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Arata Isozaki's intensive collaborations with Japanese vanguard artists enabled him to develop a design concept known as 'invisible city', imagined as a space of cybernetic interaction.

Arata Isozaki: the architect as artist

Hyunjung Cho

In September 1962, Arata Isozaki (born 1931), then a fledging architect, published a surrealistic story entitled 'City Demolition Industry, Inc.' in the prestigious architectural journal *Shinkenchiku*.[1] The story features two personas: an architect named Arata and a former professional killer named Shin. Shin is alarmed by a large number of deaths caused by various urban problems, such as traffic accidents and pollution, and declares war on the metropolis. Shin establishes an underground company, which he calls *City Demolition Industry, Inc*., and tries to persuade his architect friend Arata to join the company. However, the two characters fail to reach agreement and their conversation deteriorates into accusation; Shin labels Arata a 'cowardly Stalinist' for his technocratic mindset, while Arata calls Shin an 'inexperienced Trotskyite' because of his anarchistic attitude. Given that 'Shin' is a Chinese phonetic reading of the Japanese character for Arata, this story can easily be read as an autobiographical parable about the author, Arata Isozaki.

Contemporary readers tended to view this fable as an act of Isozaki's disengagement from the optimistic urban visions shared by Japanese architects including Kenzō Tange and the Metabolists.[2] Understandably, this potentially controversial essay was not welcomed by the editor of *Shinkenchiku* and it was moved from its original place in the beginning of the issue to the advertisement section at the back and printed in small, barely legible type. But rather than being disappointed by *Shinkenchiku*'s attempt at censorship, Isozaki tactically utilised this troublesome episode to construct his position as a radical artist distinct from the architectural establishment. As an act of resistance to *Shinkenchiku*, Isozaki reprinted this story in the opening section of his 1971 anthology *Kūkan-e* (*Toward Space*), thus violating the otherwise chronological order of the collection.[3] Thereafter, Isozaki eagerly republished it as a self-statement in many of his seminal publications in both Japanese and English.[4]

This article is not a comprehensive survey of the architectural career of Isozaki, one of the most distinguished practicing architects in the world today and the 2019 winner of the Pritzker Prize, but a specific look at his formative years of the 1960s when he began to build his own design methodology. It examines how Isozaki's Jekyll and Hyde personas were born out of the specific context of Japanese art and architecture. There have been several attempts to bring the issue of Isozaki's ambivalent dual identity to the fore. Art critic Noi Sawaragi describes Isozaki as a 'Janus-like figure', whose work embodies both the optimistic view of the technocratic architects and the nihilistic view of the radical avant-garde artists.[5] If Isozaki's ego as the creator 'Arata' was formed by his training in Tange's office and his collaboration with the Metabolists, his alter-ego as the destroyer 'Shin' was indebted to his encounter with the 1960s avant-garde art movements. Similarly, architectural historian Kenneth Frampton appreciates Isozaki's ability to 'discuss both technique (techne) and poetic intent (poesis)', with an emphasis on his 'lyrical' professionalism that is integrated with an 'artistic sensibility of extraordinary of lucidity'.[6] Perhaps it was Isozaki himself who was most eager to emphasise the significance of his artistic side. By repeatedly emphasising his affinity for and connection with contemporary art circles, Isozaki attempted to construct and promote his self-image as an artist-architect.[7]

Indeed, Isozaki was known as a member of the art group Neo-Dada, which was active in the early 1960s, and an active participant in the cross-genre collaborations of intermedia art practices that prevailed in the latter half of the 1960s. For art historians, Isozaki is widely conceived as a reliable witness, an ideal partner, and a resourceful patron of the 1960s rebellious art movements, one of the most discussed topics in the field of Japanese art history.[8] Despite the growing interest in Isozaki's role in the Japanese art scene, however, few attempts have been made to address how Isozaki's intensive interactions with art circles played a role in formulating his design methodology. In this article, I would like to argue that Isozaki developed his architectural methodology by adopting some of the radical approaches of his artist colleagues, while at the same time reconsidering and revising them.

First, the article delineates Isozaki's encounter with the avant-garde art movements of the 1960s, collectively called 'Anti-Art', against the backdrop of the 'anti-spirit' of Japanese society. Then it examines how Isozaki's collaborations with his artist contemporaries enabled him to formulate the notion of the 'invisible city', a radically new design concept characterised by the expansion of the nature of architecture from producing isolated built-forms to all-encompassing natural and manmade environments. However, after drawing on communications and information theory, which prevailed in 1960s architectural circles, Isozaki's destructive and anarchistic connotation of 'invisible city' was channelled into a systematic cybernetic model and eventually transformed into a constructive planning method. The final section of this article examines the realisation of a cybernetic environment at the Festival Plaza of Expo' 70 and traces the legacy of 'invisible city' in his later postmodern design. The goal of this study, however, is not restricted to the disciplinary intersection between art and architecture but expands to a discussion of the two competing perspectives *vis-à-vis* Japan's traumatic past. While technocratically inspired optimism for a better future constituted the nation's celebratory narrative from devastation to prosperity, this simplified story of success and progress was complicated by vanguard art practices that critically unearthed the postwar reality embedded in the form of rubble and ruins.

Art in the age of 'anti' and ruins

Looking back at the last days of his twenties in 1960, Isozaki recollected that his itinerary delineated a triangle, the three corners of which were Tange's office at Tokyo University where he worked on futurist urban projects in the morning: the front plaza of the National Diet Building, where he joined protests against the US-Japan Security Treaty in the afternoon: and the White House in Shinjuku, where he hung out with artists at night.[9] This cartographic recollection reveals that Isozaki's orientation during his formative years was directed at the art community as much as the architectural one.

Entering the 1960s, Japanese society was shaken by intense political conflicts over the renewal of the US-Japan Security Treaty (known as *Anpo*). The Kishi regime forcibly passed the unequal treaty through the National Diet, infuriating the opposition, which was composed mostly of progressive intellectuals, radical students and artists, and labour organisations. According to historian Yoshikuni Igarashi, the anti-*Anpo* protests provided an opportunity for the Japanese to revisit their repressed memories of the war and defeat and to critically reconsider the optimism attached to the economic growth and promise of eternal peace of the postwar society that had been enabled by the *Anpo* itself.[10] In May 1960, at the peak of the *Anpo* protest, Tange and the young members of the Metabolist movement hosted the World Design Conference in Tokyo, a global event that some two-hundred-and-fifty designers and architects from twenty-seven countries attended.[11] Unlike his colleague architects, however, Isozaki did not attend the World Design Conference, a government-sponsored event held amid anti-government protests. Instead, as he has repeatedly claimed, he participated in the *Anpo* protest along with a group of young artists who were baptised by political radicalism.

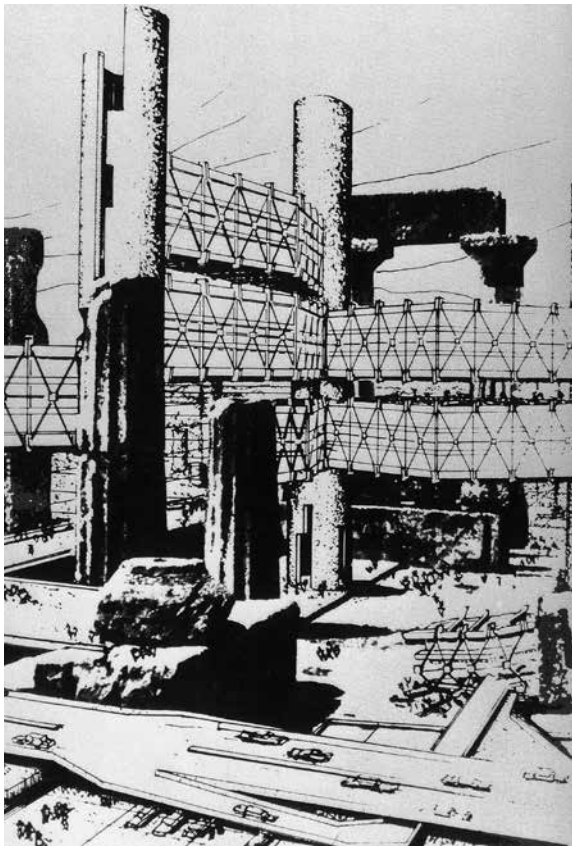
Isozaki's interactions with the contemporary art movements were largely made possible by his personal connection with the members of Neo-Dada (also known as Neo-Dadaism Organisers).[12] Neo-Dada was a short-lived artist collective founded in Tokyo in 1960 that aimed to subvert the accepted values of social norms and the art system.[13] Isozaki's liaison with Neo-Dada members can be traced back to the late 1950s in Ōita, Kyushu, his hometown. Students from the region, including Masunobu Yoshimura, Genpei Akasegawa, Shō Kazakura, and Isozaki, who later became associated with Neo-Dada, clustered together and founded a local art group called *Shin Seiki-gun* (New Century Group). These artists eventually left to attend various colleges in Tokyo and settled down in the Shinjuku area, which was then a centre of vanguard culture in art, theater, and music.[14]

Commissioned by Yoshimura, the leader of Neo-Dada, Isozaki designed Shinjuku's White House (1960), the first realised design in his portfolio. These radical young artists who gathered around the White House often organised provocative performance-cum-parties, at which Isozaki was a regular visitor. On 18 June 1960, the eve of the treaty's ratification, for example, the White House hosted the '*Anpo* Episode Event'. The highlight of this highly politicised event was the appearance of Yoshimura, who attached a giant erect penis to his loins and imitated *kara-kiri* suicide. Yoshimura's subversive gesture resonated with what Alexandra Munroe labels '*Anpo* spirit', a kind of anarchistic nihilism and destructive energy that was prevalent in the left-leaning cultural atmosphere of the time.[15] Art historian Kristine Stiles considers the artists' assertive use of the body as a 'response to the threatened ontological condition of life itself in the aftermath of the Holocaust and the advent of the atomic age'.[16]

Neo-Dada was a part of a larger artistic trend known as 'Anti-Art', a term coined by art critic Yoshiaki Tōno in his description of junk objects adopted by these vanguard artists. In his encounter with the Neo-Dada's exhibition, Tōno wrote:

> *Their exhibits reflected the immense junkyard of the teeming city of Tokyo. The junk which they first saw, which influenced their way of feeling objects, was the junk of the burned ruins of the city during the war. The blasted city had been their playground: their first toy had been bottles melted into distortion from fire bombs, pieces of roof-beams found in the ashes. Now, their shows were full of these junk-flowers, with their queer blossoms.*[17]

Like the French Nouveaux Realists who utilised industrial detritus to pursue a new perception of the reality of the postwar years, Anti-Art practitioners



1 Arata Isozaki, *Incubation Process*, photo collage, 1962.

employed everyday junk objects as a means of reflecting Japan's new material conditions. Moreover, in Japan's specific postwar context, these junk items served as a mnemonic device that recalled traumatic memories of wartime destruction and ruins repressed by a technocratic endeavor to build a better future.

As an attentive witness and unofficial member of Neo-Dada, Isozaki was sympathetic to the anti-art and anti-authority attitude of his artist contemporaries and tried to emulate their attempt to disrupt the status quo of both the artistic and social establishments. To this end, Isozaki employed the metaphor of ruins as an architectural version of Anti-Art. Isozaki's ruins first appeared in his illustrated essay titled 'Incubation Process' published not in an architectural journal but in an art journal titled *Bijutsu Techō* (*Art Note*) in April 1962. This six-page illustrated essay was included in the special issue for this prestigious art journal on the theme of 'Contemporary Image' edited by renowned art critic Shūzō Takiguchi.[18] Isozaki's essay depicts a contemporary city not as a static machine but as a living organism that goes through an endless life cycle from birth to death and back to rebirth through a metabolic process. The final page of the essay features a compelling image of a ruined future entitled *Incubation Process*, in which half-destroyed ultramodern megastructures are superimposed onto a ruined Greek temple in Agrigento *[1]*. This photo-collage is followed by Isozaki's poetic text:

Incubated cities are destined to self-destruct
Ruins are the future of our cities
Future cities are themselves ruins
Our contemporary cities, for this reason, are destined to live only a short 'time',
Then give up their energy and return to inert material
All of our proposals and efforts will be buried
And once again the incubation mechanism is reconstituted
That will be the future.[19]

Here, it is worth pointing out that the idea of architecture as a living organism was prevalent in the architectural thinking of the 1960s when the Metabolists advocated the idea of flexibility and changeability. However, as opposed to the predictable change and systemic growth preferred by contemporary architects, Isozaki called for 'dramatic and destructive change', which lay outside the control of individual architects or planners.[20] Isozaki claimed that 'since change is half-destructive and half-constructive, it should be permissible for architecture to create the exact appearance of ruins'.[21] In this sense, as architectural historian Hajime Yatsuka has argued, Isozaki's presentations of future cities in the form of ruins demonstrate his reluctance to accept the utopian future vision shared by Tange and the Metabolists.[22] Indeed, Isozaki has been overtly critical of the naïve optimism about growth and expansion inherent in the Metabolists' thinking, which corresponded to the 'growth-first policy' of the era of rapid economic growth.[23]

This conflict between the positions of Isozaki and his fellow architects was illustrated in the architectural group exhibition 'The City and Life of the Future' held in Tokyo's Seibu Department store in September 1962. Curated by Metabolist critic Noboru Kawazoe, the exhibition was a showcase for 1960s futuristic urban schemes by Japan's architects, including Tange and the Metabolists.[24] For this exhibition, Isozaki submitted a three-dimensional version of a ruin image entitled *Incubation Process: Joint Core System*. This project consisted of three visionary urban schemes, one of which was a photomontage of a ruined future featured in *Incubation Process*, and an aerial photograph of Tokyo placed on the table along with some nails and pieces of coloured wire *[2]*. It was an installation-cum-participatory performance produced under the strong influence of Anti-Art. Viewers were invited to stick nails into the photograph of the city wherever they wanted to and to connect them with the wires. The combination of vertical nails and horizontal wires looked similar to a pilotis and core structure, the basic unit comprising the megastructure of a future city. It was not long before the structure became as entangled as a spider's web, such that the wires stretched all over the gallery space, including the prepared table, walls, and ceiling like a chaotic labyrinth. On the last day of the show, Isozaki appeared and poured plaster on the tangled wires, a gesture reminiscent of Jackson Pollock's action painting. Eventually, the incessant flow of becoming ceased and the invisible and interactive process became visible in the form of fragments and ruins.

2 Arata Isozaki, *Incubation Process | Joint Core System*, 1962, multimedia installation (re-enacted in 2011).

3 Arata Isozaki, *Re-ruined Hiroshima* (Part of Electric Labyrinth), 1968, Milan Triennial, Ink and gouache with cut-and-pasted gelatin silver print on gelatin silver print, 35.2 x 93.7 cm.

While *Incubation Process|Joint Core System* fit perfectly into the contemporary artistic vocabularies, it was not welcomed in architectural circles. Kawazoe, the organiser of the show, opposed the inclusion of Isozaki's work because his presentation of chaotic ruins was inappropriate for the utopian theme of the exhibition, 'the wonderful life of the future', presented by the other architects.[25] It seems that Kawazoe found Isozaki's destructive work of ruins offensive. Although Isozaki was allowed to remain in the exhibition with the intervention of the Metabolist Kiyonori Kikutake, one of the participants in the show, this episode revealed that Isozaki's urban vision was not compatible with those of his architect colleagues.

Isozaki's ruins were largely indebted to the various examples from world architecture including half-destroyed ancient temples and visionary drawings by neoclassical architect Giovanni Battista Piranesi. However, his imagination of ruins cannot be thought of without considering Japan's traumatic recent past of war and destruction. In his multimedia installation titled 'Electric Labyrinth', submitted to the 1968 Milan Triennial, Isozaki clearly

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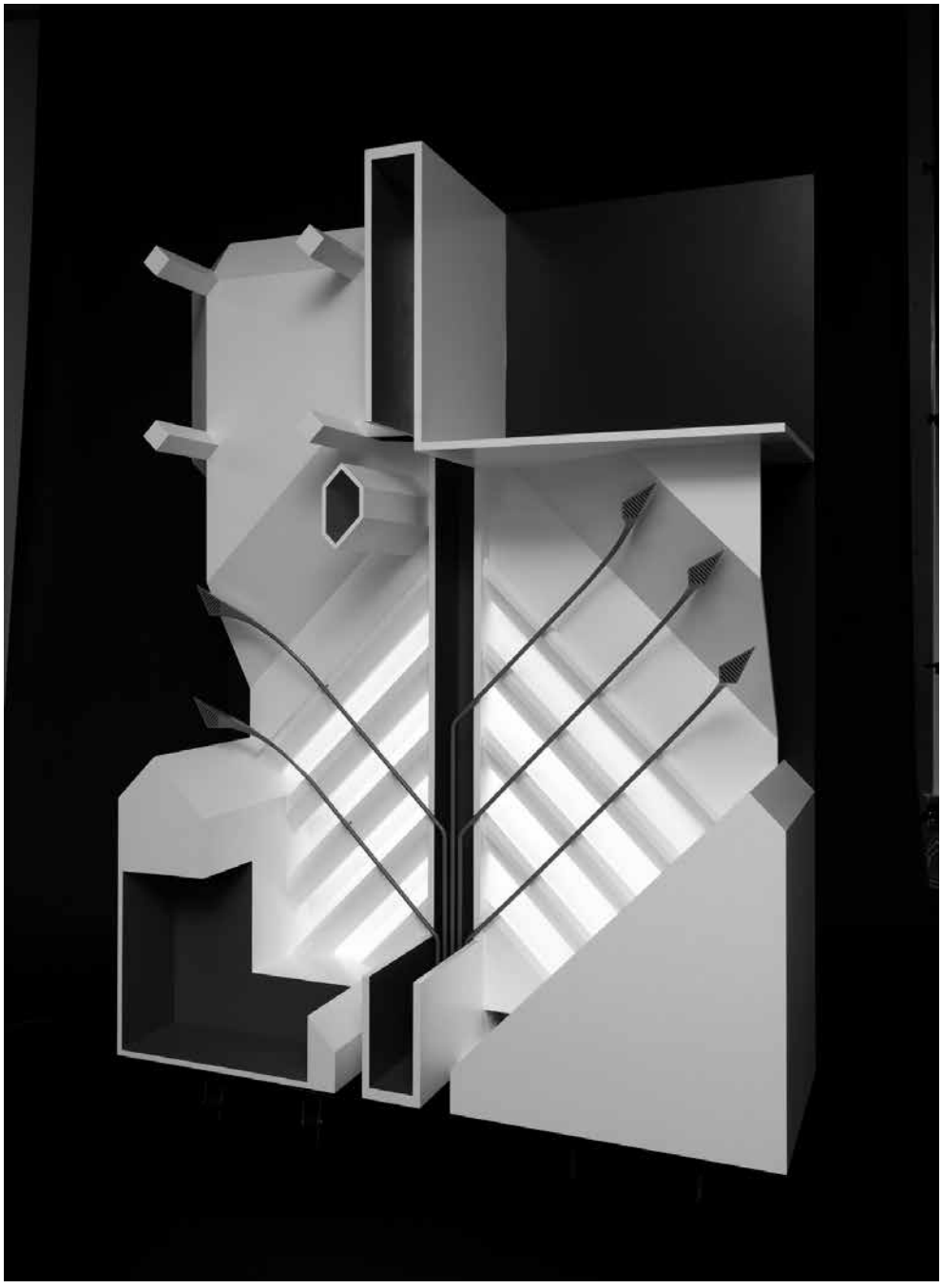
demonstrated that his imagination of ruins was derived from the bombed city of Hiroshima. In this project, Isozaki presented a panoramic photomontage, in which futuristic megastructures were juxtaposed with the devastated cityscape of Hiroshima, together with an installation of a maze consisting of twelve revolving mirrors *[3]*. On the surface of a mirror made of a curved and reflective aluminum panel, numerous images of death and destruction including Shōmei Tōmatsu's photographic representations of nuclear victims were projected.

Despite the fact that Japan was the only country to suffer an atomic bomb strike, very few architectural projects addressed the traumatic history of the nuclear blast. Rather, as Tange's Hiroshima Peace Memorial Park (1949–55) exemplified, mainstream Japanese architecture was interested in replacing traumatic memories of death and ruins with an aspiration for peace and prosperity. Isozaki was one of the rare architects who attempted to come to terms with traumatic memories of war and nuclear calamity. His presentation of Japan as an anxious space haunted by nuclear trauma can be understood in terms of his alliance with 1960s radical politics. Here it is worth noting that the mid-1960s marked a moment when Japan got involved in the Vietnam War by offering Okinawa as a military launching pad for US attacks on Southeast Asia. According to historian Thomas H. Havens, the Vietnam War was regarded among the progressive sectors of Japanese society as 'an emblem of the evils produced by contemporary bureaucrats: anonymous warfare, in direction and execution, by the Americans and constant complicity by a monolithic Japanese state'.[26] The death and destruction of the Vietnam War not



4 Arata Isozaki, *Architectural Space*, 1966 (reproduced in 2011), production supported by Mori Art Museum.

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5 Arata Isozaki, Oita Branch of Fukuoka Mutual Bank, interior, Oita, 1966.

only reminded Japanese people of the long-repressed memories of their own wartime disaster but also exposed the potential violence immanent in a seemingly peaceful postwar Japanese society under the US nuclear umbrella.[27] Taking sides with the oppositional spirit in the midst of ferocious anti-Vietnam War protests, Isozaki featured ruined Hiroshima in the Milan Triennial as a harsh criticism of the celebratory narrative of Japan's peace and prosperity that was advocated by the state and technocratic architects.

From an invisible city to a cybernetic environment

Entering the mid-1960s, as Japanese society was enwrapped in the euphoria of miraculous economic growth, the fever of Anti-Art abated and artists became interested in the role of art in the new world characterised by the advent of a mass-consumerist society and the development of media technology. Critic Yoshiaki Tōno, a fervent spokesperson of Anti-Art, became interested in the new ontological condition of art in this media-saturated modern world and announced the arrival of the age of simulacrum. He adopted the word '*kyozō*' (virtual or hollow image) as a key concept to understand the logic of capitalist cultural production and consumption of the time.[28] Isozaki, a longtime friend of Tōno, shared his concern with artists and critics regarding the crisis of material reality due to the proliferation of technologically mediated images. In his 1964 essay titled 'Space of Darkness', Isozaki uses the example of a pilot who flies an airplane at night. Because of the darkness, the pilot cannot trust his own vision and thus 'must rely solely on signals received by flight instruments' in order to navigate the aircraft.[29]

Artists' scepticism about visible, material, and enduring objects led to growing attention to the invisible, immaterial, and ephemeral environment that surrounded everyone. Art critic Yūsuke Nakahara has pointed out that 1960s art practices, such as kinetic art, psychedelic art, LSD art, and happenings, are characterised by their tendency to go beyond the physical boundaries of objects and to embrace to the expanded field of environment.[30] This trend was well illustrated by two multimedia exhibitions held in 1966, 'Color and Space' and 'From Space to Environment', both of which were organised by Tōno and participated in by Isozaki.[31] If 'Color and Space' called attention to the element of colour and light that had long been suppressed by stoic modernism, 'From Space to Environment' played a crucial role in disseminating the concept of 'environment' among artists, following Allan Kaprow's interactive happening or large-scale assembly that surrounded viewers' environment. The accompanying catalogue for 'From Space to Environment' makes it clear that the idea of environment denoted a 'more dynamic and inseparable relationship between a person and her surroundings than a space'.[32]

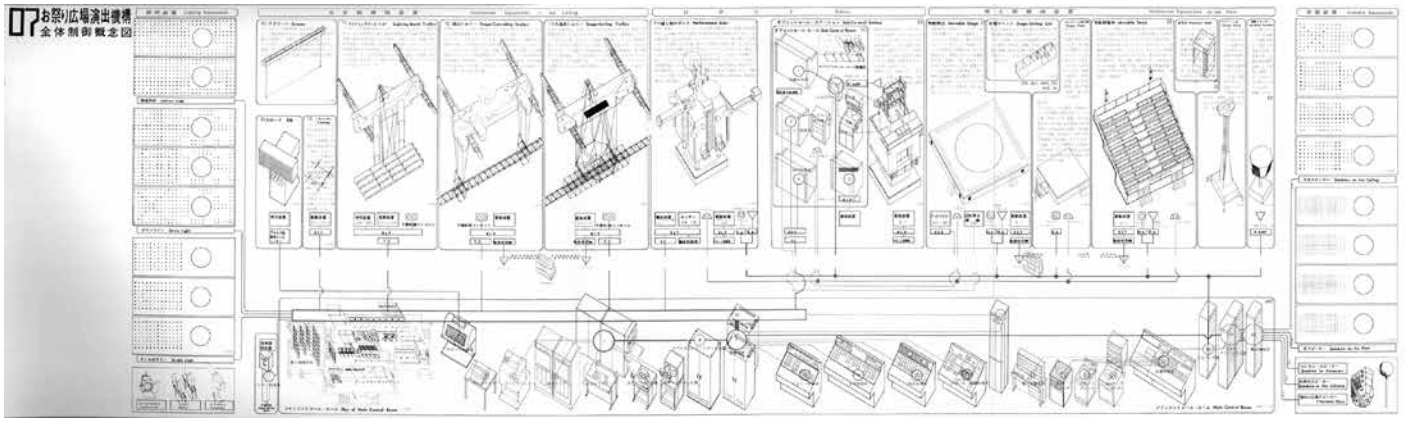
In both exhibitions, Isozaki not only displayed the exhibition space but also submitted a 1/20 model of his design for the Oita Branch of Fukuoka Mutual Bank (1966–8). This maquette, entitled *Architectural Space*, was nearly two metres in height, cleaved in the centre by a slot through which there emanates black light and is crossed on both sides by white beams at forty-five degree angles to the slot *[4]*. The architects hung this maquette on the gallery wall, as if it were a painting or a relief. To his disappointment, *Architectural Space* was simply accepted by other participants as an 'unusual color sculpture', rather than an exquisite model of a building that explored a new type of space.[33] However, by participating in these exhibitions, Isozaki had a chance to rethink architecture not as relating to physical objects but as dealing with the immaterial environment.

The Oita Branch of Fukuoka Mutual Bank, completed in 1967, presents not only a physical structure but also a virtual space that is dominated by colour, light, and movement. The building's interior is particularly marked by the unprecedented use of vivid colours, which creates a vital and playful ambience, while the overhead bridges and labyrinth corridors stimulate the users' bodily engagements *[5]*. Pipes and beams are brightly coloured and exposed as if they were sculptural ornaments. Impressed by the building's psychedelic ambience created by red stairs, salmon pink walls, and reflected orange waves of light, Tōno describes the Oita Branch of Fukuoka Mutual Bank as a 'place where girls in miniskirts might energetically dance about, a place cheerful, active, and moreover sporty'.[34] Referring to Marshall McLuhan's media theories, Tōno compared the visitors' phenomenological spatial experiences of this building with the act of switching TV channels.[35]

Throughout his consistent interactions with art circles, Isozaki was able to articulate a radical design methodology called the 'invisible city', an interactive and participatory environment that would transcend the object-centred modern architecture. Already in 1963, he proposed the idea of an 'invisible city' in his historical overview of the four stages of urban design as follows:

1) The substantial stage, which saw urban design as a physical decoration of cities, as seen in Haussmann's renovation of Paris.
2) The functional stage, which developed from the Athens' Chart of CIAM based on mechanical division of space according to functional zones.
3) The structural stage, which was based on a mechanical analogy between architecture and living organisms as seen in Tange's Tokyo Plan 1960 and Metabolism's future city.
4) The semiotic or symbolic stage, which evolved from electronic communications and control systems.[36]

Isozaki called the semiotic or symbolic stage an 'invisible city', a complex immaterial sign system that undergoes constant change. This latest stage suggests a paradigm shift from the generally accepted concept of architecture as characterised by a certain tension governing physical urban compositions to a flux of information occurring both inside and outside the physical structures of the city. As architectural historian Ken Tadashi Oshima has pointed out, the emphasis on the ever-



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6 Arata Isozaki, Conceptual diagram for the Festival Plaza's control system, Expo' 70, 1970.

changing process and flow constitutes the essence of Isozaki's design method that runs through his seminal projects from the 1960s to the present.[37]

The idea of an 'invisible city' originally derived from his research project on traditional Japanese cities conducted by the City Design Research Group (*Toshi dezain kenkyū tai*).[38] Beginning in 1961, Isozaki participated in the research project of the City Design Research Group (*Toshi dezain kenkyū tai*), initiated by Tange and Teiji Itō, and wrote a report.[39] The aim of this project was to explore the elements of traditional Japanese cities, which could not be adequately explained through the use of Western urban concepts. While Western cities are dominated by monumental buildings, their Japanese counterparts are governed by the dynamic ambience of lively neighborhoods called *kaiwai*. For Isozaki, Japanese notion of *kaiwai* provided a precedent to or equivalent of the latest semiotic stage of urban design.

At the outset, Isozaki's model of the 'invisible city', anarchistic and destructive, celebrated the uncontrolled dynamicity and unprecedented interactions of various elements that comprise a city. However, after drawing on the focus on cybernetics that prevailed in architectural circles, it was updated to become a constructive design method. Isozaki's aim was not restricted to simply diagnosing a contemporary city as a nest of invisibilities, ever-changing combinations of invisible networks of information and signs. Rather, he hoped to find a solution to make one's way through the darkness of ruins.

For Isozaki, cybernetics is an 'Ariadne's thread to lead us out of the maze of the city.'[40] In his 1967 essay titled 'Invisible City', he promotes the idea of a 'cybernetic environment', a self-regulatory system characterised by following the five features: (1) homeostasis; (2) interchangeability; (3) movability; (4) a man-machine system; and (5) a self-instructing feedback system. Conceived by American mathematician Norbert Wiener based on wartime military research on aircraft feedback devices, cybernetics is the study of communications, feedback, and control. Relying on cybernetics, Isozaki was interested in replacing artists' intuitive and playful notion of the environment with a more systemic and scientific method of architecture and urban planning.

The 1960s was a time when the cybernetic concepts of communication, control, and feedback first entered architectural criticism. This trend was represented by the following architects, of whom Isozaki was aware: Hans Hollein, who called for a complete rebooting of architectural thinking and the elimination of disciplinary boundaries; Cedric Price, who replaced the notion of immutable monumental structures with a cybernetic system; Archigram, which shifted its interest from hardware megastructures to software environments; and Christopher Alexander, who proposed the idea of pattern language, a universal language forming the environment that influenced computer science.[41]

Japanese architecture also witnessed what media scholar Yuriko Furuhata called a 'cybernetic turn' in the 1960s at the threshold of the radical transition to a post-industrial and information era.[42] At the centre of this cybernetic turn was a group of architects who proposed visionary urban schemes at the Tange lab. As Furuhata has claimed, Tange's technocratic approach that stressed control and management was distinguished from Isozaki's anarchistic one that favoured interactivity and spontaneity. Nevertheless, it was clear that Isozaki also pursued a self-regulatory organisation system that could enhance spontaneity and interactivity to the extent that they were controllable and manageable. His idea of a cybernetic environment saw its realisation at the Festival Plaza of Expo '70.

The Festival Plaza as a cybernetic environment

Together with the 1964 Tokyo Olympics, Expo '70 was widely conceived as the culmination of a celebratory drama of the country's remarkable recovery from the ashes of the war, to becoming an economic superpower. Invited by Tange, Expo's chief designer, Isozaki was involved in designing the Festival Plaza from 1967 to 1969. The Festival Plaza, a multipurpose open space located at the centre of the fairground roofed by Tange's space frame, was mainly used for three purposes: as a place for national day events in the morning, a rest zone in the afternoon, and a

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7 Arata Isozaki, Tsukuba Center Building, Tsukuba, 1983.

stage for large-scale shows in the evening. It was not a conventional building but an expanded field of an immaterial environment in which visitors could be immersed in a vast perceptual space of light, colour, sound, and dynamic movement. In this sense, the Festival Plaza can be seen as an enlarged extension of the aforementioned multimedia exhibitions of 1966, 'Color and Space' and 'From Space to Environment'. In fact, Isozaki, together with artist Katsuhiro Yamaguchi, a key contributor to those exhibitions, founded the company Environmental Planning to prepare for this multimedia setup of the Festival Plaza.

The idea of the Festival Plaza was first conceived by Uzō Nishiyama, a professor of architecture at Kyoto University, who drafted the master plan of the Expo site in its earlier stage. Drawing on the concept of a traditional festival, Nishiyama tried to offer a symbolic centre of the fair that accommodated face-to-face interactions among visitors. Nishiyama hoped that the Festival Plaza, characterised by contingency and eventfulness, would serve as an 'antidote to the capitalist spectacle in which people are merely reduced to passive consumers'.[43] However, the Festival Plaza was not as liberating and spontaneous a space as it was intended to be. Rather, it functioned like a 'control room', a vast governing system that treated human beings as quantitative data.[44]

The operation of the Festival Plaza was based on computer-controlled feedback mechanisms, the process by which continual adjustments are made based on past processes *[6]*. Isozaki's 1967 essay 'The Invisible City', in which he articulated the cybernetic

model of the city, served as theoretical background for the design of the Festival Plaza. By means of magnetic tapes bearing preset programs fed into a computer, a six-channel tape recorder was able to control all kinds of activities occurring in the Festival Plaza. The centrepiece of this space was two giant robots nicknamed Deme and Deku, designed by Isozaki with the help of a robot engineer, Yoshi Tsukio. These robots were equipped with a subcontrol system that sensed the surrounding sound and light, and sent the sensations back to the main control computers. On the ceiling, seven moving trolleys, hung under the space frame of the Grand Roof, amplified the stage effect by providing additional light and sound.

Here, Isozaki appeared as what architectural historian Alan Colquhoun called the 'programmer', who channelled users' activities and mobility in the service of the authorities and market.[45] Understandably, the control room operation of the Festival Plaza received criticism from radical artists and critics. Yoshimura, the former leader of Neo-Dadaism Organisers and the plaza's event production, pejoratively called the Festival Plaza a 'managed plaza', a highly controlled space whose primary emphasis was given to safety and control.[46] Similarly, critic Ichirō Haryū remarked that people who visited the Festival Plaza succumbed to being in the position of spectator and passively received the Expo as a festival bestowed on them by the designer or the fair authorities.[47]

Such criticism was not restricted to the Festival Plaza itself but expanded to the Expo '70 as a whole. When Expo '70 was held, Japanese society was not only enveloped in the euphoria of the economic miracle but was also experiencing violence and social upheaval. In June 1970, large-scale political demonstrations took place against the automatic renewal of the *Anpo*. The student movement and the anti-Vietnam War protesters also appeared as powerful oppositional forces in the society. Expo '70 divided the Japanese intellectuals and art communities into those who supported it, and those who opposed it. While a majority of Japan's leading artists and architects including Tange and the Metabolists participated in this national event, some radical artists associated with anti-war and anti-*Anpo* protests criticised it for its deceptive nature, calling Expo '70 a form of state propaganda and refusing to take part in it. While Expo '70 gave Isozaki a rare chance to realise his visionary urban schemes, albeit partially, it forced him to collaborate with the state and the rosy narrative of the future and progress championed by the government and technocratic architects despite his oppositional politics.

As soon as Expo' 70 ended, Isozaki openly expressed regret over his participation in it by stating, 'I was utterly exhausted with that dubious aftertaste of disgusting bitterness as if I had been forced to engage in war.'[48] Isozaki's predicament at Expo '70 revealed that the precarious coexistence of Arata and Shin, a destructive artist and a constructive architect, was no longer possible. This was not just a problem for Isozaki himself; the convergence of creative individuals and cross-disciplinary connections that prevailed in the 1960s soon faded away in Japanese art and architectural world.

The legacy of an invisible city

Expo '70 was widely viewed as a 'spectacular swan song' of the modern movement in Japan[49] and marked the arrival of a new trend called postmodernism, which placed its emphasis on such elements as historical style, ornamentation, and popular and playful expression. After Expo '70 ended, Isozaki shortly continued his experiments with cybernetic environments as seen in his proposal for Computer-Aided City (1972), a cabled city animated by information exchanges. However, Isozaki soon rode the wave of the postmodern movement by presenting a series of prominent postmodern designs.

Isozaki's postmodern turn was far from abrupt but stemmed from his idea of the 'invisible city' developed in a dialogue with artists since his formative years. Already in the 1960s, Isozaki attempted to reintroduce colour and symbolism to architecture, means of expression that had long been suppressed by modernism. Moreover, Isozaki's call for a complete rebooting of architectural thinking and the elimination of disciplinary boundaries as opposed to the object-based and medium-specific approach of modernism converged in postmodernism's all-encompassing aesthetics. His proposal for the semiotic stage of urban design, in which a city is conceived as a virtual world filled with information and signs, prefigured Charles Jencks's semiotic approach that considers architecture as a kind of language, a means of communication.

I would like to conclude this article by briefly mentioning Isozaki's iconic postmodern design, Tsukuba Center Building completed in 1983 *[7]*. It is a complex of commercial and cultural facilities including a hotel, civic centre, shops, and plaza. The design not only employs platonic elements including cubes, circles, and triangles but also refers to Claude Nicolas Ledoux's neoclassical column and Michelangelo's Renaissance plaza. Such a broad formal language, which is frequently figurative and historically eclectic, serves as a vehicle for communication and cultural expression. This project is characterised by the playful use of various materials with different textures, colours, and surface patterns. As far as the interior space is concerned, one might explore a physically and emotionally stimulating ambience shaped by the ever-changing combinations of expressive ornaments, dramatic lighting, and dazzling, vivid colour. Given that the essence of the Tsukuba Center Building is less a singular physical entity than a stage-set like space consisting of various signs, images, and users' activities, it can be argued that this building is in no small part indebted to Isozaki's earlier idea of the 'invisible city'.

Notes

1. Arata Isozaki, 'Toshi hakaigyō KK [City Demolition Inc.]', *Shinkenchiku* (September 1962).
2. Joan Ockman, *Architecture Culture 1943–1968: A Documentary Anthology*, ed. by Joan Ockman (New York: Rizzoli, 1993), p. 402.
3. Arata Isozaki, *Kūkan-e* [*Toward Space*] (Tokyo: Bijutsu Shuppan-sha, 1975), pp. 11–20.
4. This essay was translated several times in to English. See Arata Isozaki, 'City Demolition Industry. Inc.', in *A New Wave of Japanese Architecture* (New York: The Institute for Architecture and Urban Studies, 1978), pp. 48–51; Arata Isozaki, 'City Demolition Inc.', *South Atlantic Quarterly*, 106:4 (autumn 2007), pp. 853–8.
5. Noi Sawaragi, *Sensō to banpaku* [*World Wars and World's Fair*] (Tokyo: Bijutsu Shuppan-sha, 2005), pp. 116–24.
6. Kenneth Frampton, 'The Japanese New Wave', in *A New Wave of Japanese Architecture* (New York: The Institute for Architecture and Urban Studies, 1989), p. 4.
7. Arata Isozaki, 'As Witness to Postwar Japanese Art', in *Japanese Art after 1945: Scream Against the Sky*, ed. by Alexandra Munroe (New York: Abrams, 1994), pp. 27–31; Arata Isozaki and Hino Naohiko, *Arata Isozaki Interviews* (Tokyo: LIXIL Shuppan-sha, 2014).
8. For Isozaki's active role in the Japanese art scene, see Contemporary Art Center, Art Tower Mito, *Nihon no natsu-1960–64* [*Japanese Summer 1960–64*], ed. by Art Tower Mito (Mito: Art Tower Mito, 1997); Oita-shi Kyoiku linkai, *Neo-Dada Japan 1958–1998: Isozaki Arata to Howaito Hausu no menmen* [*Neo-Dada Japan 1958–1998: Arata Isozaki and the Artists of 'White House'*] (Ōita-shi: Kyoiku linkai, 1998); Midori Yoshimoto, 'From Space to Environment: The Origin of Kankyō and the Emergence of Intermedia Art in Japan', *Art Journal* (autumn 2008), 25–45; Midori Yoshimoto, 'Expo '70 and Japanese Art: Dissonant Voices: An Introduction and Commentary', *Review of Japanese Culture and Society* (December 2011), pp. 1–12; Yasufumi Nakamori, 'Imagining A City: Visions Of Avant-Garde Architects and Artists from 1953 to 1970 Japan' (PhD dissertation, Cornell University, 2011).
9. Arata Isozaki, 'Runaway System', in *Nihon no natsu-1960–64*, p. 81.
10. Yoshikuni Igarashi, *Bodies of Memory: Narratives of War in Postwar Japanese Culture, 1945–1970* (New Jersey: Princeton University Press, 2000), pp. 3–18.
11. Metabolism consisted of architects Kishō Kurokawa, Kiyonori Kikutake, Masato Ōtaka, and Fumihiko Maki; designers Kenji Ekuan and Kiyoshi Awazu; and critic Noboru Kawazoe. The Metabolists presented a manifesto at the 1960 World Design Conference. *Metabolism 1960: Proposals for New Urbanism*, ed. by Noboru Kawazoe (Tokyo: Bijutsu Shuupan-sha, 1960).
12. For more on Isozaki's engagement in the Neo-Dada, see Oita-shi Kyoiku linkai, *Neo-Dada Japan, 1958–1998: Isozaki Arata to Howaito Hausu no menmen*; Kuroda Raiji, 'A Flash of Neo Dada: Cheerful Destroyer in Tokyo (1993)', trans. by Reiko Tomii with Justin Jesty, in *Review of Japanese Culture and Society* (December 2005), pp. 51–71; Thomas Daniell, 'Isozaki Arata in Conversation with Thomas Daniell', *AA Files*, 68 (2014), 26–37.
13. The members included Genpei Akasegawa, Shūsaku Arakawa, Betsujin Ishibashi, Kunihuko Iwasaki, Norizō Ueno, Shō Kazakura, Ushio Shinohara, Sōroku Toyoshima, and Masunobu Yoshimura.
14. For Shinjuku as a centre of vanguard art, see Thomas R. H. Havens, *Radicals and Realists in the Japanese Nonverbal Arts* (Honolulu: University of Hawai'i Press, 2006), pp. 131–3.
15. Alexandra Munroe, 'Morphology of Revenge: The Yomiuri Indépendent Artists and Social Protest Tendencies in the 1960s', in *Japanese Art after 1945: Scream Against the Sky*, ed. by Munroe, p. 152.
16. Kristine Stiles, 'Uncorrupted Joy: International Art Actions', in *Out of Action Between Performance and the Object, 1949–1979*, ed. by Paul Shimmel, Russell Ferguson, and Kristin Stiles (Los Angeles: Museum of Contemporary Art, 1998), pp. 227–329.
17. Yoshiaki Tōno, 'Neo-Dada et Anti-art [Neo-Dada and Anti-Art]', in *Japon des Avant-gardes, 1910–1970 [The Avant-gard of Japan 1910–1970]*, exhibition catalogue (Paris: Centre George Pompidou, 1986), p. 53.
18. Arata Isozaki, 'Fuka-katei [Incubation Process]', *Bijutsu Techno* (April 1962); This essay was reprinted in Isozaki, *Kūkan-e*, pp. 46–50.
19. Ibid., p. 50.
20. Arata Isozaki, 'Metaborizumu to kankai o kikarerunode, sono koro o omoideshite mita [To Ask about the Relationship with Metabolism, Let's Think of that Moment]', *10+1*, 13 (spring 1998), p. 30.
21. Arata Isozaki, *The Island Aesthetic: Polemics* (New York: Wiley, 1996), 29.
22. Hajime Yatsuka, 'Architecture in the Urban Desert', *Oppositions*, 23 (winter 1981), 9.
23. Akira Asada and Arata Isozaki, 'From Molar Metabolism to Molecular Metabolism', in *Anyhow*, ed. by Cynthia C. Davidson (Cambridge, MA: The MIT Press, 1998), p. 67.
24. This exhibition featured visionary proposals by the Metabolists, Tange, Ōtaka, and Eika Takayame.
25. Isozaki, 'Metaborizumu to kankai o kikarerunode, sono koro o omoideshite mita', pp. 28–9.
26. Thomas R. H. Havens, *Fire Across the Sea: The Vietnam War and Japan, 1965–1975* (New Jersey: Princeton University Press, 1987), p. 58.
27. For a discussion of the relationship between wartime memories and postwar politics, see Eiji Oguma, *'Minchu' to 'aikoku': sengo nihon no nashonarizumu to* kōkyōsei [*Democracy and Patriotism: Postwar Nationalism and the Public Interest*] (Tokyo: Shinyō-sha, 2002).
28. Yoshiaki Tōno, 'Kyozō no jidai [The Era of Simulacrum]', *Geijutsu shinzō*, 18:1 (January 1968); For the growing interest in simulacrum in the 1960s art world, see Michio Hayashi, 'In Focus: The Shadow Debate', in *From Postwar to Postmodern: Art in Japan, 1945–1989*, ed. by Kyle Bentley (New York: MoMA, 2012), pp. 209–10.
29. Arata Isozaki, 'Yami no Kukan [Space of Darkness]', in Arata Isozaki, *Kūkan-e* [*Toward Space*] (Tokyo: Bijutsu Shuppan-sha, 1975), pp. 148–64.
30. Yūsuke Nakahara, 'Geijutsu no kankyō ka Kankyō no Geijutsu ka [Environmentalisation of Art, Artistisation of Environment]', *Bijutsu techō* (June 1967), pp. 130–41.
31. The Environment Society consisted of thirty-eight artists, including Isozaki, Metabolist designer Kiyoshi Awazu, artist Aiko Miyawaki (who later became Isozaki's wife), and critics Yoshiaki Tōno and Shūzō Takiguchi. For more on this exhibition, see Yoshimoto, 'From Space to Environment: The Origin of Kankyō and the Emergence of Intermedia Art in Japan', pp. 25–45.
32. Kanyō kai, 'Kūkan kara kankyō e ten shushi [The Aim of the Exhibition, From Space to Environment]', *Bijutsu techō*, 275 (November 1966), 118.
33. Yoshiaki Tōno, 'Shikisai to kūkan ten [Color and Space Exhibition]', *Bijutsu techō* (December 1966). This essay was reprinted in Yoshiaki Tōno, *Kyozō no jidai: Tōno Yoshiaki bijutsu hihyō sen* [*The Era of Simulacrum: Tonō Yoshiaki's Art Criticism*] (Tokyo: Kawade, 2013), p. 88.

34. Yoshiaki Tōno, 'Architecture for the Miniskirt Age', *Japan Architect* (May 1968), pp. 33–4.
35. Yoshiaki Tōno, 'Shikisai no hakken [Discovery of Color]', *Shinkenchiku* (March 1968); reprinted in Yoshiaki Tōno, *Kyozō no jidai: Tono Yoshiaki bijutsu hihyō sen* [*The Era of Illusion: Art Critics by Yoshiaki Tōno*] (Tokyo: Kawade Shobō Shinsha, 2013), p. 204.
36. Arata Isozaki, 'Toshi dezain no hōhō [The Method of Urban Design]', *Kenchiku bunka* (December 1963); this article was later included in the following volume, Toshi dezain kenkyū tai [City Research Group], *Nihon no toshi kūkan* [*Japanese Urban Space*] (Tokyo: Shōkokusha, 1968). The City Design Research Group was established around 1961 under the leadership of Tange and architectural critic Teiji Itō.
37. Ken Tadashi Oshima, 'Paradoxical Processes', *Arata Isozaki* (New York: Phaidon, 2009), pp. 10–18.
38. Kenzō Tange, Teiji Itō, and Arata Isozaki, 'Toshi dezain no hōhō [Methods of Urban Design]', *Kenchiku bunka* (December 1963). In 1968, the collective urban study of the City Design Research Group resulted in a volume called *Nihon no toshi kūkan* [*Japanese Urban Space*].
39. Toshi dezain kenkyū tai, *Nihon no toshi kūkan* [*Japanese Urban Space*] (Tōkyō: Shōkokusha, 1968).
40. Arata Isozaki, 'Mienai toshi [Invisible City]', in *Kūkan-e,* pp. 380–404.
41. A series of essays by Isozaki on his Western architect contemporaries were published in Bijutsu Techō from 1969 to 1973. These essays were compiled in his 1975 publication. See Arata Isozaki, *Kenchiku no kaitai* [*The Dissolution of Architecture*] (Tokyo: Bijutsu Shuppan-sha, 1975).
42. Yuriko Furuhata, 'Architecture as Atmospheric Media: Tange Lab and Cybernetics', in *Media Theory in Japan*, ed. by Marc Steinberg and Zahlten Alexander (Durham: Duke University Press, 2017), pp. 52–79.
43. Uzō Nishiyama, 'Bankoku kaijō keikaku: chōsa kara kikaku e [Expo '70, From Research to Planning]', *Kenchiku zasshi* (March 1970), 197.
44. Yuriko Furuhata, 'Multimedia Environments and Security Operations: Expo '70 as Laboratory Governance', *Greyroom*, 54 (winter 2014), pp. 56–79.
45. Alan Colquhoun, *Essays in Architectural Criticism: Modern Architecture and Historical Change* (Cambridge, MA: The MIT Press, 1981), pp. 117–18.
46. Masunobu Yoshimura, 'Omaturi haroba ka kanri hiroba ka: kanryōteki henshitsu no gisei [The Festival Plaza or the Management Plaza: A Victim of Technocratic tendency]', *Asahi shimbun* (11 August 1970).
47. Ichirō Haryū, 'Bunka no haikyo toshiteno banpaku [Expo '70 as the Ruins of Culture]', *KEN*, 1 (July 1970), p. 114.
48. Arata Isozaki, 'Rendaiki deki nōto [Chronological Note]', *Kūkan-e*, p. 511.
49. Hajime Yatsuka, 'Architecture in the Urban Desert', *Oppositions*, p. 8

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