Examination of Blurred Boundary and Avoidance of Modernist Grid in the Works of Toyo Ito

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Abstract This study examines modernist grid and boundary in the works of Toyo Ito - two of the most important notions characterizing the development of Toyo Ito as an iconoclast architect. Early in his career, Ito recognized modernist architecture’s inherent tendencies to establish homogenous order and divide space by function was alienating people from their context. Ito identified the notions of modernist grid and boundary as the agents of Modernism which inadvertently served to impose this systematic order and severe separation. As a reaction against these tendencies, Ito sought to avoid the use of modernist grid and blur boundary in his architecture. In Ito’s career spanning over four decades, he engages in an exhaustive inquiry seeking to modify these two core elements of architecture. This study investigates these two notions in Ito’s works and examines the significance of the architect’s exploration in the context of Japan’s Modernism.

Keywords: Toyo Ito, Blurred Boundary, Modernist Grid, SANAA, Sou Fujimoto

1. INTRODUCTION

1.1 Study Subject and Purpose

This study began seeking to find explanation of startling contrasts observed in Toyo Ito’s White U (completed in 1976, Fig.1) and Sendai Mediatheque (completed in 2001, Fig.4-5) in the way notions of boundary and order were applied in the design of the two projects. Closer examination of Ito’s works from his career revealed that the contrasts were inspired by his reaction against Modernism and evolution of his design approach following the completion of White U.

Early in his career, Ito felt that modernist architecture’s inherent tendencies to establish homogenous order and divide space by function was alienating people from their social and natural context. Ito identified the notions of modernist grid and boundary as agents of Modernism which served to impose this systematic order and severe separation in architecture. As reaction against these tendencies, Ito sought to avoid the use of modernist grid and blur boundary in his work. In his career spanning over four decades, Ito engages in an exhaustive inquiry seeking to modify these two core elements of architecture in order to create more fluid and natural built environment for people.

The aim of this study is twofold. First, to investigate the notions of boundary and grid in Toyo Ito’s works and the evolution of his design approach concerning these two notions. Two, to critically examine Ito’s career long exploration working with these two notions in the context of Japan’s Modernism and what is happening within contemporary Japanese architecture today.

1.2 Study Methodology

As the aim of this study is twofold, the study methodology is organized in two parts. Part one of this study has selected four projects designed by Toyo Ito for an investigation. The investigation into these projects will first examine how the notions of boundary and grid were applied in the selected works in relation to the architect’s theoretical approach. The investigation will also examine various aspects of the architecture including but not limited to, organization, space, mass, structure, program, materiality and meaning. The focus will be on how Ito’s notions of boundary and grid were applied differently to modernist architecture and served as devices that worked to mitigate the tendencies of Modernism.

After surveying selected projects, part two of this study will examine significance of Ito’s explorations in the context of Japan’s Modernism. The study will survey the historical context in which Modernism established itself as the dominant force in Japan, and current thinking within Japanese architecture. As well, the study will examine Ito’s influence by identifying parallel thinking and shared tendencies found in the works of Ito’s contemporaries.

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2. MAIN DISCUSSION I: INVESTIGATING THE NOTIONS OF BOUNDARY AND AVOIDANCE OF MODERNIST GRID

In part one of this study, four projects by Toyo Ito have been selected for an investigation - White U, Sendai Mediatheque, Tama University Art Library, and Marroc Museo Internacional. These works were selected because each project represents significant point in the development of Ito's inquiries concerning the notions of boundary and grid, and the architect's own development as an iconoclast who has challenged Modernism in his long career.

2.1 White U: Modernist Architecture of imposed order and boundary

Toyo Ito, a Tokyo based architect, is considered by many to be one of the most important architect of his generation with works that have profoundly influenced the direction of contemporary architecture in Japan. Ito first surprised many in 1976 with White U in Nakano, considered by some as one of the most radical house of the twentieth century. Since then, Ito continued to surprise the architecture world with innovative works such as Sendai Mediatheque and Tama University Art Library rising to the pinnacle of international prominence. And in 2013, Ito became the fifth Japanese recipient of the prestigious Pritzker Architecture Prize.

Examining Ito's body of work spanning over forty-years, there exists seemingly startling contrast in how Ito approached the notions of boundary and order early in his career compared to his recent works; it is as if Ito is aiming create something that is complete opposite of what he has had created early in his career.

White U in Nakano (completed in 1976, Fig.1) is one of his very early work and a rare example of Modernist architecture created by Toyo Ito when he was only thirty-three years old. In White U, Ito created architecture that is most disconnected from the outside world. One could assume that it was the very private program and personal context which attributed in creating such an inward-looking architecture; it is a house which Ito designed for his sister and her two young children, whose husband and father had been recently passed away.

Using plan as a primary device to establish order and boundary, White U's blank walls contain interior spaces along the perimeter, leaving central space as a void open to air. Although broken up by the front entry and the window facing inner courtyard, the overall massing of the house is in symmetry which completely dominates the organization, and flow within and out. White U's appearance with its nearly windowless blank walled rooms and living spaces positioned on the perimeter, the house appears much like fortress with complete disconnect of the interior from the exterior. The organization of the house and the wall layout seemingly opposes the outer world. The resulting feeling is heavily massed boundary separating occupants of the house from the outside world while providing most protected and intimate spaces for the inhabitants within.

The courtyard situated in center of the property serves as more than a simple void. With its inward sloping roof seemingly converging at a point in the center of the courtyard and the courtyard directly opening upward to the sky, it stands as direct contrast to the heavily walled perimeter of the hard concrete surfaces. The courtyard serves to provide a relief from interiority and disconnect in a space where one is directly connected to the sky, the natural world.

In White U, flow of movement, interiority and exteriority are established with utmost clarity. The expansion of space is completely contained by the windowless blank walls of solid concrete. Even within the interior, various rooms are clearly defined and enclosed with no adjoining spaces or spatial continuity between the rooms. The living room, only space which suggests continuity of spaces, is presented more like a corridor; the space is designed to be occupied in temporal sense, a transitional space with spatial continuity which connects various individual rooms. One could imagine overwhelmingly heavy presence of the symmetry and U-shaped mass bearing on visitors with complete authority.
With its materiality, play of mass versus void, light versus shadow, plan organization, reliance on clearly established boundary and circulation to establish order, White U epitomizes Modernism in its design approach. And yet with its subtle manipulations and breaks in the symmetry, there is a hint of Ito's forthcoming exploration working with notions of order and boundary. What is further intriguing in this early work of Toyo Ito is the way Ito had played with the notion of inhabiting space in temporal sense. In White U, living room is treated like a corridor, the most public realm and collective space in modern architecture. Due to contingency of the space and proportion, spatial quality of the living room feels more like street or alley, a transient but inhabitable space.

In White U, Ito uses boundary as a primary design device for organization, to calibrate perception of a space, and give a meaning. The notion of boundary becomes important elements in the evolution of Ito's later works but with opposite aim; Ito explores the notion of boundary not to disconnect and separate as he has done in White U, but to blur boundary in his attempt to connect and merge rather than disconnect or separate.

### 2.2 Modernist grid and boundary

When surveying the evolution of Ito's design approach, a particular article written by Ito early in his career stands out for its sobering honesty and directness. The article is also an architect's own critique of his work and self-reflection.

In 1978, two years after the completion of White U, Ito in his article for Shinkenchiku magazine, reacting to some of the criticism received for his design of the house, he admits to the severity of closed spaces and imposed order in White U. Ito, in his brutally honest reflection, laments how only after seeing the photographs of the space and the criticism received, it made him realize the harshness and disconnectedness of the space from its surrounding. Ito also explains how at the time of his design, White U was simply a study in manipulation of functional form – a process that epitomizes modernist architecture. In his publishing written just two years after the completion of White U, Ito laments how he had honestly not analyzed his design closely and being disturbed by his own experience of the house. "From the interior, when even that glimpse of cityscape disappears, the White U becomes completely dark", Ito writes. Ito then goes on to expresses his desire to undo what he has done and to reopen the closed space to the city, and to coherently re-link, and to recover the context.

In the same article, Ito criticizes modern architecture's shortcoming for being dissociated with its social context. Ito argues that one of the problems of modern architecture is its tendency to impose order and boundary. Ito questions the common assumption of the Modernism that a homogeneous frame or grid of modern buildings organizes the city.

Indeed, the visual essence of the grid found in art of early Modernism - rectangularity, parallel lines, modules, and repetitions - when applied to architecture translates to spaces that are defined by systematic ordering, standardization, boundary and division. (Fig.2-3) Application of frame as organizing device and grid as a modular base in the design of buildings is in direct conflict with disordered and natural qualities found in natural environments.

Ito asserts that modernist environment people live in is a homogenous world divided by function and its constituent parts. On the contrary to the heroic pose which Modernism claims, homogeneity, universality, relativity, and flatness are the characteristics of modern architecture which have made today's cities unnatural, unambiguous and odorless much like commodities wrapped in clear plastic wraps. This conflicting aspects of modern buildings and cities serve to disconnect people from their surroundings. Ito then questions, how can architectural space dissolve boundary and open up to the city, and what methods can be applied to accomplish this.

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1. Ito, The Reflection of the Sacred in the Profane World, Shinkenchiku, June 1980 (First published in Japanese in Shinkenchiku, later translated by Jessie Turnbull in Toyo Ito, Forces of Nature, 2012)
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“fluid space of technology.” In Sendai Mediatheque, Ito created architecture that is very open and public. Unlike White U which uses the floor plan as a primary organizing device that establishes clear boundaries, in Sendai Mediatheque the layout is loose and separations between spaces are not clearly defined. Boundaries between spaces are porous. As well, the openness and outward-looking qualities extend beyond the building and out to the city with all glass curtain wall seemingly dissolving the boundary which separates the interior space from the exterior. In the way programs are distributed on each floor, physical separations between different zones of spaces are restrained as much as possible; furniture, book stacks and low walls are used as devises for defining zones of spaces. When required to establish clear physical separations between spaces, Ito uses porosity and transparency to dematerialize the walls as much as possible and achieve spatial continuity.

With all the accolades Ito has received for his design of Sendai Mediatheque, perhaps the most intriguing and important idea Ito has offered may be how he has modified the modernist grid which has dominated modern architecture for a very long time. Ossature Dom-ino, an open floor plan structure of columns and slabs advocated by Le Corbusier as a way to eliminate load-bearing walls thus giving freedom of interior configuration has served Modernism so well. (Fig.6) But it has also posed limitations; it resulted in structural layout based on grids, and system based architectural elements such as elevator, mechanical, environmental, and fire safety engineering systems to be consolidated and hidden underneath slabs or enclosed in vertical shaft walls. Over many decades, this tendency has become so prevalent and accepted within design and construction industry that it offered limited possibilities for design explorations.

Indeed, this aspect of contemporary architecture was a point of criticism in the Venice Architecture Biennale in 2014 curated by Rem Koolhaas in which he was critical of the fact how architecture today has become much about assembling predetermined system based elements, and how things such as the elevator, suspended ceiling or the escalator have never really been incorporated in either ideology or theory of architecture.²

In Sendia Mediatheque, Ito sought to break from these two modernist tendencies in a single design move which is to consolidate system based architectural elements in a new way where they are not hidden but embraced and celebrated as design features within what is effectively hollowed out structural columns. And by transforming the columns into porous structure, Ito helps to negate the rigid order imposed by the grid. Ito further dissolves homogeneity and order of grid by introducing irregularity of the structural columns. By employing latticed truss system as columns, Ito was able to achieve greater spans between the columns thus reducing the number of columns located on each floor - limiting the repetitiveness which reinforces the grid. And by making columns with varying sizes that are not in grid alignments, with slight turning and twisting as they move vertically from slab to slab, the design largely frees itself from imposed homogeneity and systematic order. With the structural system cutting through the slabs providing vertical perforations of the building’s cube, and inserting vertical circulations and building systems into the porous columns, the grid is comprehensible but more organic than modular.

² 2014 Venice Architecture Biennale, curated by Rem Koolhaas focuses on how system based architectural elements such as elevators, escalators and suspended ceiling have never really been incorporated into either the ideology or the theory of architecture.
2.4 Tama University Art Library: Modified modernist grid and blurred boundary

In Tama University Art Library located in the suburb of Tokyo, Ito modifies the modernist’s grid in another way. At a glance, Tama University Art Library (completed in 2007, Fig. 7-9), is striking in appearance due to its repeated use of arch. Considering the building was designed by one of the most innovative contemporary architects practicing today, the sheer imagery one absorbs from visiting the building makes the viewer question if the architect was making reference to classical architecture.

On the exterior and interior, lines of arches in various scales and proportion appear as if they were used as style or pattern. Upon closer examination, it becomes clear that the lines of arches were used as a device for activating space. What is innovative in Ito’s use of arch is that he creates another type of grid using crisscrossing lines of arches. The grid is not orthogonal or systematic in modernist sense, but are gently curving lines in plan consisting interlocking arches of various proportions and elliptical in profile with spans ranging from roughly 1.8 to 16 meters. The resulting architecture is multi-layered building of crisscrossing lines and surface of arches.

In construction of the arch, Ito working with engineer Mutsuro Sasaki defied traditional notion of arch in its construction; the concrete arches are too thin to be working in compression and to stand by themselves where multiple arches join and meet the floor. With core of the arch made of steel surrounded by concrete reinforcement, Ito and Sasaki were able to make the wall extremely thin with very small footprint bearing on the floor. The resulting appearance is arches of various proportion and scale gently touching the floor. (Fig.9)

In the architecture of Tama University Art Library, the grid is not a device which establishes order or provide stable system for organization; nor arches represent solid enclosed space as is often the case in classical architecture. The crisscrossing lines of arches activate spaces within and beyond. While intersecting rows of arches softly breaks the floor into separate zones, open views and spatial flows penetrate through the entire floor and beyond the limits of the building. With sense of diversity and human scaled rooms, spatial continuity flows creating zoned spaces with blurred boundaries. As he had done in the design of Sendai Mediatheque, Ito effectively modified modernist grid and created architecture of open and fluid without alienating columns as irrelevant element in architectural space making. Traditionally, lines of arches serve as divisive device which separates spaces and apply rigid order. But in Tama University Art Library, Ito creates architecture of very open and fluid that relies on people’s movement and visual perception to overlap and connect spaces. It this sense, the arch is activator of spaces.

Stan Allen in his critique of Toyo Ito’s works makes similar analysis of Ito’s organizing devices in his writing “Toyo Ito’s Patient Search”, Princeton University Press, 2012
2.5 Marroc Museo Internacional: Modular grid and boundary merged

In the design of Barroc Museo Internacional in Puebla, Mexico (completed in 2016, Fig.10-11), Ito merges grid and boundary as one where the grid serves as an organizing device as well as a boundary defining element. In this approach of using modernist grid as the organization and boundary defining device, Ito seemingly appears to embrace the very element which he has had rejected for years. But upon closer examination, it becomes clear that the modernist grid was used merely as a starting point for series of transformative operations. It also appears that Ito recognized that Museum design requires programs to be dispersed with inwardly spaces confined by wall surfaces for exhibits. Rather than simply rejecting modernist grid, Ito embraces it as the organizing device then makes series of modification to create fluid flow within the grid and between interior and exterior.

In his design process for the Museum, Ito first analyzes the program and distributes them into 4x5 matrix modules. Then inserts a large courtyard within the grid and creates flow lines around the courtyard. Ito distorts the grid in such way the rigidity and divisions of spaces that are inherent in grid begins to erode away at the point of intersection. By turning and pulling the grid, new spaces emerge and Ito uses this as a way to create flow between spaces within the grid and from interior to exterior. Ito further manipulates the grid by making the walls curved at buffer zone creating free flowing spaces. (Fig.11)

In Barroc Museo Internacional, circulation axis and corridor are largely absent. The layout is essentially connected rooms without corridor where the viewer moves from room to room through undulation of walls where walls pull and push away from the grid. Whereas typical museums employ connected room model in which the viewer moves from room to room through holes punctured in walls, Barroc Museo Internacional takes bottom corner of the wall within a room pulling and pushing to create continuity and visual relationship. This distortion of push and pulling creates a condition where one surface turns from interior to exterior wall. The flow, both visual and physical, filters through, in and out like water. The inwardly spaces and outwardly spaces are interconnected in subtle and free flowing way. The grid matrix is strongly present and yet rigidity has been replaced by fluidity of movement and connectedness of the modules. Divisions are established but hierarchy of spaces, and distinction between main and supports spaces are nonexistent.

3. MAIN DISCUSSION II: CRITICAL EXAMINATION OF ITO’S EXPLORATION IN THE CONTEXT OF JAPAN’S MODERNISM

In part two of the main discussion, this study examines Ito’s exploration in the context of Japan’s Modernism, both historical and what is currently happening within contemporary Japanese architecture.

3.1 Tracing the beginning of Japan’s Modernism

With its emergence as a new nation in the mid-nineteenth
century following more than 200 years of cultural isolation, Japan embraced western culture and began a period of rapid Westernization in order to catch up with other developed nations. During this period, Japan’s architecture also experienced beginning of Westernization with western architects and styles being imported to Japan. This Westernization extended to the city planning as well. Gradually Japan produced its own architects educated in western architecture philosophy and style with Japanese architects returning from study abroad quickly establishing themselves in Japan, designing many buildings in public and private sectors. And throughout Japan people started witness Western-style architecture with new building materials appearing. Westernization of Japan was particularly visible in Tokyo following the Great Kanto Earthquake of 1923 which destroyed much of Tokyo and surrounding prefectures including the port city of Yokohama, Chiba, Kanagawa, and Shizuoka. (Fig 13)

Aftermath of the Earthquake spurred the development of new building codes and construction methods. Many Japanese architects embraced reinforced concrete and steel as the new building material which offered great strength combined with versatility, and pursued Le Corbusier and Bauhaus styled architecture. Sighting of radically contrasting styles of traditional Japanese architecture co-existing with architecture of Modernism was becoming increasingly common in major cities across Japan.

In the years following World War II, after many cities were destroyed by bombs, architects and builders of Japan began great reconstruction in the modernist ideals and the postwar Japan experienced the tsunami of Modernism which swamped the country.

In the 1960s, Japanese architectural movement Metabolism rose to the international prominence drawing on both International Modernism and elements of traditional Japanese architecture. Led by Kenzo Tange, Metabolism movement attracted a group of young architects which included Kisho Kurokawa, Fumihiko Maki, Kiyonori Kikutake, and Otaka Masato who were influenced by Marxist theories and biological processes. Applying the biological metaphors, the Metabolists contended that architecture and cities should be designed in organic way for growth and change.

A decade later, the Expo 1970 in Osaka provided a platform for its theory to evolve into a practice. This event was significant beyond Metabolism in that it represented an important moment in understanding of contemporary Japan. During this decade, the radical and visionary proposals of Metabolism captivated Japanese. Fueled by hype of mass media in TVs, newspapers, and magazines, the architects of Metabolism were transformed into heroes of the nation, and architect as important civil servants and visionaries of Japan. But decades after Metabolism rose as a symbol of a nation, many considered the movement as a failure as only a handful of small individual buildings identified with the movement were ever built, and Metabolism’s grand proposal of new cities remain a utopian vision.

In the 1980s, Japan as nation became a global economic power and its cities nation’s engine for growth. Following the years of explosive growth in its urban population, architects and urbanists in Japan have started recognize issues and challenges associated with its growth. In the past decades, with sense of urgency in the face of rapid urbanization and associated problems, Japanese architecture witnessed an outburst of critiques that questioned Modernism which has dominated Japanese architecture and urbanism of the nation for almost a century. And this criticism gained greater momentum amongst Japanese architects in recent years.

3.2 Limits of Modernism and desire to seek new direction grows in Japanese architecture

Kengo Kuma, one of the most respected Japanese architects of his generation, points to great devastations in history often serving as the catalyst for a great change in architecture. Kuma references the Great Lisbon Earthquake of 1755, the Great London Fire of 1666, and the Great Chicago Fire of 1871 as historical events which changed the course of architecture and urbanism of cities. Kuma argues that such devastating events, much like the Great Kanto Earthquake of 1923, fueled the desire for human to create big and strong architecture. Kuma points to the Great Kanto Earthquake as the reason for Japanese to shun traditional Japanese architecture based on natural materials and human scale architecture in favor of stronger and versatile new architecture of concrete and steel. In Kuma’s view, what followed the development of Japanese architecture was a century of architecture that disconnects its inhabitants from nature. Kuma feels that the architecture of the 20th century was an era of division in which modernist tendency to replace natural with manmade objects and architecture severely separating people from environment.

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4 The Great Kanto Earthquake of September 1, 1923 struck on the main island of Honshu with magnitude of 7.9 and caused widespread damage and death. Historians estimate casualties to be over 142,000 deaths with over 380,000 houses destroyed. Much damages and casualties were results of the many fires fueled by a strong typhoon which hit the Kanto region at the same time of the Great Kanto Earthquake.

5 Following the devastation of the earthquake, Japanese government, led by Goto Shinpei, administered great reconstruction of Tokyo and much of surrounding Kanto areas with modern infrastructures of roads, trains, parks, public buildings as well as public services with new and stricter building regulations.

6 Kuma, Chisana Kenchiku, Ahn Graphics, p.p.7-29, 2015
But Kuma suggests that this modernist tendency is coming to an end and Japanese architecture is at a turning point. If the Great Kanto Earthquake of 1923 served as the catalyst for a change, Kuma feels the devastating event of the Great East Japan Earthquake of 2011 is serving as the catalyst for a change in the way architects approach their work. (Fig.14) The Great East Japan Earthquake of 2011 which claimed tens of thousands of lives and left many more homeless initiated profound questioning in the Japanese architecture world. Combined with desire to break away from the limitation of Modernism and realization that with all the advancement of technology, architects and their creations were helpless in the face of such devastating disaster, many in Japan started to question the trajectory of Japanese architecture.

Indeed, one of the significance of the event of March 2011 for Japanese architecture is that it has invited reflection on the direction of architecture for Japan. Whereas the devastating events of 1923 Great Kanto Earthquake brought a desire to focus on technology to create stronger and bigger architecture, the event of March 11 Earthquake have many wanting to focus on the human side of architecture.

Kuma’s point of view is echoed by Julian Worrall, an architect and critic who has written extensively about contemporary Japanese architecture. In his critique of architectural evolution of Japan since March 2011, Worrall observes that architects in Japan since the Postwar were more concerned with technological refinement and formal experimentation, but the current generations of architects are increasingly focusing on the social and communicative side of architecture. With growing suspicion of the technical and physical solutions, increasing number of Japanese contemporaries are turning to ‘soft solutions’ of the social and connection to natural environment. As well, for these architects the notions of order and boundary play important role in their architecture.

Near the entrance of the exhibition is what may be most striking piece of exhibit - a diagram sketched by Toyo Ito himself which illustrate in overlapping circles architects and engineers whose work Toyo Ito has influenced, and whose work inspire him. (Fig.15) In the diagram, featured prominently are the Kazuyo Sejima (SANAA) and Sou Fujimoto, Akihisa Hirata and Junya Ishigami. The exhibition is intended to draw connections and highlight shared tendencies of architectural sensibilities in contemporary Japanese architecture. Of all the architects included in the exhibition, all but Sou Fujimoto have worked in the offices of Toyo Ito, Kazuyo Sejima (Sejima has worked at Ito’s office) or both. The exhibition alludes to the relevance of Ito in the development of contemporary Japanese architecture and points to the collective sensibilities which tie this leading group of Japanese architects.

Ito influence is evident in the works of this group of architects. Like Ito, all the architects’ works focus on the social and communicative side of architecture and connection to natural environment. As well, for these architects the notions of order and boundary play important role in their architecture.

3.3 A Japanese Constellation: Toyo Ito, SANAA, Sou Fujimoto, and others.

In contemporary Japanese architecture, Ito is considered by many as one of the most influential architect of his generation. In 2016, the Museum of Modern Art in New York presented an exhibition, “A Japanese Constellation: Toyo Ito, SANAA and Beyond.” The exhibition is a retrospective of works by generations of internationally acclaimed Japanese architects with list which includes SANAA (Kazuyo Sejima/Ryue Nishizawa), Sou Fujimoto, Akihisa Hirata and Junya Ishigami. The exhibition is intended to draw connections and highlight shared tendencies of architectural sensibilities in contemporary Japanese architecture. Of all the architects included in the exhibition, all but Sou Fujimoto have worked in the offices of Toyo Ito, Kazuyo Sejima (Sejima has worked at Ito’s office) or both. The exhibition alludes to the relevance of Ito in the development of contemporary Japanese architecture and points to the collective sensibilities which tie this leading group of Japanese architects.

Kuma’s writing Casting Off “Weak Architecture” appears in the Primitive Future by Sou Fujimoto, Lixil Publishing, 2008
and Sou Fujimoto, who are considered by many as two of the most exciting Japanese architects working today.

3.4 Shared tendencies in Toyo Ito and Sou Fujimoto’s works

In his writing “Casting off Weak Architecture”, Toyo Ito recalls his experience of first meeting with Fujimoto when Ito served as the design competition juror for Aomori Prefectural Art Museum in 2000 in which Fujimoto was one of the finalist. Fujimoto narrowly being beaten by Jun Aoki for the first prize, Ito mentions how Fujimoto’s clear way of talking about not making architecture from an overall order but from relationship between each of the parts have left an impression on him. Fujimoto’s explanation that an order can be made that incorporates uncertainty or disorder was an intriguing assertion to Ito because Ito himself had been seeking ways to create architecture that frees itself from rigidity and order. Ito refers Fujimoto’s theoretical thinking behind his proposal for the Aomori Museum as “antithesis of (Modernism’s) compositional rule that instantaneously determines the whole, like a grid or an axis”. In Ito’s view, even if not relying on grid or axis to integrate or give order to the whole may be plausible as an idea, Fujimoto fails to clarify the methods or relationships which may be applied as a way to achieve this integration for the whole. Fujimoto’s reference and comparison to the relationships that exist between things in the natural world, in Ito’s view, are inadequate explanation. Nonetheless, what intrigues Ito in his observation of Fujimoto’s works are the architect’s attempts to delineate this relationship between things in the natural world as architectural diagram. Fujimoto rejects systematic ordering and frame as device for integrating the whole. Instead, Fujimoto utilizes plan as primary organizing device and relies on diagrammatic simplicity to delineate the relationships of the parts and integrate the whole, including its surrounding (natural world).

Fujimoto’s aim is to forge more natural relationships between the artificial (architecture) and the natural world. Fujimoto frequently refers to his background growing up in Hokkaido, northernmost of Japan’s main island known for volcanoes, natural hot springs, scenic mountains, having influenced his architectural thinking in his lectures. In many of Fujimoto’s projects, nature subjects such as trees, forest, cave, nest, and clouds become metaphorical inspirations. Having had moved to Tokyo for a university education, Fujimoto often talks about differences of environment between the two places in his public presentations. It is these notions of nature and urban environment that serve as a metaphorical catalyst in his work. Fujimoto calls Hokkaido “nature field” and Tokyo as “crazy ugly city”. And yet, Fujimoto sees similarities in the two places, both sharing qualities consisting “small spaces, human scaled spaces, and unexpected spaces” in “open field” of nature or urban environment. The aim for Fujimoto is to treat nature and artificial (architecture) as equal parts and to integrate the two to create better living environment.24

When examining the works of Fujimoto, one can observe similar tendency that are found in the works of Toyo Ito; disposing homogeneous order and separation. As with Toyo Ito, Fujimoto makes deliberate effort to dispose hierarchy of spaces and to blur boundaries.

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24 Fujimoto, Between nature and Architecture, SIGEF 2014, Social innovation and Global Ethics Forum Presentation, Geneva, Switzerland, 2014
In his competition proposal for Aomori Art Museum (designed in 2000, Fig.18), Fujimoto explains that his aim was to make architecture akin to a forest, and devises a wall configuration that folds in response to the contour of a landscape and an environment. The configuration of the walls recalls Cartesian grid based from, but with each folds of the wall and its seemingly random configurations, only hint of axis remain. The boundary which exists between the interior (architecture) and the exterior (nature) was imagined as a line loosely defining extents of the architecture as if conversing with the surrounding forest. The folds of the exterior wall, in Fujimoto’s words, were aimed to “open up architecture to forest” and imagined as “flexible architecture with aim of conceiving existence between nature and artificiality.”

In his design for T House (completed in 2005, Fig19), Fujimoto takes similar approach where a wall configuration that folds continuously. Within, boundaries are blurred and space flows from one another. Seemingly continuous line of the exterior wall folds as if conversing with each of the interior spaces. There exist no systematic order and hierarchy, and the spaces are presented to the viewer as ever-changing relationships of people and their surrounding environments. Similar to Ito’s Tama University Art Library, a viewer’s movement within the house alters perception of spaces and relationships, with each incremental movement of a viewer activating space perceptions.

Kazuyo Sejima often uses the term “open stage architecture” to describe SANAA’s work. In much of SANAA’s architecture, fluidity in its space use and movement are prevalent. There is no hierarch of spaces or singular purpose, and often no pre-defined path for public movement such as circulation axis or main corridor. SANAA’s buildings often have multiple access points, no primary entrances, and invite viewers to move freely and explore their relationships with their social and natural contexts. In SANAA’s architecture plans are deceptively simple, diagrammatic and non-hierarchical with program elements seemingly placed loosely. Programs are presented as abstracted modular and independent pieces.

In 21st Century Museum of Contemporary Art in Kanazawa (completed in 2004, Fig.20), axis and grid are vaguely visible but broken up by the irregularity of the program placement, size and circulation path. The architecture then relies on the circulation, movement of viewer to connect independent programmatic pieces and surrounding context. While the separation and boundaries of individual programmatic pieces are clearly established by the distinctive individual volumes, standardized order is dissolved.

Kazuyo Sejima, one of the founding partner of SANAA and former apprentice of Toyo Ito, in her interview with NPR describes her approach to architecture as desire to create “architecture like a park” and how like in a park architecture could be open space shared by different people. She asserts that much like a park, very open space architecture can be an environment that hosts various groups of people at the same time while providing personal and intimate places for individual.

Hitoshi Abe, Japanese architect and chair of the Department of Architecture at UCLA, points to SANAA’s design tendencies to blur the boundaries between public and private spaces. Abe references SANAA’s housing projects as an environment in which the inhabitants are forced to live together and accept other people.

Several years after completing 21st Century Museum of Contemporary Art, the notions of blurred boundary and non-homogeneous order is explored more aggressively in the designs of Rolex Learning Centre in Lausanne (completed in 2010, Fig.21) and Toledo Museum of Art in Toledo (completed in 2006, Fig.22).
Examination of Blurred Boundary and Avoidance of Modernist Grid in the Works of Toyo Ito

As in 21st Century Museum of Contemporary Art, the architecture of the two buildings utilize movement of viewer to establish relationships between programmatic parts and set up latent possibilities of spatial experience and interaction. Circulations do not rely on axis or primary path but multiple access points and paths exist. The movement of viewer then activates and deactivates spatial boundaries and understanding of ones position against the social and natural context. Boundaries within the building are suggested but often dissolved through reflection or transparency.

In the Serpentine Gallery Pavilion in London (completed in 2009, Fig.23), roof of the pavilion seemingly disappears as the polished silvery surface reflects the ground, trees, sky and cloud. With its slender columns akin to wooded forest, the entire pavilion seemingly dissolves in its natural context. The spatial boundaries and zones are subtly hinted with its roof line and placement of the columns, and use of the space is situational rather than predetermined. As with most of SANAA works, the architecture is extremely permeable; exteriority and interiority distinctions are dissolved. Spaces are very open and inherently public, but can also be transformed into private spaces for individual.

4. CONCLUSION

Julian Worrall in his writing on Ito suggests that much of Ito’s career could be defined by his long and continued exploration to overcome the limitation set by the standardizing and flattening characteristics inherent in Modernism. Worrall likens Ito’s long line of inquiries as an effort to dismantle the iron cage of Modernism’s rationality which has dominated architecture for a century.13

Ito is not alone in this regard as there were many others over the past several decades who have simply thrown out the modernist grid and explored non-orthogonal, highly expressive language of form. But what make Ito’s work particular are his efforts not to simply create new generative language of form, as so many architects have tried, but instead how Ito systematically applied methodical strategies to dissolve order and separation. In this regard, Ito’s exhaustive efforts can be considered not a search for revolutionary breakthrough in the way we approach architecture, but patient effort to reexamine Modernism from a new perspective.

The real significance of Ito’s effort lays in his works with ideas that alter the paradigm which has dominated architecture for a long time. And at a time when the architecture world appears to be at a juncture rethinking direction of the discipline, such ideas and methodologies serve as a catalyst for deeper investigation into the role of architecture today and for the future. And the current development in Japanese architecture serves as an evidence of Ito’s contribution in shaping the direction and identity of Japanese architecture.

Several decades ago, Metabolism served as a catalyst for a nation to set a vision and rebuild after the country was destroyed by the war and atomic bombs; a group of young architects, designers, and artists led by a visionary, Metabolism provided the nation an inspiration to envision a complete transformation of the nation. The movement was as much about a national identity as it was visionary architecture and urban landscapes. Metabolism movement in many ways represented Japan’s postwar cultural resurgence, discipline and identity as the nation was transforming itself into economic superpower following decades of destruction brought by the war.

Several decades later, new kind of Japanese architecture emerged as a shining example of architectural greatness on international stage - considered by many as most thought provoking, rigorous and exciting. This period in Japanese architecture is also accompanied by questioning of what constitutes an identity of Japanese architecture.

The discussions and activities within Japanese architecture suggests significant transition lays ahead. It remains to be seen where these questioning and exploration by current generations of Japanese architects would lead to. But the current development brings great curiosity for the future of Japanese architecture as well as optimistic feeling.

“I want to pursue a dream that transcends the regulations of (architecture) today, something that is arguably the true essence of architecture, a vision of it as something free...I think doing that is encouraging to people,” says Ito in his book.14

13 Worrall, Base and Superstructure in Toyo Ito, Toyo Ito Force of Nature, Princeton Architectural Press, 2012
14 Ito, Toyo Ito 2 2002-2014, Toto Publishing
Indeed, Ito has inspired generations of architects to question the direction of architecture and reimagine its possibilities. Toyo Ito’s explorations spanning over four decades of his career have served as a reminder to us how architecture as a discipline is about persistent questioning and exploration. While Ito undoubtedly is still continuing his architectural exploration, his works have already offered new possibilities for the discipline and profoundly influenced the way we examine architecture.

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