Symbiotic office programming in Urban High-Rises:

Linked spaces as a means of inter-office
communication

by Melanie Lee

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abstract

This thesis speculates on the implications of a more flexible type of office layout to suit the needs of the increasing share in shared office programming. The goal is to create an architectural system for high-rise office towers, which drives variability and devise how these changes in environment could better reflect activities of different professions and social needs. The aim for this thesis is to direct porosity and connectivity where needed respective to high-rise office towers. I am proposing that re-looking at the spatial orientation of these shared spaces has the potential to create greater variation of spaces while promoting a symbiotic usage of spaces. In contrast to the open atrium typology which denotes a place of rest and the individual units denoting a place of work, I propose to stimulate work in a rest environment benefiting both the neighboring relationships of the workplace and creating defined nodal micro environments – more suited to the future of networking in the work environment. Topics that will be covered in the thesis are: social engineering, better dialog of spaces, multiple programming, encouragement of connections, 3-D spatial qualities, and stimulus for work. My thesis will devise potential arrangements of spaces suited to different needs and work environments, which will lead to a symbiotic work place environment.

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introduction

Since the publication of Delirious New York in 1978 and the expression of Rem Koolhaas' "Vertical Schisms", High Rise office typologies still have not successfully articulated vertical connections to develop a larger network of relationships. The significance of the study connects various theoretical researches. Using both Critical and Post-Critical sources the thesis explores changing notions of social connects in office high-rise typologies. Connections are spatially articulated to enhance the relationship between users by relocating social space. With an expanding idea of flexibility within the unit office type, this thesis argues that varying symbiotic relationships between different clusters of office type will lead to enhanced relationships and more flexible uses of the tower as a whole. The project aims to design the boundaries between segregated types of offices to improvise a third type of work social space that differs in focus from the commercially driven atrium.

This thesis deals with high-rise as both a controversial topic in architectural criticism, by the differing views of acceptance of marketing and architecture, a driver of design in post critical theory, which critical theory has the potential to deliberately avoid. To propose a change in the high rise, the differences between criticism and post criticism must first be acknowledged.

In the discourse, critical theory will be analyzed for its specific applicability to the high-rise rather than as a critique on the theory as an over arching truth. While examples used in critical theory act as an antithesis, through the analysis of post-critical innovation is where the project will draw its conclusion. Variation is stressed upon in the study of biologically inspired systems and architecture. To determine the

implications of these elements to be reincorporated into the high-rise office environment.

Critical Theory as defined by Michael Speaks in "Intelligence After Theory", was accepted into academia in architecture in the 1980's, accepted as "a new mode of contemporary thought, a fast philosophy"¹. Ten years later, "theory vanguardism" was challenged by globalization, and the post critical mode of thought arose. A post critical standpoint in architecture differs from its predecessor, critical theory, by the acceptance of innovation in architecture.²

Theory, on one hand, was challenged by its nature of being removed. Theory was criticized by Stan Allen as a "handicap", seen as an innovation for "advancing Enlightenment ideals of ultimate truth and by splitting thinking from doing"³. It posed "a method for architecture to create an alternative to market driven design by following a different logic, one that can be considered "utopian". For "Eisenman, theory used by him in the abstract perfection of forms shields them from market driven demands of program, use, and market viability"⁴. Architectural theory, removed from the world and reinterpreted as an ideal, cannot meet challenges faced by diverse views and forms presented in the connected world. On the other hand, theory developed from critique inherently is a "negative practice", rewriting past practices, further supporting the notion of a singular truth.

Critical Theory vs. Post Critical

Critical Theory in architecture is driven on an assessment on the critique of society and culture by applying knowledge derived through the architectural philosophy and literature. As philosophy is shared through writing and speech, through literary means, reasoning becomes focused on its ability to convince through writing thus "splitting thinking from doing". Its premise is based on thinking about a commentary of the world rather than analyzing the direct impact of the object on the world. Characteristic of critical theory is its inability to distinguish between a metaphorical likeness and the actual implications when a model is placed in context.

¹ Speaks, Michael. Intelligence After Theory. Perspecta 38. MIT Press (2 Jun 2006) p. 104-106

² ibid. p.104-106

³ ibid. p.104-106

⁴ ibid. p.104-106

This thesis will first discuss visionary modernists versus post critical works. Following an analysis of the capsule building in Japan it will discuss Koolhaas' 'Vertical Schism' and the notion of vertical isolation. This will lead to a discussion of a growing biological imperative in architecture and the connection of fluidity, topology and program hybridity in the development of a new formalism.

The underlying theory of the Metabolists draws the idea of flexibility as a keyword linked to biology. However, the flexibility employed in Metabolist works, works as a system rather than as a living creature. Through literature, the Metabolists' definition of flexibility encompasses both the biological flexibility as well as the flexibility of lifestyle in order to obscure their intentions and appeal to those interested in both technological advancement and a new lifestyle – a literary play. Kisho Kurokawa's Capsule Tower talks about the flexibility of vehicles, cars, and capsules. It is shaped like a biological cell, however, does not perform like one. The Metabolists' theories are under a critical theory as the proposed project is based off reasoning through writing rather than discovering implications of the object through making.⁵

Similarly, Rem Koolhaas in *Delirious New York* is under the umbrella of critical theory by its approach of analyzing the innovation of the elevator and what it is to bring to architecture, rather than focusing on what the proposed design brings. He devises scenarios using the vertical schism, a programmatic flexibility that can only be experienced on paper and through descriptions.⁶ *Delirious New York* brings innovation through theoretical arguments rather than an analysis of what his proposal brings.

This detachment produces creative responses and a varied interpretation of the word flexibility. Flexibility used in my thesis will aid in conducting a beneficial relationship, one which a person can experience through the promenade in the building. Thus, through a post critical analysis, the Metabolists' vehicular definition of flexibility will be used.

The works of Michael Hansel and Achim Menges, Ali Rahim, and Patrik Schumacher, all under the umbrella of post critical theory, will each be analyzed in relation to Koolhaas' Vertical Schism, the antithesis, and

⁵ Kurokawa, Kisho. *Metabolism in Architecture*. Studio Vista, London. 1977

⁶ Koolhaas, Rem. "Delirious New York: A Retroactive Manifesto for Manhattan". *The Monacelli Press* (December 1, 1997)

their potential provide a more responsive architecture to the needs of inhabitants in an office tower typology.

Post Critical theory focuses on an aftermath study, where the discovery of its relevance to society is examined during and after the process of making. Unlike the works of architects linked to critical theory, these individuals examine the direct impact their form making to implications they create. Schumacher, Hansel Menges, and Rahim produces flexibility by dissolving boundaries, blurring the idea of a self contained entity, each with a difference in focus.

The thesis project, entitled "Symbiosis" which attempts to rectify these issues in a speculative tower development in Toronto. This project analyzes and brings elements of different systems for variation: a modular system, a territorial system, a utilitarian system, a jungle system, a cluster system, with a social system, to create an environment suitable for inter and intra office interaction. Thus the contribution will be the development of a flexible system of links and boundaries for acknowledging a micro environment, which satisfies the overall system of inhabitants.

[compatibility]

Konrad Wachsmann > >

In the most general sense of Modular construction in architecture, - individual or a series of building elements can be switched up, interchanged, replaced and isolated when needed. The building is dynamic. However, the elements themselves are static. A clear outline of different methods and ideas of how modular buildings could be constructed is outlined in Konrad Wachsmann's The Turning Point of Building (1961), a guide and summary of designing for his universal building system.⁷

The intent of his works and explorations in this standardized modular system was for each element to be completely compatible with all elements. These panelized elements are based on a regularized panel ratio sizes to allow for the interfacing of different types of panels. Modules

⁷ Wachsmann, Konrad. The Turning Point of Building. Reinhold, New York. 1961

defined for the case of Wachsmann are building blocks of elements. He does not relate his system to the biological metaphor but rather as mechanical metaphor. The sliding and slotting principle in each panel works in every axis the same and orthogonally. In his prefabricated panel system, profiles of vertical and horizontal panels are all identical and do not change in thickness. It is the joint which dictates assembly sequences. The requirements for the modular system as Wachsmann outlines are broken down into modules themselves: The Element Module, Performance Module, Geometry Module, Handling Module, Structural Module, Element Module, Joint Module, Component Module, Tolerance Module, Installation Module, Fixture Module, Planning Module ⁸

In Wachsmann's exploration of panelized systems, any detached 2-D plane can be rotated in the (x, y, z) direction. In his exploration of space frames, each node has the potential for a 3-D extension. Clear extrusion in a tower, prefabricated panels and parts make up a vast amount of buildings in the downtown core. Though their systems may be less intricate and homogenous as Wachsmann's system, both are static systems. They enclose spaces in terms of their size and shape of the program. With a stress on containerization, in Wachsmann's panelized systems, the significance of his works thus becomes an antithesis for the paper. ⁹

Flexibility and variation in Wachsmann's panel system is achieved through the design of elements with the same proportion and connection joint. However, by slotting the panels in place, removal of one panel depends on the sequence the building was constructed. The typical high-rise office tower is based on a 3x3 planning grid system and is standardized in relation to the module system. Variation can be introduced into the office high rise by breaking down the rental floor plate. If an office high-rise started to look at a greater variety of ways to break down the floor plate through small sizes (half levels, quarter levels, etc.) then modules of the 3x3 grid have the potential to be replaced by a varied element, and start linking levels diagonally, breaking down the segregation of a tower. While Wachsmann's panel system is based on a homogenous system with and connection, standardizing each building element, the following page on Metabolism, based on a primary and secondary structure, provides greater freedom for future change. The system which Wachsmann proposes evolves indirectly through internal conditions of the joints, thus

⁸ Wachsmann, Konrad. *The Turning Point of Building*. Reinhold. New York. 1961

⁹ *ibid.*

dependently linked together. While Wachsmann does not deal directly with highrise, his bottom up design approach is comparable to material computation in Morpho-Ecologies, later discussed in the paper.

dislocation. kisho kurokawa >> dislocation.

Top: © designboom
Kisho Kurokawa's Capsule
Tower.
Bottom: © designboom
Capsule Display at Mori Art
Museum.

Metabolism was a Japanese architecture movement, which sought to introduce ideas in biology into architecture by a metaphorical sense. In Japan, the traditional wood houses constructed were far more temporal than the western notion of a house in the 1960's. The Metabolist movement in part, embraced the idea of flexibility and the juxtaposition of building objects that have various life spans. Metabolism, referencing the portion of biology it borrowed was the generative ability of a cell and tissue, as much as it did from the aerospace industry for its capsules. However, unlike Konrad Wachsmann's drive for affordability, the Metabolists concerned themselves less over the proper supply of housing, but as a driver for a new way of living for the future.¹⁰

One widely referenced example from this movement is Kisho Kurokawa's Capsule tower (1972) that can be described as a series of completely homogenous capsules protruding from the core. Each capsule is identical: from the exterior proportions, size, and appearance to the fixtures, creating wholly standardized unit. Each attachment is autonomous for bolting each capsule straight to the core, each unit is slightly hovering above its neighbouring units.

Metabolism and its inherent flexibility were not about shortage of housing supply. Its minimal size was not driven by affordability. Rather, its appeal lies in the ideal for "escapism". The goal of the Metabolist movement was one of transferability and mobility, a form of lifestyle for "*homomovens, one who spends his time traveling and moving house*".

¹¹ Kurokawa's original intention for the Capsule tower was to be able to shelter and provide all facilities the modern business man would need if they were not able to travel home after work for various reasons, a

¹⁰ Kurokawa, Kisho. Metabolism in Architecture. Studio Vista, London. 1977

¹¹ Kurokawa, Kisho. Metabolism in Architecture. Studio Vista, London. 1977

convenience. Similar to a mobile, which frees an independent man of location, the capsules provide the choice to be mobile and embody a temporal notion of inhabitation. The appeal of the capsules acts as an object type, the ability to move to a location and inhabit a temporary "home". Kurokawa's capsular structure also had a second application were also designed on a different occasion for the single story residential home, providing the option to add on capsule rooms, expanding or detaching from the single house if desired. Despite starting with a starting set of capsules or capsule, the potential that each capsule is detachable provides more places to live without fully eradicating the previous through gradual transformation. This system of adaptation; however, is far more consequential in an office tower, as the expansion of one unit, will directly change the potential of the surrounding area.

Relooking at the Capsule Tower, despite the fact that building did not functionally exchange units as its details suggested, it did offer to enhance the flexibility of one's living condition. With the nature of individualized units in the Capsule Tower, the relationship between each unit is limited, homogenous, and socialization among apartments is entirely disregarded since each unit is designed to be fully dependent on the core and completely autonomous. The discrete relationships suggest a stronger connection to the street than among other units. As each unit is individually bolted onto the core, the dislocated experience identifies each unit as a separate building. The form a neighbor takes, does not affect the experience of neighbouring units. However, through providing solely the basic living conditions, it forces one's reliance on the area around to support all other needs – including the social. While, it is acknowledged that there are differences between the residential and office high-rise typology, the office can still have the same degree of isolation, e.g. the traditional middleman office.

Tying back to the design of an office, generally the office and corridor typology is designed for the same effect, however, if the area or streetscape of an area densifies or changes over time, the provision of amenities may be lost. With a trend in flexibility, hotspot sharing offices, and transformable spaces - an effect of new communications technologies allowing decentralized work spaces, the provision of a choice to work in other locations in the tower can be beneficial to encourage interaction within the building while continuously engaged in work activities.

The significance of nomadism between groups of users in a

vertical high-rise then becomes important in its dependence of localized resources. Capsules act as an apparatus to keep people moving, mobile and not tied to a specific way of living or location. This thesis also maintains that people who use them are also nomadic but not within a building but as a community. By looking at relocating dislocated social space back into a close proximity to working conditions, the building has the potential to act as an apparatus to interlink with others through the emphasis on a symbiotic necessary relationship with other areas in the tower that is vertically segregated.

Delirious New York Athletic Club
© Architekten Starrett & Van Vleck

Shibuya Project: City in the Air 1962
© Isozaki Arata

stratification

rem koolhaas >>

Rem Koolhaas, who later immersed himself in the works of the Metabolist movement, also devised buildings of the future, which took on isolated, and interchangeable elements. Koolhaas, founding partner of OMA, has based the origins of its practice on theory of Metropolitan culture and the skyscraper. Delirious New York (1978) was published by Koolhaas in light of the ability for high-rise buildings to densify and broaden the “programs, events, and overlappings and a smoothness that urban life has never known before”¹². Though at the beginning of his career Koolhaas held a strong support for what he coined “Vertical schism”, discussed in the book as a deliberate disconnection between stories in high-rise, later in his years of post- modern criticism, a more experimental approach is adopted. OMA experiments with different form-

¹² AMOMA REM KOOLHAAS. Iss. 131/132 El Croquis 1996 2006. 2006

finding techniques in order to break away from extreme “lobotomy” as development and expansion of the firm progresses.¹³

New York 425 Park Avenue
© OMA

Despite that, Delirious New York and the literary definitions remains a relevant description to many developer-driven high-rises in the 21st century. Metropolitan culture refers to the culture of congestion in high-rise cities such as New York, Manhattan, where Koolhaas’ mythical investigations takes place.¹⁴

Koolhaas in Delirious New York (1978), in light of the vertical schism and use of elevators in high-rise wrote about the skyscraper as a means for condensing various forms of programs and activities within one shell – what he coins, a social condenser. The Athletic club, in the novel was described as “*a machine to generate and intensify desirable forms of human intercourse*”.¹⁵ The methodology to incorporate such a scheme was to quite literally isolate all the different activities vertically by level. The problem this strategy poses is that it prevents the reading of space in any axis other than the horizontal. The system’s ability to socially condense activities is limited to the level itself. If the floor plate is large enough, more than one programmatic activity can happen on the same level, there is a neighbouring relationship where both activities share common areas or views. However, if the floor plate is not large enough to accommodate both, then they must be placed on different levels, and spatially, unaffected by the presence of each other. Thus, the definition of social condenser Koolhaas uses does not imply a heightening of senses and experience of their proximity, but a condition of efficiency. The condensing of activities does broaden the range of activities within one building, however, the “*smoothness of urban life*” proves lacking.¹⁶

The elevator encourages automaticity and isolation. While all the activities are condensed in proximity, the spaces, which they fit in a tower, are dictated like cells, with its own skin. As a building inside a building, there is hardly an opportunity to integrate cross-social interaction between programs. As none of the programs overlap, the design of an enriched experience within the tower is lacking. While in essence, the accumulation

¹³ *ibid.*

¹⁴ Koolhaas, Rem. “Delirious New York: A Retroactive Manifesto for Manhattan”. The Monacelli Press (December 1, 1997)

¹⁵ Koolhaas, Rem. “Delirious New York: A Retroactive Manifesto for Manhattan”. The Monacelli Press (December 1, 1997)

¹⁶ AMOMA REM KOOLHAAS. Iss. 131/132 El Croquis 1996 2006. 2006

of programs emulates a row of buildings on a streetscape in layout, the urban street experience cannot be emulated, as one is completely unaware of the activity above and below.

Stratification is a form of modularity. Similar to the Japanese Metabolist movement in the 1960's, where modules were denoted as individual compartments capable of being additive or subtractive from the spine or core of the system, Vertical Schism embeds the same notion of a stronger interior relationship with a loose exterior relationship. Each office is a separate entity to be changed only on the inside of the container or module. The only systematic difference between the two in the Athletic club is that each module is treated as a per floor module.

While Kisho Kurokawa's Capsule Tower, an emblematic structure of the Metabolist movement, and Rem Koolhaas' Athletic Club take different outward appearances their internal system remains the same. While one is new by constantly purging its units, the other remains new by lack of personalization within the interior space.

Pavlos Sideris
Morpho-Ecologies
© membranespaces.net

variation shifts

Michael Hensel, Achim Menges >>

While, OMA has moved from the 1960's hype of pure verticality, the shaft and homogenous repetitive vertical extrusion remains a common appeal, closely supported by efficiency. Efficiency here is a type of singular parameter optimization driven by the minimum amount of energy and material required for a projected performance. It is a single use optimization parts – one principal function. Here in this chapter, the work of Michael Hensel and Achim Menges in their work with developing Morpho-Ecologies will be discussed and critically assessed.

The definition of efficiency does not necessarily address the performance of the space – social variables, and its ability to sustain specific activities that work best in their respective environments that can evolve over time. In place of optimal efficiency, Morpho-Ecologies suggests multi-varied effectiveness, which factors a broader range of requirements

and looking at the building as a holistic system. Morpho-Ecologies is a reaction against the “lobotomy of social experience” where material efficiency is regarded as the primary design driven factor, in place for a more materially efficient design concept.¹⁷

In the book, “Morpho-Ecologies”, ecology is the “*science of relationships between the organisms and their environment*”.¹⁸ Menges and Hansel take this further by providing examples of societies that inhabit spaces that are flexible, adjustable and vague trying to achieve post design optimization. Through the study of material behavior and environmental conditions, self-organizational systems capable of producing the quality of flux desired is developed. The key to fluctuating systems is self-organizing systems for their ability to shrink/expand/ and warp in small degrees but with large overall outcomes as a whole façade, wall, ceilings, or elements of. The building in theory becomes an adjustable system, each working against other spaces working for one space, and possibly for or against the other.¹⁹

While Morpho-Ecologies acknowledges the notion of variation and differentiation, and redefines criteria for performance to include a far greater range of factors – including social engineering, the solution does not necessarily need to be taken in a morphogenic way. Utilitarianism, is in theory, the mindset that the “*aim of action should be ...the greatest happiness of the greatest number*”²⁰. Morpho-Ecologies speaks of a shifting system working towards a satisfied balance. While transformative spaces allow specialization of spaces to better suit all the occupants in a system may be contradictory in a large part and unable to satisfy the “general well being off all the occupants”. To create a hierarchy, in which a material system responds, requires identifying which factors take precedence over others. Take for example, the scenario of a high-rise office tower with user induced variability in the flux of walls or ceilings. As one user reconfigures their immediate environment, the surrounding units are highly affected. When a space expands/ contracts/ or changes shape, the alternate face will take on the opposing shape to the enclosed space.²¹

17 Hensel, Michael. Achim, Menges. Morpho-Ecologies: Towards Heterogeneous Space In Architecture Design. AA Publications (February 1, 2007)

18 Hensel, Michael. Menges. Achim. Designing Morpho Ecologies. AD John Wiley & Sons Ltd. 2008

19 Hensel, Michael. Menges. Achim. Designing Morpho Ecologies. AD John Wiley & Sons Ltd. 2008

20 Definition of Utilitarianism < <http://www.merriam-webster.com/dictionary/utilitarianism>> Merriam Webster Online Dictionary. 2013

21 Hensel, Michael. Menges. Achim. Designing Morpho Ecologies. AD John Wiley & Sons

On the other hand, a partition that moves in consequence to environmental conditions such as moisture in the air as the primary control factor and human operation as secondary, will more likely ensure the likelihood of satisfying majority of inhabitants. When the building reacts outside of human control to regulate environmental factor, the building then embodies the idea of a utilitarian building.

Czech National Library
in Prague
© OCEAN and Scheffler +
Partners

Another scenario is where the façade is taken as the morphogenic element, is in the case of OCEAN and Scheffler + Partner's New Czech National Library in Prague (2006), republished in *Morpho-Ecologies*. The design is driven by which the synthesis of structure and form was based on computational analyses of load bearing behavior, microclimatic provisions, organizational capacity, and differentiation of the envelope. However, this strategy is limited to horizontally dominant buildings with light penetration being a main factor in the variability of spaces as the responsiveness of spaces and variation of gradients can only be experienced in an open space.²²

However, *Morpho-Ecologies* does bring a valid point on changing the flux of the system (one which throws the notion of a constant regulating temperature system off). Homeostasis is the system in which organisms and other open systems regulate their temperature through a feedback system. In a building this is done through thermostats. It is unclear whether the library aims to maintain a consistent regulated temperature, or whether the term gradient also includes distinct boundaries of separately regulated areas. The capsule tower by Kisho Kurokawa, and other capsule systems is an extreme case of segregation where this does happen. Here, concrete units are fabricated and assembled off site, each fed directly from the flanges off the core, independent of each other.²³ However, as they are physically separate concrete units, the entire building can be treated as several mini "houses" branching off a central vertical street.

Ltd. 2008

²² Hensel, Michael. Menges, Achim. *Designing Morpho Ecologies*. AD John Wiley & Sons Ltd. 2008

²³ Kurokawa, Kisho. *Metabolism in Architecture*. Studio Vista, London. 1977

virtual spaces

Ali Rahim >>

From a diagram and programmatic approach to design in the classical model, rooms are categorized by function categorized by size and material. In this model, *"what is predicted and built has a direct correspondence"*.²⁴ Optimization, efficiency, and predictability, Ali Rahim criticizes, limit technological innovation. Rahim in "Catalytic Formations" develops a method of digital analysis, which interrogates the possibility of *"when and how ... we bring ephemeral instances into a classical model of the building"*²⁵ through a feedback system.

Ice Storm, MAK
© Zaha Hadid
Patrik Schumacher

According to Rahim, *"missing from these diagrams are the dynamism of users and interactions in the space, (where) formations develop uses in response to their occupants and contexts and connected to form directly rather than representation."*²⁶ By the inclusion of the virtual, traditional concepts of type and program are challenged. The function or program is typically classified by reliance on the typology. Rahim experiments with forms and gradients, which cannot be linked to a specific typology; thus, the extent of how a space should be used is not inhibited by standards.

The virtual are elements of a building that do not take on a specific defined form. Rather, different forms of the virtual are manifested through temporal forces acting on the form. Virtual elements in contrast to actual elements cannot be statically measured. The virtual can be compared to campfire fire. The environment plays a direct role on shaping the form of fire. Human activity around the fire then changes according to the form the fire takes.²⁷

What the fire can induce, however, is to be gathered around, to shift people around to a certain location (depending on wind and smoke),

²⁴ Rahim, Ali. *Catalytic Formations*. Taylor & Francis. 2006

²⁵ *ibid.*

²⁶ Rahim, Ali. *Catalytic Formations*. Taylor & Francis. 2006

²⁷ *ibid.*

to entice people to perform different activities on or around it. Around a fire, there tends to be limited amount of activities people will use the fire for. However, by extending this concept, if flux can be accommodated in buildings and take on vastly different personalities, the virtual has the potential to form dynamic and interactive social spaces. One that does not cater to a single activity but entices interest through innovation, change, and the potential to “generate new uses after”.²⁸

The virtual “gives rise to formal, spatial and material innovations”²⁹ The system Rahim proposes forges new connections with people and the space they inhabit. However, when one space changes, the adjacent spaces are affected. As Rahim proposes these changes be made by a system of forces preprogrammed ahead of time, it is debatable whether certain movements will favor specific activities more than others. In Rahim’s proposals, the sense of identity is lost as the entire building becomes seen as a single living organism. The current office spaces off a corridor are homogenous, thus their exterior identity is lost. However, Virtual spaces does not work against the homogeneity.

In addition, by also reinventing the typology of a building, in an office environment, people would not have a stable space to work with. The conclusion drawn about the relevance from Rahim’s experiments is limited to spaces, which depend on large amounts of interaction. Otherwise, without a “typology”, clear forms or shapes, the orientation within a high rise become similar to a labyrinth.

Migration >> Connection

Certain architecture has the ability to entice people to creatively use the space more than others, to induce affects (degree of responsive from people. Rahim argues that they are generated through techniques. “the greater the differences in pressure, the more intense the transformations, the more affects are contained within the formation”³⁰ for instance, stretching, bent surfaces by folding, openings by tearing. These openings indicate the possibility of moving through presenting unfamiliar landscapes to users. Since the relationship is less defined –

²⁸ ibid.

²⁹ ibid.

³⁰ Rahim, Ali. Catalytic Formations. Taylor & Francis. 2006

not linked to a typology, this allows for greater variation of inhabitation, inventive modes of inhabitation. These transformations perform by *"coaxing forms and inhabitation in useful directions"*.³¹

⋮

Can a tall building be spatial?

Left:
Migrating Coastlines
© Ali Rahim

Right:
Istanbul Cross Towers
© Zaha Hadid,
Patrik Schumacher

Unlike Schumacher's vision of constant flow through dynamic forms, which will be discussed shortly, Rahim provides the design of spaces with an implied flow through variation. While it should be noted that Rahim bases his model of migration on the residential tower, while Schumacher focuses on public spaces, the design of an office typology is neither as privatized as a residential, nor as public as a museum. Thus, both examples will be reconciled in the design of the project. On the other hand, similar to Morpho-Ecologies, which aims to maximize variation that best benefits the entire system Rahim's system of variation creates movement of gradual change along the vertical flow of the tower without proposing a hierarchy. For physical movement of people towards an area, a hierarchy must be achieved, similar to Schumacher's notion of movement. This hierarchy may be simply, in favor of spaces for larger gatherings of people rather a hierarchy of design importance. Thus, in the design process, no area is favored over the other, and a utilitarian view of balance is maintained similar to in Morpho-Ecologies. The significance of differing between a subtle variation, which causes a gradual shift in environment, and a predetermined flow of movement is important to consider denoting the different relationship between inter and intra office connectivity.

³¹ *ibid.*

For an intra office connection, Rahim's gradient offers an "unconscious" movement within the office, while Schumacher's directed flow may be a more suitable comparison to inter office communication.

[Engagement + Intensification]

Patrik Schumacher >>

Patrik Schumacher, a prominent figure for his parametricism style along with Zaha Hadid, also rejects the spatially rigid formation of modern architecture in literature, rejecting static forms and prescribing "deep jungle" like spaces. At the beginning of Zaha Hadid's career, Hadid started by bringing dynamism into architecture in a way that perceptively was "*explosive, fluid and boundless*".³² These qualities presented active energized and layered spaces, fitting the qualities Schumacher sought for in his post critical theory.

"Our increasing ability to scan an ever-increasing simultaneity of events and to move through a rapid successions of communicative encounters constitutes the essential, contemporary form of the cultural advancement. The further advancement of this vital capacity requires a new city, a deep urban jungle."³³ (Patrik Schumacher)

Schumacher argues that dense communicative spaces lead to productivity in the urban environment. He refutes modern architecture as "dead" and unproductive. However, he does not specify the extent to which his theory holds true. His design intent starts out as a metaphor for communication in building circulation, but ends up as a stylistic device with the rest of the building.

Kartal Pendik Masterplan
Abu Dhabi Performing Arts
Center
© Zaha Hadid
Patrik Schumacher

³² Schumacher, Patrik. The Sky-scraper revitalized: Differentiation, Interface, Navigation < <http://www.patrikschumacher.com/Texts/skyscrapers.htm> > Zaha Hadid, Exhibition Catalog, Guggenheim Museum Publications, New York 2006.

³³ Schumacher, Patrik. My Kind of Town: The Parametric Jungle. < http://www.patrikschumacher.com/Texts/My%20Kind%20of%20Town_The%20Parametric%20Jungle.html > Architecture Today, AT227, London April 2012

Open-ended strategies Zaha Hadid posed in achieving a dynamic layering of fragments were first presented in widely recognized horizontal schemes – like in the Zaha Hadid's Maxxi in Rome where paths were strategically overlaid and merged for a spatial dynamism.³⁴ However, the firm was later forced to readdress the dynamism in vertical conditions. Where one is led to believe that the dynamism readdressed is continually relating to the formal definition.

One North Masterplan
© Zaha Hadid
Patrik Schumacher

This thesis will analyze the validity of the notion of a jungle, as well as how they are currently implemented. Firstly, this thesis questions whether Schumacher deals sufficiently with the notion of networking, whether the jungle simply refers to the dynamism of intersecting paths/ views or whether an intentional networking strategy is proposed. In circulative spaces, Schumacher's definition of dynamism aids in "energizing" the space, however, its ability for people to exchange ideas despite a "hyper" visual connection can be debated. As seen in the paths of Maxxi, regardless of whether a visual connection is maintained, unless the pathways are of a short distance to each other, social interaction involving an exchange in knowledge is not likely the case. In working spaces, while flow and integration of spaces is important, Schumacher's notion of "*constantly networked spaces of the future*"³⁵ is not reflective of the way people work but rather overanalyzes its necessity in an overarching environment.

In Patrik Schumacher's article, "My Kind of Town: The Parametric Jungle", he describes "*the city (as) a complex text and permanent broadcast. All its spaces and territories are communications*".³⁶ This is a quote which reflects Schumacher's desire for people to "*constantly recalibrate what we are doing in line with what everyone else is doing*."

³⁷As a result, his designs are based on the notion of open networks which he proposes is a framework to create a more "*dense, intense and stimulating than Rio, Tokyo, Manhattan and Hong Kong put together*".

³⁸These qualities are amplified by designing "*semiologically charged*

³⁴ Schumacher, Patrik. My Kind of Town: The Parametric Jungle. < http://www.patrikschumacher.com/Texts/My%20Kind%20of%20Town_The%20Parametric%20Jungle.html> Architecture Today. AT227, London April 2012

³⁵ ibid.

³⁶ ibid.

³⁷ Schumacher, Patrik. My Kind of Town: The Parametric Jungle. < http://www.patrikschumacher.com/Texts/My%20Kind%20of%20Town_The%20Parametric%20Jungle.html> Architecture Today. AT227. London April 2012

³⁸ ibid.

communication interfaces".³⁹ Where such qualities are made visible by a *"smooth parametric differentiation of all urban and architectural/urban subsystems infused by associative logics that correlate different subsystems."*⁴⁰ In Essence, Schumacher proposes a space, which requires constant networking. Meanwhile, he rejects the composition of differently shaped objects, further emphasizing on the notion that all forms must flow into another. Schumacher goes as far as to explicitly list it as a taboo: *"avoid juxtaposition of unrelated elements or systems."*⁴¹ Whether his writing on the fluid networking jungle reflects solely circulation space or includes programmed rooms, by his rejection of collaging different elements, all spaces must relate formally to each other.

However, the notion of network Schumacher describes is not a human one but a technical one overlaid in the human environment. The notion of meeting and interaction is a purely theoretical one, not capable of actualizing as humans do not interact and align themselves on a verbal communicatory level based on walking simultaneously by each other, or "bumping" into each other like atoms in pathways or even intersections. Rather than designing spaces most beneficial to production, rest and system", he describes spaces in architecture and urban planning solely in terms of its ability to link and integrate.

Schumacher's emphasis on communicatory inhibited spaces undoubtedly overlooks the importance of all other types of spaces. On the other hand, this can be contrasted with a breakdown of types of functional spaces, as summed up by Gensler, with a practice highly based on high end and marketable office buildings.

Gensler

According to the 2008 UK workplace survey conducted by Gensler, spaces linked to performance of top tier companies are a proportionate amount of four spatial types –spaces to socialize, focus on work, collaborate, and learn. "On average a company spends 6% of time socializing, 6% of their time learning, 48% of their time focus, and 32 % of their time collaborating. On the other hand, top performing companies

³⁹ *ibid.*

⁴⁰ *ibid.*

⁴¹ Schumacher, Patrik. *Parametricism - A New Global Style for Architecture and Urban Design*. AD Architectural Design - Digital Cities, Vol 79, No 4, July/August 2009, London 2008

focus more of their time on learning and collaborating with a smaller break down percentage on focus time.” Different performing factors as well as nature of work require different types of spaces relating to their work requirements.⁴²

Dancing Towers
© Zaha Hadid,
Patrik Schumacher

Verticality Studies:

Schumacher, in his rejection of modernism for its lack of differentiation proposes three points to sum up his agenda, all three, which has a prime focus on exterior formalities within high-rise towers:

1. Differentiation through the shell

In Schumacher's viewpoint, differentiation in a tower on the inside starts with a formal differentiation of outer shell. With this new found freedom, the resultant floor plates must differentiate from each other and thus break away from singular repetitiveness, whether it may be a bundle, ovoid, wave shaped tall slab, stretched prism, spiral, or blade. Schumacher suggests that the formal differentiation can also lead to differentiation of spaces with the inclusion of "certain variation of conditions ... affording opportunities for urban contextualizations". However, this does not exclusively elaborate on the interior systems relating to dynamism in the paper.⁴³

2. Differentiation through Interface

An extension to differentiation, interface relooks at ground plane horizontal extension into the vertical, bringing horizontal layering the firm has mastered into the "podium" area of the tower. As the base is free from the footprint of a tower and greater design freedom is achieved.⁴⁴

3. Differentiation through Navigation

Inarguably, in order to configure a legible navigation space, it requires "a certain visual penetration and mental map. Through the restructuring of the elevator, and its spaces around it, floors are freed from an automaticity of producing segregated boxes. To invite browsing *"rather than to satisfy one primary destination."*⁴⁵ Here he combats the circulation

⁴² Gensler The 2008 Workplace Survey <<http://www.gensler.com/#viewpoint/research>> 2008

⁴³ Schumacher, Patrik. Parametricism - A New Global Style for Architecture and Urban Design. AD Architectural Design - Digital Cities, Vol 79, No 4, July/August 2009, London 2008

⁴⁴ Schumacher, Patrik. Parametricism - A New Global Style for Architecture and Urban Design. AD Architectural Design - Digital Cities, Vol 79, No 4, July/August 2009, London 2008

⁴⁵ Schumacher, Patrik. Parametricism - A New Global Style for Architecture and Urban Design. AD Architectural Design - Digital Cities, Vol 79, No 4, July/August 2009, London 2008

areas but presenting a different formal treatment. Rather than a straight shaft, he proposes the curved. Rather than the full enclosure, he proposes a super high sky lobby.

While Patrik Schumacher, Ali Rahim, Michael Hensel, and Achim Menges all focus on innovating architecture through a biological metaphor with similar spatial forms, their social focus in contribution differs. As Schumacher deals with movement and dynamism as a human experience, his notion of the jungle relates to layering of space and bringing people in close proximity. Koolhaas deals with the social condenser differently through simply packing programs in an entire system, condensing programs through enclosure diagrammatically. However, Schumacher's system of movement inherently relinks back to a horizontal movement through public space. When incorporated in a vertical tower, it should be noted that flow becomes a mechanical notion of travel rather than experiential with visual connection limited in the direction of travel. In addition, it is to be noted that Schumacher's definition of a jungle is a metaphorical one rather than a literal formal translation. To implement the same notion in a high rise tower, an enhanced degree of networking must be provisioned.

Schumacher does not deal specifically with the design of individual units but rather are the result of blending with the style of circulatory spaces. For an office tower, Schumacher's forms are transferable for spaces that have a close desire to form a relationship with each other.

In order to successfully incorporate flow through a unit based high rise, the tower must house programs that have a desire for migration, as researched by Rahim. Rahim's concerns lies less about the speed of people but rather on migration led by relational differences. He focuses on the experience of the individual and how people inhabit the space. Within similar spaces, boundaries are morphed, creating variation and differing degrees of stimulation among different types of units. Thus, placing these relationships in a high rise tower is critical to the thesis.

attract/repel

Computational Tool Aedes >>

While Schumacher speaks of flow and deals very little with the program itself and the configuration of such, a more nodal approach is the attract/repel algorithm that is currently in the computational process of being explored to organize space. Here, each self-organizational units require inputs of different room layouts as connectivity of spaces are determined through a simulation of local communication. In the process of the attract/repel mechanism, rooms, units or spaces are graded by their desired association with other rooms. Then all of the units in the building are placed in relation to the grading system until an optimal desired form can be achieved. This form of interaction is not limited to plan but also in elevation and diagonally as desired.

Habitat 67 (Non - Hierarchical Organization)
© westland.net

Abu Dhabi Educational Council Building
© Aedes

Aedas, a global architecture firm, proposes the attract/repel algorithm as a time saving mechanism for the required amount of rooms for the ADEC building (Abu Dhabi Educational Council Building). However, their use of the computational process is not exemplary of its full potential. Although the void spaces on each level, after the optimization process has been solidified presents interesting crevices between the different levels, the process in which the rooms are placed in this case is limited vertically, and produces a 2-D rather than 3-D form.⁴⁶ As the attract/repel method here was used to organize rooms solely per floor, one must note, that the program does contain the capability to extend vertically as well. When looking back at the issues of Koolhaas' Vertical Schism, designing through method of configuring spaces before floor plans has the potential to break up floor plates stacked vertically.

In an opposing example to a program based clustering effect, are found in corporate offices. In the book, the Multinational City, Reinhold Martin and Kadambari Baxi analyze the elements of corporate office complexes three countries that contain programs and layouts, which resemble a microcosm of the city. Ultimately, one of the characteristics of the multinational city is its reliance on "the generic layout", one that is inward looking as attributed by the atrium and one, which can be easily,

⁴⁶ Abu Dhabi Educational Council <<http://aedasresearch.com/features/view/all/project/abu-dhabi-education-council>> Aedes, 2013

displaced by a similar program for its homogeneity.⁴⁷ The organization of space is an inward looking one reflecting its strong interconnection with a different part of the world rather than the immediate physical site context. However, the resulting form provides a distinct organizational behavior of “islands”. Rather than a system of programs branching off a light filled atrium, the formation of clusters is the opposite, where surrounding the open voids are formed from the excess space. Thus, the programs are not maximized around atrium but the programs that are least likely to be close to anything else are separated by void. This may be an applicable method for dividing dissimilar types of programs that still wish to maintain a visual connection to each other.

Both the atrium approach and attract/repel method in ADEC reach an optimal capacity for the criteria they define. However, in the atrium approach, there is a lack of distinct neighbouring relationships, while, for ADEC, there is a lack of definition of void to program. By organizing programs after a defined social space would address both conditions more adequately.

⁴⁷ Reinhold, Martin. Kadambari, Baxi. Multi-National City. Actar Publishing, Barcelona, 2007

conclusion

Despite the difference in theory of Metabolists and Koolhaas', the notion of isolation remains similar to both. In comparing the two, while it is noted that there is a strong distinction between commercial and residential types, the issue of social connectivity is equally prevalent. Drawing conclusions from their different connections to society outlines their fundamental difference. As capsule is based on the idea of mobile or aerospace technologies, a temporary stay, it does not replace the home but frees the individual by expanding the home. This however, creates a building inside a building, or a segregated capsule attached to a building, a condensed isolated unit that causes a dependence on the streetscape. For the Metabolist capsule tower the form is not transferable, it is merely the relationship that is critical to this thesis.

On the other hand, the anti-thesis of the project is Koolhaas' Vertical Schism , a city encapsulated within the tower. The building isolates the city horizontally as social experience is only available horizontally. Koolhaas offers connectivity and variability but only as a series of horizontal planes.

Theoretically these issues are addressed with the biological metaphors of Schumacher, Hensel and Rahim. While the notion of flow is topologically relevant, in practice the notion of program, in the office typology, are still rigid and static. Therefore these issues are dealt with formally, however they still suffer from Koolhaas' Vertical Schism.

While in theory, Schumacher's Jungle offers variability and differentiation through a multilayered system of connections, enhancing the diversity of relationships and information exchange, these relationships are less obvious in the situation of a vertical tower. Fluid spaces play a role in shaping the circulatory spaces through enhancing flow of pathways, visual connection and differentiation. While his schemes present a spatial configuration that allows for social connection and differentiation, it does not address a reason for relationships between within the unit based office

tower. While Schumacher's notion of flow is linked to the flow of people in public spaces within a commercial, public or private building. On the other hand, Hensel and Menges, and Rahim deal primarily with an implied flow. When dealing with circulation and linked spaces, Schumacher's system of flow is most applicable and intra office connections are best explored through Rahim's exploration of virtual spaces. However, from the analysis of his writings, Schumacher's does not define the jungle as a strategic study of developing a system of connections. Rather, the notion of flow he deals simply relates with enhancing the speed of flow, and maximizing amount of visual connections.

With a focus on inter-office communication, the project proposes that the framework of Schumacher's connections along with the spatial considerations of Rahim's Visual Spaces will better recognize the variety and richness of collaborative work within the office typology. Rahim's observations of virtual space has the potential to offer a secondary design consideration in addition to flow for circulation. As the notion of virtual spaces affects and entices users to respond to the architecture, social space can be also considered, multi-purpose space. These include, spaces for groups of people to socialize, spaces for semi private meetings, spaces to lounge and interact, and spaces to relax. While the commercial based atrium offers a space to lounge and socialize, the introduction of consumer activities breaks from the routine of work. Dynamic virtual spaces, on the other hand have the ability to stimulate and suggest a variety of activities. With the inclusion of forms that provoke engagement of people among others, a second dimension can be added to suggest a purposeful experience rather than simply dictating flow in Schumacher's case.

project:

site analysis

The Site is located on an existing parking lot located in close proximity to Eglinton Subway Station, a midtown location with a large potential to densify and become an activated node in the future decades. The first factor examined is its location on the current subway line. As the downtown core of Toronto becomes oversaturated with sparse room for development, Eglinton and Yonge's midtown location with lower land prices becomes an attractive alternative to develop in comparison to the already established downtown or the vehicle driven uptown. In the process, is the development of a secondary subway line intersecting Eglinton Station from east to west (proposed as Eglinton Crosstown LRT), with predicted construction completion within the next decade. The design project is one that benefits from drawing young professionals, students, and business workers together. Inherently, as an inner node on a main subway line, accessibility to universities, downtown Toronto, and other resources are within a reasonable boundary. For these reasons, attention should be placed in developing the area.

Axonometric plan of site with lot location and subway station location

Subway line showing relationship of Toronto Universities and Downtown

Approaching the Eglinton Yonge area from a distance, the site takes the form of refined narrow cluster of highrises situated adjacent to Eglinton station, and quickly disseminating into midrise along further down Yonge or Eglinton. While beyond the street lined commercial-scape is mainly dominated by single-family homes. Due to the fine balance of live/work/play, office buildings and condominiums quickly rise in the area. The wider variation of occupants becomes important as the traditional hierarchy and notion of the office will be challenged in the design and focusing on amalgamate of groups and diversity over status quo. Within the area are several gaps and parking lots which are marked for future development.

The lot on the corner of Eglinton Ave E and Dunfield Ave is one example which is currently being developed (April 2013) which the project will take place. To propose the construction of a new tower on the site, an experimental approach is looked at for this project. A high-rise office tower which rejects the formal office and corridor typology may best suit the current vibrancy and diversity of the Eglinton Yonge area. The proposed Office High Rise design caters towards the symbiotic relationships of markets of offices, normally segregated by isolation. Unlike the inward facing condition of atrium spaces in corporate offices, high-rises in office and Yonge primarily consist of a limited inward experience, the office and corridor typology characteristic of most. In part, the vibrancy of the area depends on its street life and “external relationship to the surrounding area”. Along with a wide streetscape, outdoor plazas, and seating areas, the proximity unveils different groups of people. The same form of unveiling of workers can be brought about in a tower to invigorate the segregated office spaces isolated level by level. The possibility of extending the character of the space internally becomes a base for innovation.

Initial Scheme with focus on ramps and connectivity

program:

The project aims to foster relationships during business hours, and contains solely business oriented programs rather than a work/live environment within the tower itself. In contrast to live/work developments, the building proposes caters towards office workers at a 9-5 schedule. The project intends to connect start-ups with established firms in a series of programmed interstitial spaces. In the project, a programmatic flexibility is provided, however, by isolating the variated portion of the building from the direct street scape denotes that the building maintains a boundary from work and rest and does not encourage work beyond office hours.

Some programs that may benefit from a symbiotic relationship are (but not limited to):

Startup companies that wish for greater exposure with a desired relationship among other startups

- Larger companies that may want to form partnerships with small companies
- Small companies that want to be in a more confined group
- Small companies that want the ease of expansion
- Medium companies that want to interact with small/ large companies
- Large companies that may want to relocate a group elsewhere

Programmatic
Relationship
Diagram

3 Scenarios:

I. Established Firm + Start-up
Relationship of Outside cocoon to Inside Cocoon

II. Client + Start - up
Relationship of Outside building to Inside Cocoon

III. 2 Start - ups
Relationships within the Cocoon

Follow the Scenario of a Tech Start-up Company residing within Cocoon
Law Office who meets with an individual part of a small start up company

Development of 3 Scenarios

Productivity: When an office worker leaves his office and reaches the atrium, they automatically transition to a leisure mode removed from work. This characteristically generalizes the podium, atrium and narrow tower environment. In a office and corridor layout, there are work spaces, corridors, and shared amenities. However, there is little accommodation for interoffice communication, spaces for casual meetings and production. As these spaces are do not hold a specific program and are considered “more free”, my proposal involves spaces surrounding these nodes to be transformative and accomodate for developed relationships among groups of offices.

Flexibility: The proposal accounts for spaces that are transformative. Spaces are designed to be accountable for emerging relationships.

Scenario 1:

What happens if a small company grows?

A. Permanently

B, Temporarily

C. What happens if a small company moves away?

Variability: Among small startup offices, each company has limited variability of spaces if they are given a single office unit. Rather than the rent of a singular unit in the traditional office model, shared spaces (quiet rooms, work space, social space, meeting rooms, special meeting rooms, etc) supplies a greater diversity of amenities.

Axonometric of Cocoon

North Section with Scenarios

West Section

View demonstrating connectivity of spaces through screens

Typical Plans

Facade:
View from North West Corner

process

appendix:

Additional Case Studies

I. Atrium and the Multi-National City – Breaking through Stratification

In what the Multinational City terms “islands”, describes the situation of public space in an office building.

“In the MNC, there are islands everywhere: enclaves and slums, gated communities, self-contained shopping malls, manicured corporate campuses, weather – sealed atriums, barricaded office buildings, prisons, refugee camps.” The author criticizes the atrium as being too “inwardly” and self-referential and an alienating experience.¹

II. External Diagonal linkages and Circulation - Breaking through Stratification

The urban fabric is typically described as horizontal flow or promenade. Its implication in towers can be examined in two case studies: OMA’s CCTV Headquarters, completed 2002 and Steven Holl’s Linked Hybrid (2003-2009). The CCTV building is widely acknowledged by architectural press for its external provision of an “alternative” to the visual homogeneity of the skyscraper. According the firm’s description, the building “truly poses a 3 dimensional experience” as a “loop of interconnected activities”. While it does achieve an engineering feat opening up new possibilities for alternative forms of skyscrapers, the internal localized experiences within the skyscraper is not a priority of the design.²

On the 12th to 18th floor, a series of skybridges link each tower forming an above around street to add the horizontality of urban space aspect in the tower and redubbing the amalgamate of the two as hybrid space. These skybridges connect a variety of activities: a swimming pool, a fitness room, a café, a gallery, auditorium and a mini salon. Each time the bridge touches the tower is considered a node linked by bridges. The intention for the loop of links connecting the buildings is to form a dynamic spatial experience, shifting diagonally rather jumping from different levels of the tower. Holl’s expression of urban complexity is achieved through the collision, discontinuity and continuity of the architectural promenade.

¹ Reinhold, Martin. Kadambari, Baxi. Multi-National City. Actar Publishing, Barcelona. 2007
² EL CROQUIS: STEVEN HOLL ARCHITECTS 2004-2008, 2008

While the built tower can be hypothesized to be a richer experience for the residents, the premise of the paper itself stands on how to emulate the urban complexities within a singular tower in a confined grid block, where freedom to expand beyond a confined extrusion is limited. The goal is not simply to improvise what forms will disintegrate isolation of levels and create an urban experience but to support its importance within the workplace as a creation of identity and meet the needs of a more specific and varied workplace. Secondly, Linked Hybrid's take on the urban experience may be limited to the engagement of the traveler within the bridge itself. What is lost between the streetscape and the horizontal/diagonal linkages is the continuity of the promenade. In diagrammatic format, the building can be read more as a series of nodes and bridges rather than a continuous loop of experience like in the streetscape.¹

Despite the lack of internal focus, it can still be concluded that pure horizontality is not the answer to a more dynamic experience of a tower. From the plans, the "loop" is not an experiential factor from the inside, similar to the Horizontal linkages devised between several towers as presented in Holl's Linked Hybrid. In addition, despite the dynamic qualities of an additional path breaking through the tower, the scheme does not suggest a possibility for a freestanding tower in a dense urban setting.²

III. The neighbouring – Pixels, Tetris

In the Multinational City, many developers embrace the notion of Existenzminimum. Existenzminimum which is described as "minimal investment for maximum return. Thus on the outside, it is an empty shell and on the inside, the hardened core, the dried – up residue of mechanization: elevators, restrooms, machine rooms, and duct chases." In contrast to Existenzminimum, modular architecture designed bottom up proposes a different look at the usage of spaces. As important as the solid modules, are void modules. In the process of using 2-D box diagrams representing a specific unit square footage, cellular modules are optimized to fit into a predetermined building form (a definite parameter). Modules to develop are used to create the optimal series of temporary neighborhoods and making new referential connections through procedural practice. "Diagrammatic approach is a device which allows us to

¹ EL CROQUIS: STEVEN HOLL ARCHITECTS 2004-2008. 2008

² *ibid.*

represent some of the bizarre conditions we observe”¹

“neither is structure function, or context, for what is involved here is a combinatorics that extends to formal elements that in themselves simply have neither form...nor representation, nor context, nor a given empirical reality, nor...a functional model behind appearances”²

¹ Reinhold, Martin. Kadambari, Baxi. Multi-National City. Actar Publishing, Barcelona. 2007
² Reinhold, Martin. Kadambari, Baxi. Multi-National City. Actar Publishing, Barcelona. 2007

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image source

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- p.27-35 All Project Images produced by Melanie Lee