2008

Rem Koolhaas: An Architecture of Innovation

Daniel Fox

Follow this and additional works at: http://preserve.lehigh.edu/cas-lehighreview-vol-16

Recommended Citation
http://preserve.lehigh.edu/cas-lehighreview-vol-16/8

This Article is brought to you for free and open access by the Lehigh Review at Lehigh Preserve. It has been accepted for inclusion in Volume 16 - 2008 by an authorized administrator of Lehigh Preserve. For more information, please contact preserve@lehigh.edu.
Rem Koolhaas:
An Architecture of Innovation

by Daniel Fox
The three Master Builders (as author Peter Blake refers to them) – Le Corbusier, Mies van der Rohe, and Frank Lloyd Wright – each had a considerable impact on the architecture of the twentieth century. These men demonstrated innovation, adherence to principle, and a great respect for architecture in their own distinctive ways. Although many other architects did indeed make a splash during the past one hundred years, the Master Builders not only had a great impact on the architecture of the century but also on the architects of the century and beyond as well. Their personal styles and building preferences, therefore, do indeed transcend their body of work and can be seen in architectural styles of today. One such architect is the Dutch-born Rem Koolhaas, who is world-renowned not just for his architecture, but also for his complex yet provoking theories on the urban environment. Koolhaas’ process in approaching an architectural problem can be described as enigmatic at best; the depth and breadth of his work, while it can be examined and dissected based on his theories, does not exude a singular architectural style. Is he a Modernist? Is he a Postmodernist? Is he Deconstructivist? Since fitting him neatly into any one of these stylistic niches is almost impossible, it is imperative to jettison all notions of style when tracing Koolhaas’ professional development. It seems as if a study of his work is best begun by establishing the fact that he is deeply concerned with how simple “space” can be transformed into an “environment” which has a distinct effect on the human condition. It is Koolhaas’ focus on layering programmatic elements that leads an environment of interaction (with other individuals, the architecture, and the exterior environment) which transcends the eclectic creations of a man who seems to have been influenced by each of the Master Builders in some way.

Koolhaas’ early career was slow-going; he first studied scriptwriting at the Dutch Film Academy before moving to study architecture at the Architectural Association School of Architecture in London. He also studied at Cornell University in New York before founding the Office for Metropolitan Architecture (OMA) in the Netherlands in 1975. Koolhaas and OMA did not have a significant impact on the actual built environment until the 1990s. Much of the firm’s early work consists of a series of competition entries (mostly unbuilt), unrealized structures (some actually unrealizable), and the shaping of architectural theory under the direction of Koolhaas. His first book, Delirious New York (published 1978), set the tone for Koolhaas’ future theories and buildings by using the concept of a “retroactive manifesto” to establish his theoretical standpoint on the development of the urban condition in America.

Delirious uses New York City as a “study model” of sorts, and traces the architectural history of Manhat-
According to Koolhaas, “Manhattan’s architecture is a paradigm for the exploitation of congestion,” with the desire of man to live in a world surrounded by artificiality (“to exist in a world totally fabricated by man”) as the primary drive behind such congestion. In fact, throughout the course of the book, Koolhaas establishes that it is precisely human desires, fantasies, and obsessions that have not just shaped congestion itself but also the nature of that congestion. The penchant for ignoring the historic nature of a building’s exterior while planning for the interior creates a “schism” or “lobotomy” in the architecture of Manhattan, but it is precisely that schism which allows the rapid changes of the city to not affect its overall architectural character (defined by the block and the high-rise). In the end, however, the “human obsession” to reach a finite destination in terms of architectural development has led to the need for a “rebirth” in Manhattan’s future to be defined by the concept of mobility and the recognition that “there is no destination” in the development of a city. His proposal for such future development, which he termed La Villette (and also bears a resemblance to Le Corbusier’s Radiant City concept), involves a series of “programmatic bands” being laid end upon end to form the structure of the city; the insertion of random elements into such order would in turn increase the possibility for “unplanned encounters” and an increase in “social energy”. This futuristic, almost utopian, city-scheme represents the culmination of the gamut of complex and almost incomprehensible ideas presented in Delirious New York; in effect, he is concluding that the city in itself is a contradiction and will forever be a contradiction, in that the “the Program” must be present in some form but at the same time have a minimal effect on the built environment. This allows the chance-like nature of human life to penetrate the physical fabric of the city, which is a concept that underlies much of his later built work (which in most cases is smaller in scale but nonetheless echoes the sentiment of the urban theory proposed here).

Delirious New York no doubt lays the foundation for Koolhaas’ future theoretical texts, which are larger in physical weight and size but not as deep in content as this first seminal work. S, M, L, XL (published 1995) is a tome which categorizes all of the built and unbuilt architectural works of Koolhaas and OMA in order of increasing size and importance (with a radical design by graphic artist Bruce Mau). Interjected within this so-called catalog are theories relating to the various works of Koolhaas and OMA, with probably the most important being Koolhaas’ theory about “Bigness” in architecture. “Bigness,” as he describes it, is “ultimate architecture,” architecture that has gone beyond a certain scale to the point which “the size of the building alone embodies an ideological program”. Koolhaas wrote that the basic principles of architecture (composition, scale, proportion) are “moot” when a building “acquires” Bigness, and that the “’art’ of architecture is useless in Bigness”. Throughout his explanation of the idea that Bigness does not simply refer to a large or massive building, but rather more to collections of buildings or structures (the city); in this way, he is once again commenting on the human experience created by architecture, much like in Delirious New York. Bigness was indeed a part of Delirious New York (although it was not explicitly mentioned), as the idea of looking at the overall picture of the city rather than focusing too much on the minute details of a “Program” was heavily stressed as the key to success for the theory of Manhattanism.
The span of Koolhaas' work in theory does not end there, however; there are a few more ideas of his which are not as terribly pivotal as the ones shown in Delirious New York and S, M, L, XL but that nonetheless constitute important links to understanding the thinking behind his architectural work. The Harvard Design School Guide to Shopping (published 2002) is a book which espouses the idea that shopping is the “last remaining form of public activity” and that shopping greatly influences the fabric of the urban architectural environment through the development of such entities as “mega-stores” and the observed movement of shopping malls from the city to the suburbs and back to the city again. In effect, Koolhaas and his students at Harvard (who aided in gathering material for and composing Shopping) are proposing that capitalism and materialism have ultimate control over the architecture and structure of a city; since individuals’ movements and experiences are essentially tied to the location and layout of such “necessary” centers to obtain merchandise, he purports that architecture seems to cater more to retail and the successful incorporation of such outlets into every part of the built environment than ever before. Speaking of mega-structures which encourage the movement of large amounts of goods at wholesale prices, Koolhaas, while he acknowledges the prevalence of such shopping centers in today’s society, nonetheless condemns them under the category of promoting what he calls “Junkspace.” To Koolhaas, “Junkspace” is “what remains after modernism has run its course,” space whose over-accommodation in the end makes it quite unaccommodating. Over-sterile, infinitely-expandable, and “continuous” are all qualities of Junkspace; it is space which is difficult to process and whose over-simplicity leads to undisciplined navigation and circulation. It seems as if Koolhaas sees Junkspace and the “architecture of shopping” in the same light; both are designed to appease the consumer, and yet both lead to a waste of space and a so-called cheap experience for the individual partaking in the architecture or the environment in question.

After establishing that Koolhaas’ theories are intently focused on defining the urban environment as a space in-and-of itself that inevitably incorporates Bigness and should attempt to avoid Junkspace, one can see from where the ideas for his architectural projects spring forth. The project most exemplary of his theories is probably his urban planning scheme for the city of Euralille, France, which was physically realized in 1994. The city’s “relevance,” so to speak, had just been transformed by the extension of France’s TGV network to include London, England (thanks to a tunnel connecting Britain to the mainland). The layout and character of the new Lille is a direct product of Koolhaas’ Bigness theory; the architecture itself is not so much important as the myriad functions and activities which the architecture brings to a city-turned-transportation hub. The project is centered near the heart of the city, and the program (carried out by OMA as well as other firms) focuses on that area so as to not disturb the rest of the existing urban fabric. It appears that the result of Koolhaas implementing his Bigness theory in this context is twofold: one, due to the scale and sheer modernity of the structures erected, the city automatically assumes a new aura of importance, and two, the interactions of people within the confines of Lille is forever changed due to the juxtaposition of seemingly incompatible activities with one another. The Congreso expo (or Lille Grand Palais, the only building actually designed by Koolhaas in Lille) is a perfect example of this second result, as it is a structure which contains three distinct zones with three distinct functions: an exhibition hall, a congressional conference center, and a concert hall (known as the “Zenith”). These three auditoria are placed back-to-back in plan, and the spaces capitalize upon Koolhaas’ penchant for interaction through the incorporation of glazed walls on the interior (although the Zenith is completely clad in black concrete) and corrugated translucent polyester as the exterior shell, which affords the transitional foyer space a bit of interaction with the outside world through incoming daylight. All of this is packaged in a pretty banal, oval can-like shape, almost reminiscent of a sports stadium; but once again one must remember that Bigness is not about spectacle in the details but rather spectacle in the massiveness. More than just the unexpected interaction of the different individuals who utilize these somewhat dissimilar functions (which now find themselves under one roof) and the interaction of the spaces through materials,

*Astronomicum Caesareum* - title page

“*The Emperor’s Astronomy*” by Peter Apian (1495-1552) was dedicated to The Holy Roman Emperor, Charles V and describes the mechanics of a geocentric (earth-centered) universe. Within three years, *The Emperor’s Astronomy* was surpassed by Copernicus’ *De Revolutionibus*, Courtesy of Special Collections, Lehigh University Libraries
Koolhaas introduced an “unpredictable” element into the program (a la Delirious New York) which allows for interaction: the walls between different zones are moveable, which allow for a myriad of combinations between the three sections and in turn a variety of functions which can be accommodated.

Going back a bit to 1992 takes one to another important step in Koolhaas’ architectural career, the construction of the Kunsthal in Rotterdam. This project required a program of exhibition spaces, an auditorium, and a restaurant to be combined under one roof; additionally, the site in question presented a challenge in that it is bisected by a highway. Instead of focusing on the interaction of space through materials and mobile architectural elements, Koolhaas envisioned interactivity as stemming from the circulatory system of the building. The backbone of this system is a series of ramps which create a promenade architecturale (somewhat like that created at Villa Savoye) which crisscrosses the interior of the Kunsthal and creates a very disciplined user experience. Although this may

*Hours of the Virgin*
*The presentation in the temple: Mary presents the Christ-child to Simeon (Luke 2:22-39), Book of Hours of Paris use, in Latin, 15th century manuscript, Courtesy of Special Collections, Lehigh University Libraries*

Koolhaas introduced an “unpredictable” element into the program (a la Delirious New York) which allows for interaction: the walls between different zones are moveable, which allow for a myriad of combinations between the three sections and in turn a variety of functions which can be accommodated.

Going back a bit to 1992 takes one to another important step in Koolhaas’ architectural career, the construction of the Kunsthal in Rotterdam. This project required a program of exhibition spaces, an auditorium, and a restaurant to be combined under one roof; additionally, the site in question presented a challenge in that it is bisected by a highway. Instead of focusing on the interaction of space through materials and mobile architectural elements, Koolhaas envisioned interactivity as stemming from the circulatory system of the building. The backbone of this system is a series of ramps which create a promenade architecturale (somewhat like that created at Villa Savoye) which crisscrosses the interior of the Kunsthal and creates a very disciplined user experience. Although this may

*An image from Plutarch’s Parallel Lives, circa 1470-1471. Courtesy of Special Collections, Lehigh University Libraries.*
sound formal and “un-Koolhaas,” it really is not; the path through the building is by no means predictable and the dramatic layering of spaces which occurs as a result of the path is distinctly a Koolhaas trademark. Even though the materials used in construction (concrete, travertine, glass planks, and corrugated plastic) do not create the same interior and exterior translucency of the Congrexpo, they, along with the irregular lighting scheme, are consistent with Koolhaas’ theory of architecture experience in that they eschew continuity and, in turn, Junkspace.

Junkspace appears plentiful, however, at the Casa da Musica concert hall in Portugal (designed by Koolhaas in 2001 and completed by 2005), even though in reality it is not. This structure, whose design was originally conceived by Koolhaas (in a smaller scale), as a design for a home, incorporates an main concert hall, a smaller auditorium, educational spaces, and even a VIP lounge in a bold and highly sculptural shell. Much like the Kunsthall (which was essentially a box), the Casa da Musica’s simple concrete exterior is deceiving, as the interior program is actually quite complex. Koolhaas in this instance worked from the inside out by deciding on the shapes and forms of the various spaces and then fitting them together (along with transitional spaces) into a compelling and unique shape. This juxtaposition and spatial layering is reminiscent of the Congrexpo, except in this instance the layering is a bit more dynamic; for instance, the main hall is like an autonomous object hanging within the building’s core, and it even has its own “structural envelope” and “gravity and stability systems”. Koolhaas also arranged the spaces within the Casa da Music according to primary and secondary importance, whereas in the Congrexpo the spaces were simply arranged in a linear fashion (he compensates for the fact that the functions of the spaces are similar in this instance by outfitting them in varying materials, such as “homey” wood for the main hall and harsh geometric tiling for another room). Also, the circulatory system is not a strictly-defined promenade architecturale experience, but nonetheless is designed in such a way as to make the user excited and surprised. The user experience (which is so important to Koolhaas’ design solutions) is even further enhanced by the glazing which separates the transitional space from the main concert hall, an unusual move.

Koolhaas was definitely subscribing to his love for a “culture of congestion” and Bigness with this commission, and, without knowing of these two theories of his, it would seem daunting to try and understand the thinking behind this organized, yet internally chaotic structure.

The Seattle Central Library, completed in 2003 by Koolhaas and OMA, uses basically the same principle of layering space as the Casa da Musica. His mission here was to unite the realms of printed and digital information under one roof, since Koolhaas recognized that a truly modern library would not be complete without a seamless integration of both. Unlike a traditional library, the actual book stacks form only one out of several vertically spaced “platforms,” with such elements as a café, a librarian headquarters, and a digital research center known as the “Mixing Chamber” included alongside. The user experience is definitely key here and is defined by a circulation system which leads individuals vertically through the platforms; juxtaposed next to these zones and the circulatory ramps are seating areas with generous views of various parts of Seattle. Koolhaas in this instance (much like the Casa da Musica and unlike the Kunsthall and Congrexpo) allows primary and secondary spaces to inform the seemingly-arbitrary exterior structure (a glass shell crisscrossed by steel tubing); for instance, the resting areas cause the “pulled” effect witnessed on the shell’s form to create lateral instances on the exterior that maximize sunlight and heighten the user’s feeling of spatial tension. Aside from increasing user interactivity with the library through the intersection of the “book and the byte” and the creation of a visually stimulating “path” to follow throughout, Koolhaas uses the concept of Bigness to make the library plain fun. Oversized graphics (thanks to the aid of graphic designer Bruce Mau) make the user more comfortable with navigating the structure, and the irregularity of its layout forces exploration and discovery. With Koolhaas’ design, the library is no longer a place to simply gather and disseminate information, but rather a place to interrelate and exchange as well.

Thus far, a few of Koolhaas’ most pivotal built projects have been discussed, and it can be seen that they are for the most part very public spaces. It is equally important, however, to examine his work in other areas of society as well, namely in the educational and residential sectors. His well-known Educatorium, designed for the Uithof University
campus in Utrecht, the Netherlands (and completed in 1997), once again breaks stereotypes. The Educatorium (which is a name purely fabricated by Koolhaas to suggest a “machine of learning”) is a mixed-use facility that houses both examination rooms and common recreational space for students. In order to appropriately define these two different functions of the interior space (which, in traditional Koolhaas fashion, are presented in layers), Koolhaas takes somewhat of a different approach than in his other works. Instead of separating the learning zone from the recreation zone by hovering spatial platforms or thin and translucent interior walls, he continues the thick concrete line of the roof and folds it upon itself to create the necessary division. He also transforms what could be a banal user experience by such “unexpected” program elements as laminated holographic film to make the glazed exam rooms more private (while still retaining their sense of Bigness) and the melding of circulation space with rest or “pause” space. Speaking of “unexpected” program elements, take another Koolhaas student center, the McCormick Tribune Campus Center, this time designed for the Illinois Institute of Technology (IIT) in Chicago (completed 2004): adhering to his theory from Delirious New York that unplanned encounters increase social energy, he positioned the new center directly underneath the Chicago El tracks. The result of such positioning was the need for a cylindrical tube to encase the tracks, a tube which in fact intersects with the roof of the center. This dramatic interaction of old and new, of the historic and the modern, is somewhat uncharacteristic for Koolhaas but nonetheless creates spatial excitement and an energy which makes the student center a lively hubbub of activity.

Spatial dynamics are not lost on Koolhaas’ residential commissions, either. The Maison à Bordeaux in France (completed in 1998), for example, is a multi-storey house designed for a family with a disabled member confined to a wheelchair. In order to make circulating the house easier for the man and also to be able to take full advantage of the hilly site, Koolhaas took his penchant for human-architecture interaction to a new level; just as has been seen in his other projects, Koolhaas used three floors to create distinct spatial layers. He then introduced a large lift (dubbed the disabled individual’s “office”) which can ascend and descend via hydraulics to each of the three floors, allowing for ultimate mobility in such a large space. As the lift is parked at each of the three levels, the character of each space changes, creating what could almost be termed “three houses in one”. Koolhaas even allowed the man to feel as if he is in the outdoors without having to actually leave the house by completely encasing the second floor, or the living floor, in glass (the other two floors are constructed in concrete). Even in a large-scale housing project such as the Nexus World Housing commission in Fukuoka, Japan (completed in 1991), Koolhaas manages to create a successful living space while preserving his love for spatial layering and dynamics (the rooms within each house arranged vertically). For this scheme he designed tightly-clustered housing blocks while still maintaining a sense of individuality within each unit through various Japanese screens incorporated into the units and the undulating roof-forms “floating” above the blocks as a whole. He manages to make Bigness work with residential architecture in a way which is neither terribly imposing nor bland, and his obsession with the organizational properties of “the block” (seen in Delirious New York), shows through clearly.

As it can be seen in the previous architectural examples and in his theories, Koolhaas does not fit neatly into a particular style category; while each of his projects show clear signs of his influence through certain key characteristics, a uniform style which can be summed up in few words is not created. However, it is important to note that the qualities which transcend his architectural works seem to stem from his connection to the Master Builders, as each of them has definitely had an influence on the course of Koolhaas’ work in some way. Le Corbusier, who Peter Blake calls the Master of Form, and Frank Lloyd Wright, dubbed the Master of Space, are the two individuals with whom Koolhaas probably shares the strongest connection. Aside from their heavy use of concrete, he and Corbusier share a liking for the promenade architectural and in general establishing controlled circulation routes, a concept featured most prominently in Corbusier’s Villa Savoye and in Koolhaas’ Kunsthall and Seattle Central Library. Corbusier was also not afraid to experiment with new and different forms in his projects (best seen in his somewhat oddly-shaped buildings for the capital at Chandigarh, India and the Church of Saint-Pierre in Firminy) like Koolhaas, but it does seem for the most part that the forms he employed were a bit more rational than those Koolhaas tends to (both men do seem to value purity of form, though, which for Koolhaas applies mostly to the exterior form of his works). Koolhaas’ urban theory on Bigness also appears to be similar to Corbusier’s notions about the ideal urban environment; urban ar-
chitecture must not be so concerned with the details but rather with the overall effect and experience created by the collectivity of structures and buildings within the city (Corbusier’s overpowering Villa Contemporaine concept for the city of Paris exemplifies this greatly).

Wright and Koolhaas seem to connect on a more theoretical level – both highly concern themselves with the crafting of dynamic space and establishing a user-friendly relationship of individual spaces to the entire program (which shows up in various forms throughout Koolhaas’ work and becomes almost a “trademark” for him). Wright, however, usually used the organization of his spaces about a central core (in most of his projects, which were residential, this central space was the living room), whereas Koolhaas tends to organize spaces usually without a distinct center “pivot,” although one could argue that the main music hall at the Casa da Musica goes against this claim. Nonetheless, both men’s scope of work is full of projects which rely upon a dramatic and dynamic flow of interior space to keep the user interested and to create not simply a place to “inhabit” but rather a place to “experience”.

Mies van der Rohe, who was not so much
concerned with space and form as he was with a building's structure, probably has the least influence on Koolhaas, but nonetheless, a relationship between the two men's thinking can be seen. Mies relied on rational structure in his architecture and many times had no qualms about explicitly expressing structure in his designs (take the vertical grid expressed on the façade of the Seagram Building in New York, for example). Koolhaas' Kunsthai manages the same feat by incorporating exposed, structural steel beams into the exterior façade in a manner actually reminiscent of Mies' National Gallery of Art in Berlin. It appears as though exposing structure for Mies meant further amplifying the building's rationality and securing its modern appearance, whereas for Koolhaas exposing structure creates a certain tension to excite the user and invite him or her to take part in the architectural
experience. Exposition also forms a key programmatic element in architectural work for both of these men, as both Mies and Koolhaas consistently introduce transparency and translucency into their designs through glass and other similar materials.

In the end, the creation of an “architectural experience” is precisely the undercurrent which runs through the gamut of Koolhaas’ works and unites his architecture without establishing “style”. Through careful attention paid to space through layering, the use of an exterior shell which does not explicitly belie the interior program, and a proclivity for “Bigness,” Koolhaas creates an architecture that even goes beyond style. Employing a “style” or designing for the sake of a style can result in buildings with little character or depth, but Koolhaas chooses instead to “change it up” as frequently as possible and to not rest on his laurels. In this way he does not simply copy from the Master Builders which preceded him but rather expands upon their thinking and ideas through his projects and theories. Innovation is the term which could best be used to describe his work, and it is precisely his innovation (which comes from reasoning and not simply for the sake of innovation) which will carry him and his architecture through a time when changing styles and tastes make it impossible for a successful architect not to be an innovator.