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It's Not About the Skyline, It's About the Base Condition



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Abstract

The rapid densification of cities is a fairly recent phenomenon and seems in many cases to be progressing without regard to important already established urban theory regarding the design of successful cities. More effort needs to be placed into the design of the base condition of the skyscraper to ensure that it plays a role in the activation of the pedestrian precinct. Porosity and a fine grained commercial fabric is key. It will be shown that a better success rate seems to ensue from urban situations where land costs are high and footprints are tightly related to the street. Tabula rasa sites that are not fitted into a pre-existing vital urban fabric tend towards insular or self-contained destination type developments. These are succeeding in dampening urban activity. Sensory connections must be maintained for multi-level pedestrian walkway systems to succeed as vital connections between tall buildings.

Keywords: Activity; Base Condition; Site Planning; Streetscape; Tabula Rasa; Urban Life

The increase in the density of our urban environments as we create “skyscraper cities” is inevitable and is desired as a means to limit urban sprawl and preserve valuable agricultural land. However, not all manifestations of density are naturally supportive of a rich urban life. How do we measure the quality, life, and success of a city? Particularly a “Skyscraper City”?

The rapid densification of cities is a fairly recent phenomenon and seems in many cases to be progressing without regard to important already established urban theories regarding the design of successful cities. The work of Jane Jacobs as characterized in *The Death and Life of Great American Cities* (1963) addressed the design of the pedestrian precinct in the city. The urban theorist Jan Gehl in *Life Between Buildings* (1971) also wrote extensively on the design of interstitial urban spaces towards a high quality of life. In Christopher Alexander's seminal work *A Pattern Language* (1977) the value of scale and human interactions to create quality urban environments were established. Hans Blumenfeld also wrote extensively on the need for the modern city to connect to the historic fabric in his influential work *The Modern Metropolis* (1971). It is of course significant that these urban theories were emerging during the post World War II period as cities were rapidly expanding and densifying through the construction of towers. Although the emphasis of all authors suggested design guidelines for less dense city zones than we are now facing, these important ideas are still valid and are easily extended to dense skyscraper cities. All authors clearly established the importance of the design of city streets in this role and the role of architecture in facilitating a highly energized and active street life. All recognized that the most important zone of interaction with buildings in the city lay in the 6m/18ft high base immediately adjacent to the sidewalk. It is the immediate base condition of the building and its relationship to the street that ultimately determines the character of the urban environment.

Yet, cities are routinely now judged by their skylines. There is a misconception that an exciting skyline equates to a vibrant city. Interesting skylines are populated by skyscrapers where increasing attention has been placed on the design of the top of the tower, to the point of creating superfluous structure and architecture for the purpose of enhancing height and aesthetic appeal. While skylines might be important indicators of the character and identity of a city, they do take the focus away from the more important detailing of the engagement of dense buildings with the streetscape - the design of the base condition. It is here where the design of the skyscraper as an urban participant can enhance or diminish the vitality of life in the city. Further, the overall planning and the nature of the interstitial urban spaces formed between tall buildings is additionally critical to urban vibrancy.

When examining contemporary urban issues arising from the increased construction of skyscrapers, there is nothing inherently wrong or right about “iconic looking towers”. However in dense urban situations the pedestrian precinct is mostly influenced by the

bottom levels, so if the cladding or form of the overall tower is innovative or banal it does not necessarily influence the vitality of the urban spaces or directly impact the success of the grade related condition in support of urban activity. As extrapolated from the work of the urban theorists, it is not the tower itself but rather its position and condition at grade that either activates or dampens urban life.

What is different in 2015 from the 1970s when the first real surge of skyscraper construction began, is the shift from single function towers to mixed function neighborhoods to multi-function towers. The central business district has shifted from one dominated by office towers, to one with a mix of office and residential towers, to the current trend for mixed use towers. Where mixed use neighborhoods were soon realized to improve upon the quality and safety of urban neighborhoods by ensuring a pedestrian population that was present during “non-office hours” in the evenings and through the weekends, economic drivers have extended this to combined uses within towers. This begins to positively influence the potential liveliness of the base condition by injecting variety in the programmatic urban requirements throughout tower districts as all neighborhoods will tend to have a residential component.

Where new mixed used tower projects are inserted into the existing city fabric they can serve to enhance the vitality of the city. This would be the case of The Shard in London, where this destination project



The high level of urban activity in the Ginza area of Tokyo can be attributed to the high quality of the pedestrian precinct. This would include the provision of amenities such as street furniture, but also the fine grain of the scale of the retail establishments that line the streets. Active façades also activate the street. (Source: Terri Meyer Boake)

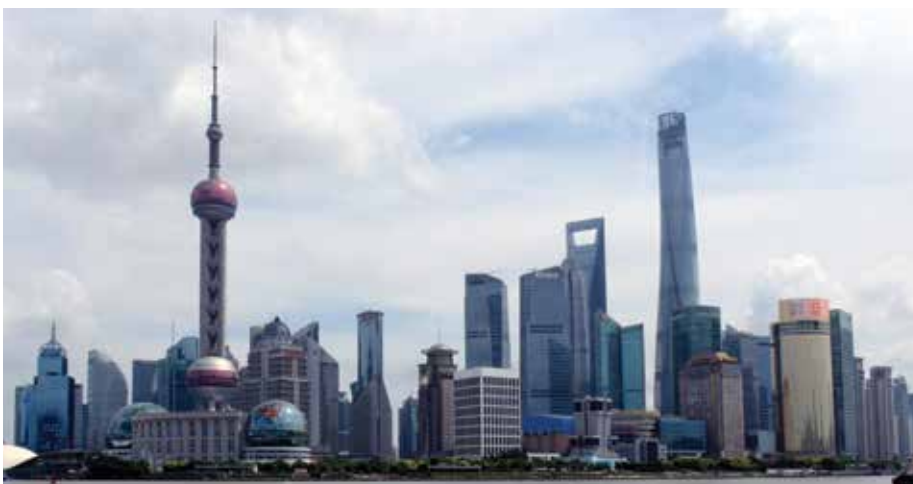
serves as an attractor and the multi-functions of the building draw pedestrian traffic to the neighborhood.

The Base Condition

The base condition of tower typologies is a function of the relationship between the tower typology, its footprint, the dimensions of the site, sidewalk widths, road widths, and the planning requirements of the municipality. This tends to result in a range

of building footprints, whose tightness seems to feed directly into the activity level of the city. It is additionally critical whether the functions incorporated into the grade level floors are inward or outward looking. Porosity is critical. It is problematic that not all jurisdictions will have firm planning guidelines in place that impose demands on the nature of the relationship of the building to its urban site.

The achievement of vibrancy in city life over the last 100+ years has been highly dependent on the earlier 20th century nature of a very finely grained urban fabric that is comprised of relatively small retail establishments that rigorously line the streets. From Europe to North America to Asia, this is consistent. The average width of shops ranges from as little as 3 meters to as many as 8 meters. This dimensional rhythm creates a porosity in the street edge. Street life arises from the function of shoppers, tourists, and hungry lunch and dinner goers who populate the streets of cities and feed the economy. Active streets tend also to be safe streets. Sidewalk and street widths are important to accommodate activity. Where the intensity of activity exceeds the carrying capacity of the sidewalk (Oxford Street, London for example) a negative environment can result. Proportions need to



The dynamic skyline of the Pudong area of Shanghai suggests urban vibrancy. However the region is relatively devoid of street related activity as a result of divisive wide vehicle corridors, an extensive elevated walkway system and inward looking retail functions. (Source: Terri Meyer Boake)



The setback of the raised plaza at the Seagram Building in New York City, combined with its expansive glazed lobby, fails to activate the life of the adjacent city street. (Source: Terri Meyer Boake)



Even iconic artwork is incapable of activating urban spaces if the grade related levels of the buildings are not themselves active with public program and providing a porous edge to the space. (Source: Terri Meyer Boake)



The large open plaza at the -1 level of the Shinjuku I-Land Plaza Tower in Tokyo, Japan is easily accessed from street level and creates a very good extension of the public space of the street. The plaza is surrounded by restaurants that service the surrounding offices. Landscape elements are incorporated. (Source: Terri Meyer Boake)

be fine-tuned based on activity levels, traffic, and climate.

It will be shown that a better success rate seems to ensue from urban situations where land costs are high and footprints are tightly related to the street. Tabula rasa sites that are not fitted into a pre-existing vital urban fabric tend towards insular or self-contained destination type developments. These can dampen urban activity.

The Typological Development of the Western Skyscraper

In the early days of skyscraper construction in cities such as New York and Chicago, the placement of the tower in the city tended to reaffirm a tight connection with the sidewalk – having neither significant podium nor setback from the sidewalk edge. The Woolworth Building (1913), Empire State Building (1931), and Chrysler Building (1930) would exemplify this type, which is also characterized by a small footprint. Although the construction of these towers required the

demolition of a number of smaller shops to create an aggregated site of a much larger size, the fine grain of the shops and urban fabric continued between these tall buildings and succeeded in maintaining a level of vibrancy in the city. Many of the early towers included significant, fine grained, grade related retail at the ground level, minimizing the major entrances and lobbies to the tower and their impact on the street. The profile of early skyscrapers tended to be vertical and compact in order to limit the requirement for expensive urban land. The distance from the elevator core to the street was relatively short and direct, allowing office workers or residents to make a quick connection between the vertical core and the horizontal street. These single-function office buildings promoted a return to street level for access, shopping and dining.

The design of current skyscrapers responds to changed expectations. Where access to daylight and ventilation was a necessity in early 20th century skyscrapers, only jurisdictions with sustainably driven codes tend to follow this daylight driven, tight plan model. The majority of towers tend to have much larger floor plates and so the distance from the core to the street increases. High post 9/11 security requirements and the expected full glazing of lobbies eliminates most ground level shops. This creates a large break in the texture of the street frontage, and in many neighbourhoods removes the majority of retail at grade. When urban planning is factored in, areas that are predominantly constituted of office occupancies have very little variety of use beyond the incorporation of restaurants,

coffee shops, and dry cleaners to service the business population.

The form of the skyscraper has evolved greatly over the last 100 years. Iconic projects such as the Seagram Building (1958) in New York City, by Mies van der Rohe initiated the creation of a large urban plaza in front of the tower, establishing a significant distance between the entrance to the building and the sidewalk. Incorporated grade related retail was removed from the building program. The large, transparent lobby became the dominant element at the base of the tower resulting in large gaps in the former fine grain of the retail fabric. The proliferation of this tower type has been credited with diminishing urban activity at street level. The large scale and often very formal nature of the plazas combined with a lack of street furniture or amenities failed to support activity in the city. Many plazas are also raised slightly from street level, signalling a semi private precinct.

Problematic is the erosion of the hard edge of the sidewalk space by increased and varying setbacks. This lack of constriction of the pedestrian realm allows traffic to bleed away from the sidewalk and dissipate in intensity. These types of spaces can be urban contributors if they are programmed with activities. Restaurants, markets, food vendors and other cultural functions need to be associated with these enlarged urban plazas. Fountains have been effective in creating an active focal point. Static sculptures have not proven as successful in creating continued interest in the space, unless they are combined with seating.

Over time plazas were also constructed at the -1 floor level. The intensity of activity in the open air plazas of -1 can tend to be high as the uses often include public restaurant functions. The John Hancock Center in Chicago (1969) and the Nippon Television Tower in Tokyo (2003) would typify this condition. There is sometimes an ability to interact with street level pedestrians via visual contact, effectively connecting these spaces into a more active multi-level environment. Access to the -1 level often includes large feature stairs from grade in addition to interior access that may or may not be connected to a subway system. The success of this base type is contingent on the detailing, scale and ease of access to the space. These areas are often designed to service restaurant functions, signalling that the precinct is public. The use of these exterior spaces is naturally climate dependent, meaning that activity drops significantly during harsh weather.

The base condition of the tower plus podium type had a similar negative impact on urban



Galaxy SOHO in Beijing, China fails to engage or activate the urban environment due to its inward looking retail program and barrier like landscaped setback from the sidewalk. (Source: Terri Meyer Boake)

activity, even if the podium reinforced the sidewalk edge. The impact of the retail podium on activity at street level varies widely as a function of the size of the podium as well as the nature of the retail space and its address of the sidewalks surrounding the project. If the retail spaces at grade relate directly to the street, this type can contribute to city life. If they are solely inward facing, they create a large impenetrable barrier along long sections of the block. The grain of the shops needs to remain fine for the best results. The distance between the elevator core and sidewalk is typically increased, creating a disincentive for occupants to return to the street for shopping and dining as the functional program of the podium often includes shopping and dining, encouraging the occupants to remain inside.

The Tabula Rasa Problem

As existing 21st century cities are renewed, older less dense districts are being razed to permit the construction of tower types that are capable of carrying higher residential and commercial densities. Generally, the fine grain of the existing, usually highly successful urban fabric is replaced with an option that is based on building typologies characterized by large footprints that fail to replicate the historic fabric in any way, shape or form. Even so, in densely populated, established cities like New York, Chicago, and London, the strength of the existing historic fabric in combination with extremely high land values has managed to encourage a mix of old and new that supports a high level of activity in the urban environment by effectively discouraging a large footprint at the base of the tower which has the effect

of maintaining the clear definition of the pedestrian precinct that is the sidewalk. The constriction of the site, whether due to land costs (New York City) or geography (Hong Kong) works to encourage tighter footprints that support a closer connection of the tower occupant to the street.

As requirements undergo radical changes and cities rapidly expand and densify, a new "tabula rasa" condition of development has emerged. The development of Canary Wharf in London and La Défence in Paris are examples of this type of development. Here a new type of mini-city is created that does not integrate into existing urban fabric and is designed to serve the functions and requirements of business. This situation challenges the position of Hans Blumenfeld who states "We must learn to plan a city in the way it would have grown if it had not been planned – if it could have time to grow."

The Western tabula rasa developments served as a precedent for current design in tall buildings in Asia and the Middle East, however with somewhat different outcomes. Developing nations are working to create skyscraper precincts on land that either has never been developed (Dubai) or on land that has been politically agglomerated into extremely large parcels (China). In the case of Dubai, there is no adjacent urban fabric to reference in designing these new precincts. In China, new developments tend to eschew the existing fabric in an effort to appear super modern. Additionally, for political reasons (expropriation or government ownership), the cost of land seems less of an issue, enabling larger footprints. This effectively removes any pressure from the existing city to restrain projects.



Although the density of Dubai is often criticized, there are distinct benefits to the close spacing of the narrow, square plan towers that have evolved. In Marina Bay these provide much needed shade in an environment that does not naturally support vegetation. (Source: Terri Meyer Boake)

The tabula rasa condition has seen different formal responses in typological developments in Asia and the Middle East. The particular and different details of the varied typological responses in these regions can also be attributed to climate factors and cultural preferences. There has been a decided movement away from the single function tower to towers or tower clusters that contain multiple functions. The trend towards diversity in the function of the tower complex, has led to projects that may combine residential, hotel, office, extensive retail uses, as well as occasional institutional or cultural functions. Many of these become “destination” projects and are not intended to work with the city or to complement or support the street life of the city. Multi-functionality has supported the push towards the creation of “mini cities” – projects that are functionally diverse enough to work reasonably well without interaction to the city that surrounds the project.

This multi-functionality has also impacted the design of tower projects. The podium condition has become significantly enlarged to accommodate the combined shopping center and cultural functions. As destination projects, these types are often tied directly into the subway system, thereby being fed below grade and discouraging pedestrian access at grade via the city streets. These projects often include large parking components, again discouraging use of the street by pedestrians and feeding directly into the project for access. The Galaxy SOHO and

Raffles City projects on the 2nd Ring Road in Beijing would typify this condition. The Galaxy SOHO project has been directly accused of destroying the historic fabric of Beijing. There is virtually no pedestrian traffic on the 2nd Ring Road between the SOHO and Raffles City projects although they are only 2 km apart. The buildings in between the two complexes are almost 100% office types, mid to high rise, with no fine grained support fabric.

Although there is a tendency to consider new tabula rasa cities such as Dubai with a broad, uniform brush, the neighbourhoods that support the new tall buildings within Dubai are quite different. There appear to be three variations. The Burj Khalifa, due to its extreme height, is the anomaly, requiring a skyscraper typology that is A-shaped in order to provide stability for the megatall tower by virtue of an extremely enlarged base condition with an associated large footprint. The plaza is only populated at night during the water show and is completely devoid of activity during the heat of the day. It is physically impossible to walk around the base of the Burj Khalifa due to grade changes and physical or landscape obstructions. There is virtually no pedestrian traffic between adjacent housing or office functions.

The Business Bay area of Dubai is comprised of a collection of smaller signature towers, largely commercial in nature, with mid-range footprints. Many of these are based on sculptural forms that also incorporate a podium element. The base condition includes some retail and restaurant functions that support the office functions.

Largely the streetscape is devoid of activity as there is little relationship between buildings. The harsh environment can in part be blamed for discouraging outside activity during a large portion of the year. Proper environmental design to improve the microclimates of outdoor areas can mitigate this problem. Although outside activity increases during the more temperate months, in general this precinct is not designed to be pedestrian friendly.

The Marina Bay area of Dubai is populated by extremely tall towers, largely residential in nature, with limited floor plan dimensions and tighter base conditions. Many of the towers have a podium element that is used to house some retail and restaurant functions, but these are smaller in size. The area is populated by these tower types, without much in the way of other, lower building fabric in between the towers. Again the extreme heat and humidity of the region seriously discourages outside activity for a significant portion of the year. Generally, the area focuses on the Marina and water elements and has included more restaurant and entertainment activities. The tight configuration of small footprint towers creates interstitial spaces that are well shaded, creating a superior micro climate in comparison to the more generous siting of the Business Bay district.

Transit Connections

Early subway systems, such as those in New York, Chicago, Boston, London, and Paris, tended to be disconnected from the



The lower level of the Nippon Television Tower in the Shiodome area of Tokyo opens into a sunken plaza that is fed by a subterranean retail level that is accessed directly from the subway. Although stairs are provided to access the plaza, the access feels limited by the extreme difference in grade and the constrained visual connection from the street level. (Source: Terri Meyer Boake)



The elevated walkway system in Pudong is well used, but could benefit from added program as the adjacent buildings have insular retail programs that fail to activate this space. (Source: Terri Meyer Boake)

subterranean levels of buildings adjacent to the subway stations. This effectively required patrons to enter and exit the subway from the street environment, creating a traffic path at grade, on the sidewalk, between the adjacent buildings and the subway. In harsh winter cities such as Toronto and Montreal whose subway systems were not constructed until the middle of the 20th century, an underground PATH system was developed that effectively allows people to travel large distances between buildings in the downtown core areas, without having to go outside. This has spawned the creation of a large below grade commercial precinct that has succeeded in creating a parallel, finer grained, often lightless, urban fabric below grade. This effectively drains pedestrian traffic from grade level in the city during the winter. The warmer seasons see a split between patrons who prefer to travel above ground and those who continue to patronize the spaces below grade. However, the grade levels of these precincts tend to have less retail development at grade as these need year round traffic.

The lack of grade related retail combined with a developed below grade retail system that feeds the traffic flow between the subway and tower is characteristic of the Shiodome area of Tokyo. There is virtually no life at street level as there is a distinct lack of retail along the sidewalks. The area is characterized by large towers with significant spacing in between and submerged retail. The area also has an extensive +1 level exterior walkway system to connect the towers.

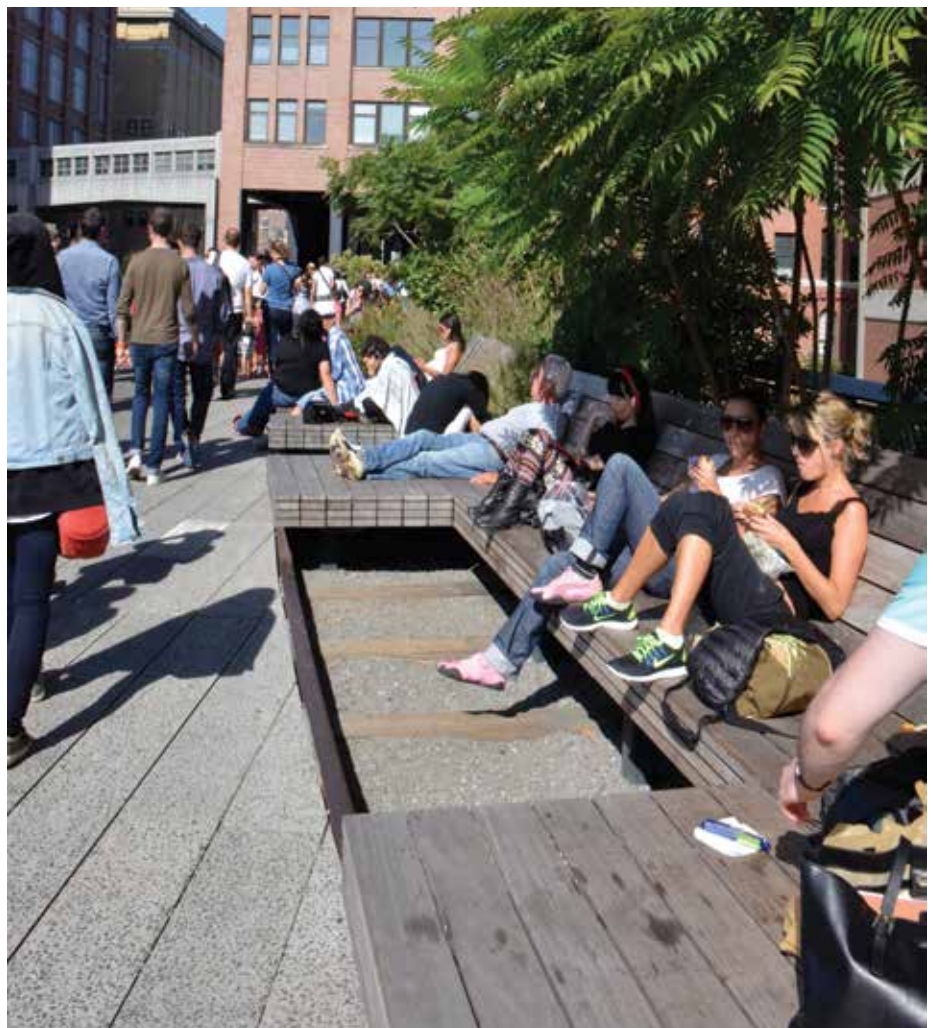
Elevated Walkway Systems

The lack of supported activity at street level is exacerbated by the presence of an elevated exterior walkway and bridge system that connects the towers in an effort to remove pedestrians from conflict with cars. This practice is growing in places such as Tokyo and the Shanghai Pudong Area. The walkways are not enclosed and intentionally support no retail activity. In most regions vending on the walkway system is illegal. This can be seen as a negative factor as these walkways become streets with no associated retail activity.

The elevated walkway system in the Pudong area of Shanghai has become quite extensive. Although beautifully designed from the perspective of detailing, the wide paths include no other activities. They are the means to walk from tall building to tall building, with all of the retail functions inwardly contained. As the roadways in this area are excessively wide, busy and divisive, the elevated walkways offer a significant improvement over

street level sidewalks, but nonetheless do not contain any activating program. In Pudong they may be seen as a relief and contrast from the intense shopping experiences that they serve to connect, but still might benefit from added areas of seating, shade and planting to improve the outdoor experience.

Parts of the elevated walkway and bridge system in Hong Kong are enclosed and have been widened to include retail activity. The point at which a walkway becomes an interior retail space was debated at the Shanghai Conference in 2014. Although not clearly defined, concerns were raised about the nature of the function of the space, and its width to length ratio. If walkways become very broad and lined on both sides with shops, thereby cutting off visual access to the street below, the classification of the space was agreed to move from a walkway/bridge to a simple extension of the retail space. If walkways remain narrow, but wide enough to allow for more casual vendors, a vibrant system can be achieved. Extremely wide enclosed second floor walkways also create dark tunnels for pedestrians walking at grade. This is also a



The High Line in New York City is an excellent example of a highly activated, urban, elevated walkway system. It incorporates landscape, seating, overlook, variety and includes strategic instances of food kiosks. The width varies to allow places of gathering. This richness of treatment would be recommended to inspire other elevated walkway systems. (Source: Terri Meyer Boake)



Times Square in New York City must accommodate winter conditions so benefits from interspersed mid-rise buildings that allow better access to light. Snow clearance needs also to be considered in the determination of street and sidewalk widths. (Source: Terri Meyer Boake)



The success of the central escalator in Hong Kong can be in part attributed to the open nature of the covered system which allows for significant sensory connections to the city. (Source: Terri Meyer Boake)

negative to perceptions of street safety and urban activity.

The +15 pedestrian system in Calgary, Canada (so named as it is 15 feet above grade) was created less to separate the car and pedestrian zones and more to create a warm climate to provide extensive interior connections between buildings during the harsh winter season. It is the most extensive elevated and enclosed walkway system in the world, including 18 kilometers of walkway and 69 pedestrian bridges. The system significantly draws away from street level activity during both the cold months for which it was designed as well as the balance of the year. In part this is as a result of habit, but also that the program of the +15 level includes most of the food courts which occupy the second floor of many of the connected towers. There is little in the way of restaurants to be found at street level. The vitality of this interior space is in extreme contrast to the underpopulated streets only 15 feet below. This is in part due to the extreme contrast with other office types where there is a high level of security at the lobby level that prevents unentitled entry.

Although links between towers at upper (high) levels seem often to be touted as the way forward in the creation of a 21st century Skyscraper City, such linkages seem still to be

logistically challenging as a viable method to promote the development of a parallel vibrant urban environment that is suspended somewhere above the 30th floor. Beyond obvious structural challenges, the lack of connectivity with the outside environment defies their interpretation as an “urban space” – or space in the “city”. The lack of connectivity to the street presented by enclosed walkway systems even as low as the levels one above grade will only be exacerbated by an increased distance from ground level, given the Calgary precedent.

It may be better to imagine interconnectivity at high levels as supplementing, but not replacing ground level retail based activities. These spaces would satisfy smaller community based functions that can answer to privacy requirements. There are some projects that seem to have started fairly successfully in this direction through the addition of outside green spaces (The Interlace in Singapore) as well as interior recreation functions within the links (Linked Hybrid in Beijing).

Again success needs to be measured not only by the use of the high level connected space itself, but also the nature of activity at ground level. Both need to be vital.

Sensory Connections

Edward O. Wilson's seminal work, *Biophilia* (1986), described the need for humans to engage in grade and landscape related activity. In this instance it is our distance from nature and landscape that is at issue when we live in tall buildings. If we are thinking of a multi-level urban realm that could be associated with the Skyscraper City, then significant landscape elements need also to be incorporated to create a fulfilling and responsive environment. There are important sensory triggers that relate to the sounds and smells of trees, plantings, and flowers in the city. Even in dense cities like Tokyo and Osaka, much attention is devoted to healthy gardens, even in the smallest of spaces that succeed in adding to the quality of the base levels of buildings. Recent projects such as The Interlace in Singapore and One Central Park in Sydney that have made efforts to bring landscape elements into higher levels in the building are making significant strides in proving the effectiveness of this point.

I do not have a photo of the Urban Habitat Winner from Singapore or Nouvel's Sydney project but either would work well here if we can do that.

As stated in the works of urban theorists, visual connections and eye contact are important to encourage vitality and interactions in



The Causeway Bay area of Hong Kong has very few "iconic" tall buildings but is kept alive with intense retail. A fine grain of storefronts activates the street level. (Source: Terri Meyer Boake)

urban spaces. So when examining elevated walkway systems, open walkways are more successful at encouraging visual, auditory and olfactory linkages between levels than enclosed walkways. Openness allows the sights, sounds, and smells of the city to penetrate levels that are physically removed from grade level. Enclosure defines elevated walkways as interior space, thereby taking the activity away from any potential interaction with the street. Enclosure systems also prevent the important sensory connections to the city space, also signalling to the occupant that they are not in the urban or street realm. The +15 system in Calgary and the interior portions of the elevated walkway systems in Hong Kong would fall in this category.

Plazas located at the -1 level can be designed to allow visual connections back to grade, and vice versa, if the proportions and sightlines of the spaces support this interaction. The inclusion of exterior feature stairs to connect levels encourages a higher degree of visual participation between multi-level spaces. Open air levels can succeed in activating urban environments as well as permit the important sensory links to the city environment.

Recommendations

Observationally at this point in time, developments in constrained cities that produce towers with smaller footprints are tending to support a higher quality of urban life through the activation of the street for pedestrians. Cities that support the creation of larger, insular, inward looking, multi-function destination complexes are seeing a marked decline in vibrant pedestrian related urban activity.

Recommendations for all types of development would include ensuring significant porosity at grade, and that the included grade related retail be of a fine grain that mimicked more historic retail fabric. Active cities seem able to accommodate a combination of a tightly reinforced sidewalk space with a degree of bleed into adjacent at and below grade plazas, provided that these spaces are easily accessed, include programmed activity, and allow for sensory connections. This requires that vertical separating distances are not excessive.

Where direct connection with subway systems may be efficient, directing pedestrians out onto the street adds activity to the city.

Again this can be balanced with some direct interior access, but exclusive interior building access from the subway system is noted as dampening urban activity.

In car centered cities where pedestrians are often considered to be at-risk, multi-level alternate walkway systems can be made effective provided that visual contact is possible between the levels and that these walkways are activated with retail and food kiosks and potentially entertainment events, seating and landscape elements. It is proving helpful to include significant landscape elements also to the walkway systems. Developing a strategic multi-level system that includes pedestrian activity at the -1, 0, and +1 levels has great potential in the Skyscraper City to address numerous logistical problems related to population densities and the management of traffic flows.

There is cause to return to some of the previously established urban thinking to inform new developments in the future Skyscraper Cities.

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