 2002). In order to mature as an urban form, architects must find ways to construct a sense of belonging and of "address" within the podium without blanketing an entire development in superficial aesthetic styles. Rather, a sense of place should be imparted through programmed, experiential space that mediates between residential territory of towers and infrastructural realms of podium and surrounding context.

2. Marketplace programs, convenience, and "walkability" within the podium: Ultimately, the podium (in its scale and its intense hybridity with an emphasis on shopping and leisure) is typologically connected to the historic precedent of the marketplace, and has the potential as such to become a meaningful urban construct, helping to define the public dimension of contemporary life in greater Hong Kong.

3. *Dynamic interface of public and private realms:* The interface of public and private in the podium block is complex and challenging. However, the potential exists for a symbiosis between the two: residents, who view the podium block as their immediate neighborhood maintain a strong sense of concern and connection to the development; while the non-resident user, who relies on a cluster of several blocks as they conduct their lives in and out of the podium-city, extends a vital connectedness to the larger surrounding context.

4. *High Density:* The high density of populations housed in podium-cities preserves the largest possible amount of natural land for universal use. However the preservation of smaller-scale development patterns remains critical, and the podium scale should not automatically trump lower-density conditions. The podium should not be an “eraser” of existing fabric and villages, nor should it turn it’s back on them.

5. *Light, air, and view:* Openness to air, light, and views on the podium roof-scape (and from within generously spaced towers) is an understandable need in a noisy, dense urban context. The podium block will continue to proliferate because of its satisfaction of this need. The potential for architectural mastery of light, view, and natural breezes within the spatial and material design of the podium is great. (Fig.5)



Fig.5 View from a podium exhibits a sense of openness and light, a much sought-after release from dense urbanism.

4. Podium-city Investigations

Podium buildings throughout the new territories, and emerging within established urban areas, follow well-known developers’ formulas, originating largely through proven, but unimaginative, speculative real estate strategies and antiquated building development codes. It is our challenge to reconsider the concept of podium and podia not just as a type, but also as an urban condition. Designers and planners must allow the possibilities of this ambitious ‘super-vernacular’ design type to be infused with critical urban theory as well as imagination. How might a super-podium make a fluid connection to humanly scaled streets and plazas rather than turning its back to existing building fabric? How might its form be designed with a mind to open-building strategies to enable it to adapt to changing lifestyles, population growth, and the maturing of a neighborhood? The work of this studio aims to address the above urban design and sustainability issues through hypothetical drawings and diagrams that invert, unfold, unravel, and loosen the hermetic black hole of the super-podium, and offer guidelines for applying more humanistic and more site-specific design strategies to this urban phenomenon.

Although broad-based in its implications, the work does not specifically study issues of podium structural systems, materials and methods of construction, or mechanical systems, which are outside the scope of our investigations. The focus is on sectional models and drawings and studies of building “skins” and “scapes,” where the podium is investigated both as a physical and a theoretical urban condition. Plexi-glass is used as a primary material in the models to induce a sense of light and transparency to the hermetic box of the podium. Being outside the objectives of the research to design a podium in exhaustive detail, investigations focus on podium edges and public open space at grade, as well as roof-scapes, internal circulation, and open space design within the block (Fig.6).

Architect Greg Lynn (2004) states that, “tall buildings are turning into urban fabrics as architects are thinking about how to pull the qualities of the street into the building.” Our stage one drawings and photographs similarly attempt to conscientiously construct joints, pockets, and portals to patterns of street-

life, intertwining street and podium to invest the latter with the humanizing qualities of the former (Fig.7). While speculating on an alternate existence to the urban realm of podium form, the stage one studies aim to amplify the promise of the podium as a dynamic and functional response to changing lifestyles while retaining the organic and free space of street and square.



Fig.6 J.U. Lee presents stage one urban analysis drawings in the Hong Kong studio facilities (left); S. Shirah develops stage two model - high-rise housing (center); Professor Robert MacLeod reviews students' stage two designs (right).



Fig.7 Stage one analytical digital constructions where students draw podium design cues from Hong Kong's streetscapes. C. Anderson (left), R. Gelles (right).

5. Podium Experimental Design Inquiry

In stage two of the work, students selected one of two typical site conditions for a hypothetical podium development that would best demonstrate their urban theories: In the typical *open field site*, located in the New Territories high-rise suburban context, the podium is an object bounded on four sides by roads. To the north (and rear of the site) there are mountains, and to the south a distant harbor-view. In this site the MTR intersection point is located 1 block away, requiring a link, either above, below or at grade. Major bus and taxi hubs are incorporated within. In the typical *congested site*, located near older fabric of Hong Kong or Kowloon, the podium is embedded in a dense, low to mid-rise context. To the south there is a major road, to the north a secondary road. The east and west edges of the site are bounded by older, architecturally insignificant seven to twelve-story buildings separated from the podium block with narrow streets. The MTR intersection is linked to the block directly. Bus and taxi stops are incorporated. (Fig.8)

Specificity of individual designs was driven by investigations into innovative programming. As a program-intensive type, the super-podium intermingles the banal with the bizarre, the everyday with the celebratory. Eight programs of everyday life, typically integrated into traditional urban fabric in Hong Kong but dispersed in the new towns, were selected as core functions for the designs: housing _ worship _ open space _ shop _ park(ing) _ play_ learn _ work. These 8 conditions make up the common program-base of each project, while qualities of light, material, and atmosphere of the traditional street - studied in stage 1 - inform the phenomenological, tactile, and sensual quality of space, and serve as a reminder of the importance of detail, everyday routines, and humanly scaled elements. The programs are not limited to the eight core functions. Rather each design expands independently on them as the specific neighborhood context calls for. The designs aim to induce a broad urban complexity and a layered synthesis of conditions, and arrived collectively at a set of urban design guidelines to improve and enhance quality of life in *podium-cities*.

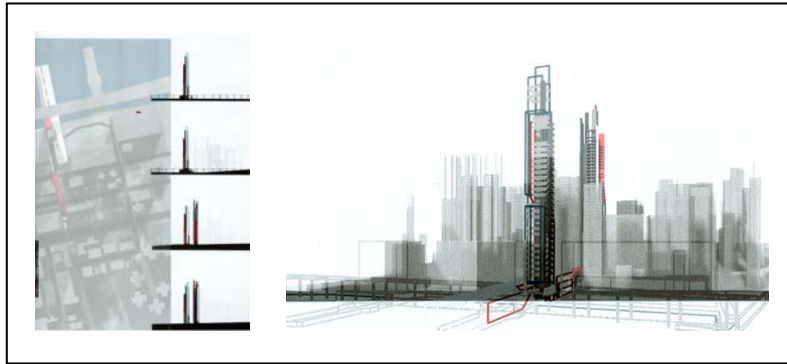


Fig.8 Podium stage two designs by S. Shirah located in North Point, Hong Kong

6. Urban Design Guidelines

1. *Localize the podium:* Encourage variety and depth of concept and theme beyond commercial considerations to create specificity of place; acknowledgement of neighborhood history and culture; connections and views to significant natural features, villages, or monuments. (Fig.9)

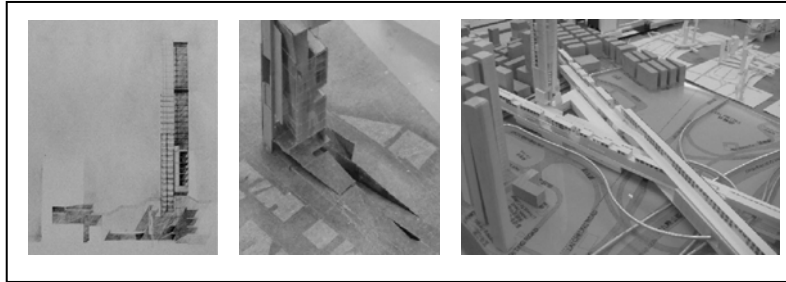


Fig.9 Site-specific design for a mountainous New Territories context (C. Anderson); Marking the ground with a memory of historic fabric in Kowloon (S. Yip); site-specific urban gesture for a super podium in west Kowloon (D. Crabtree).

2. *Infrastructuralize and apply open-building strategies:* Vary tower footprints and bases where they interface with the podium to alleviate longer-term problems associated with redevelopment and to create spatial variations suitable for dynamic open-space programming within the block. Allow some towers to penetrate the podium and land on open void space while others remain elevated on the transfer slab to accommodate parking and transport at grade and podium levels. (Fig.10)

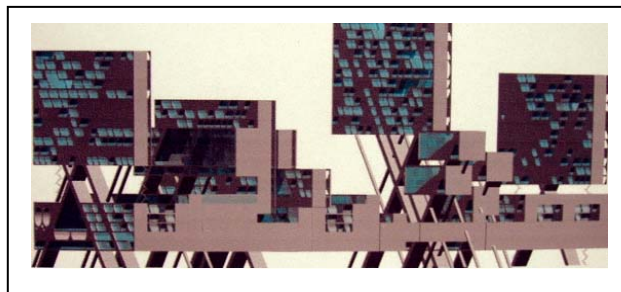


Fig.10 Tower variations with different relationships to ground and podium. (R. Gelles).

3. *Incorporate sky gardens* at intervals within towers: alleviates tower uniformity and imparts a sense of identity; creates semi-public or resident-only leisure and recreation realms that free portions of the podium roofscape for volumetric light wells and other public linkages to the inner podium. (Fig.11)

4. *Landscape the edges of the podium* (not just the top): Extend landscaping considerations from the podium roof along edges and down to street level to make the perimeter streetscape more dynamic and more hospitable to walking, waiting for buses and taxis, etc.

5. *Incorporate flexible, adaptable commercial space* at the sidewalk and ground plane in a manner consistent with existing urban street life, and as an extension of the internal pedestrian/shopping experience of the podium. (Fig.12)

6. *Carve out open-air plazas on the podium perimeter*, at the ground plane and above, that create multiple entries (locations based on surrounding conditions) to the podium interior and offer pedestrian recesses from busy traffic streets. Incorporate plaza-scaping, water features, and public art –continuous with the interior public spaces of the podium - to create public places that mediate between inside and outside.

7. *Design podium elevations in direct response to internal programs*: That is, allow shops, parking, health clubs, etc. to be visible from the street rather than cladding the podium in decorative, formal elevations with no relationship to the program within.

8. *Expand and increase the plurality of programs* within the podium to include more free public amenities including atria and multifunction spaces for performance and gathering; pocket-gardens of naturally lit, planted and ventilated spaces; sports and recreational spaces; small libraries; post offices, etc.

9. *Program the linkages*: Activate linkages between podia by programming walking bridges and subways with kiosks, public art, resting places, natural light and carefully designed signs and symbols. (Fig.13)

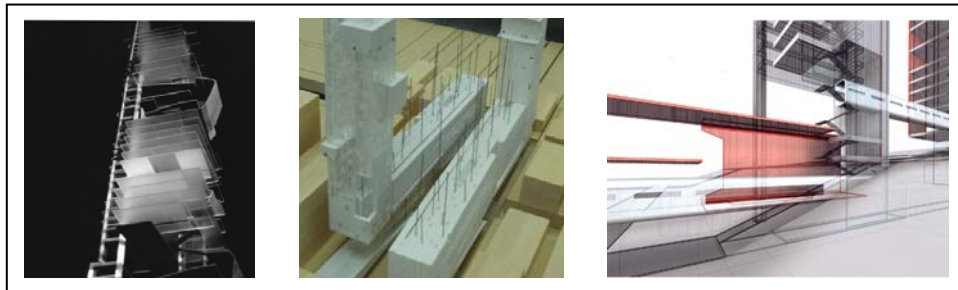


Fig.11 Sky gardens (S.Yip); Fig. 12 shopping street folds into the podium (A. Casey); Fig. 13 Programmed infrastructural linkages (S. Shirah)

7. Discussions

In Hong Kong's New Towns, mostly in the New Territories region, placelessness is acutely felt. Almost instantly metamorphosed from very rural to very urban, the area exhibits the difficult characteristics of the vertical sprawl city (discussed in previous work by the author, 2003). The lack of continuity in Hong Kong's new town urbanism also attracts criticism for lacking the kind of beauty of denser parts of old Hong Kong and Kowloon. Density there is understood in itself as being diverse, complex, intricate, and immediate. Tall density, the dominant characteristic of podium cities, is not as obviously so. Abutments, connections, and layers of activities that render meaningful human associations are lacking. Millions of people live together yet apart in a perceptually *sparse-density*. It has a paradoxical dense-emptiness that is yet to be tapped.

The podium, a multi-story, city-in-a-box beneath the towers, is the programmatic life-support of the residential development, but the enemy of the streetscape around it. Anchoring public space solely to the podium (itself adrift from the urban fabric) or solely to the ground plane (primarily leftover space), will not suffice. It is essentially in the relationship *between* the podium and the ground plane that public space must originate. This is clearly a joint responsibility requiring greater design communication between government and private developers. It is hoped that this work will contribute, and add direction, to the ongoing dialogue surrounding the urban considerations of Hong Kong's unique podium building typology and ultimately

encourage a richer, more experiential, and less alienating urbanism in the greater Hong Kong/New Territories continuum.

8. Conclusions

The implications of working within such an immeasurably large and common building type under constant evolution, but not widely understood, in order to enhance quality of life and connection to place in Hong Kong, are broad-based and significant. We have approached the podium more as *a template* than as a building, in order to uncover a new kind of urban space and propose design guidelines for “opening up” the podium box and preventing it from swallowing the block and erasing a sense of neighborhood. It is hoped that the underpinnings of the project will be understood as having applications at multiple scales and will lead to further investigations on the transformation of housing infrastructure in Hong Kong.

Acknowledgements

Associate Professor Robert M. MacLeod and Associate Professor Dr. Diana Bitz, The University of Florida School of Architecture; Essy Baniassad, Chair, The Chinese University of Hong Kong for providing studio space and resources for students and faculty. All photos by author and Robert M. MacLeod except where specified.

References

- Baudrillard, Jean. 1987. *The Ecstasy of Communication*. New York: Semiotext(e) by Autonomedia.
- Coullinane, Sharon and Kevin. 2003. “City Profile Hong Kong”. In *Cities*, vol.20, No.4 2003. 279-288. Great Britain: Pergamon.
- Holl, Steven. 2000. *Parallax*. New York: Princeton Architectural Press.
- Lacayo, Richard “Kissing the Sky,” *TIME*, vol.164, No. 26, Dec. 2004, p.176.
- MacLeod, Robert M. 2003 “Other Urbanisms and New Public Space: Emerging Notions of Place and the Public Realm in Greater Hong Kong.” In *Proceedings of Dense Living Urban Structures International Conference on Open Building*, Faculty of Architecture The University of Hong Kong, 2003 p. 128.
- Sanders, Nancy Margaret. 2003. “Dwelling in Shenzhen: Re-inhabiting the Modified Cruciform Tower Block.” In *Proceedings of Dense Living Urban Structures International Conference on Open Building*. Faculty of Architecture The University of Hong Kong. p. 84-95
- Sherwood, Roger. 2002. Housing Prototypes.org.
- Wong, Joseph Francis. 2003. “Urban Discontinuity and Redevelopment of Mega-Scale Projects”. In *Proceedings of Dense Living Urban Structures*, Faculty of Architecture, The University of Hong Kong. p 182-190.