

ARCHITECTURE FOR THE SIMULATED CITY (1991)

Map-like aerial images of Tokyo flow across the floor. Photographs taken automatically from an altitude of 300m are graphically processed by computer and smoothly homogenised. Alternatively, the backs of the heads of young boys facing game machines in a video arcade are aligned on the screens. The images then instantaneously change to a scene of an expressway taken from a video game. The scenery vanishes at the speed of Akira racing on his motorcycle in the eponymous movie. Even here, the sense of depth on the screens is completely erased by graphic processing and transformed into cartoon landscapes.

A 10m-wide and 28m-long floating floor has been paved with translucent acrylic panels. An undulating 5m-high translucent acrylic screen has been set horizontally; one part of this incorporates a liquid-crystal sheet, the transparency of which can be electronically controlled. Another wall is clad with aluminium panels; perpendicular to it, a translucent cloth hangs from the ceiling. All these elements are screens for images from 44 projectors. Eighteen projectors are suspended from the ceiling, and shine images on the acrylic floor, while the remaining 26 units shine overlapping images from behind hanging acrylic or fabric screens.

Numerous images have been edited and collected on 12 laser discs. These are mostly scenes of everyday life in Tokyo. Crowds of people traverse zebra crossings, businessmen converse on the railway platform while waiting for a train, young people talk on public telephones, and so on. These incessantly changing video images are

collaged on 44 screens. The images are mostly random, but occasionally all 44 screens show the same image. Ambient sounds processed by a synthesiser are emitted from 16-channel speakers, making the space more three-dimensional.

Titled 'Dreams', this space was the third room of the *Visions of Japan* exhibition, held in London. Visitors at the show were inundated with floating video images and saturated with sounds. Their bodies floated on the river of the acrylic floor and swayed as if they were seasick. Crown Prince Hironomiya of Japan, attending the opening of the show, said he was sure he would have felt the space more intensely if he had drunk alcohol beforehand. Prince Charles, on the other hand, asked me what lay beyond the images. I answered that there might be nothing beyond them, and so he asked if I was an optimist. I answered that of course I was.

According to exhibition producer Arata Isozaki, the space was originally to have been titled 'Simulations': it was renamed 'Dreams' in response to opinions from the London side that 'Simulations' would be too obscure for ordinary museum visitors. Yet the space is an accurate simulation of the reality of Tokyo, or perhaps it is more accurate to say that Tokyo is a simulated city. For instance, the experience of walking through the Kabuki-cho district at night closely resembles the experience of this imagistic space. In either space, our bodies float amid vast images and showers of sounds. When gazing into video-game screens, we are already on the other side of the screens. As suggested by Crown Prince Hironomiya, we become intoxicated by the spatial illusions of light and sound, and as implied by Prince Charles, we are paused in a space without hope. Perhaps we will never arrive in either future.

There exists, however, one distinct difference between the 'Simulations' room and the reality of Kabuki-cho. Compared to the real Kabuki-cho, which brims with noise and chaos, the city collages projected on the screens are suffused with white noise. Or, they merge into streams of computer graphics that represent physical flows. In other

words, the urban scenes lose their distinct outlines and dissolve into morning haze. All the scenes of reality merge into a state of calm oblivion that may be called 'nirvana'. If we are to imagine the future, what else can we expect but a state of extreme technological control?

Five objects were placed within the deluge of images in this space. Designed by Anthony Dunne, a young British designer, these objects could be described as television sets fresh out of their packages, or as comical androids inhaling the atmosphere of information. In any case, they are objects that generate weird sounds and transform images in response to the noises suffusing this atmosphere. They use readymade containers, but in comparison to commercially available television sets, which unidirectionally absorb the major flows of information, these are personal, poetic objects that allow us to recognise anew that our surroundings are suffused with noise. Perhaps somewhere inside our bodies we have already begun to grow an additional organ that inhales noises in the same way as these objects. Even if we cannot visualise it, our bodies are unceasingly touching and sensing this atmosphere of technology, which forms our bodily rhythms. As each day passes, we may have already begun to possess an android-like body without our being aware of it.

Okawabata River City 21 Main Gate, known as the 'Egg of Winds', was based on a very similar concept. Wrapped with aluminium panels, an egg with a maximum length of about 16m and a maximum diameter of 8m floats in front of two high-rise apartment buildings. During the day, the egg is merely an object reflecting sunlight, but at night five LCD projectors installed inside the egg are switched on. They project images from videotapes and television onto the partly perforated aluminium-panelled exterior surface and directly onto the screens inside. The aluminium egg has a silver gleam in daytime, but when night falls, it transforms into a hologram-like presence, a sculpture comprising nothing but vague three-dimensional images without a sense of reality. People on the street look up at the egg, pause and suspiciously mutter,

'what's that?', before moving on. The object is not a street-side television, and it differs in character from the Jumbotrons that decorate the facades of railway station buildings. It is an image object that becomes visible due to the information-suffused surrounding atmosphere. It is an image object that appears and disappears with the wind.

During the same period that I built the 'Egg of Winds' a model with a very similar shape was displayed at an exhibition venue in Brussels. To be honest, this was the initial model for the River City 21 Gate – that is to say, a model formed as a ship-like polyhedron comprising triangular planes. The Brussels 'Egg of Winds' was wrapped with translucent fabric and perforated aluminium panels, and also had a floor made of translucent acrylic. Though people could not enter, they could still look into the translucent egg and see chairs and tables made of translucent materials, lit by natural light from above. In short, people could see the illusion of a packaged urban lifestyle in the egg. These were all temporary and insubstantial objects, like a mirage. Rather than possessing structure, they resembled ephemeral natural phenomena, sometimes appearing and sometimes disappearing in the atmosphere, like rainbows.

Accordingly, if these two Eggs of Winds are superimposed, they could almost be described as the 'design of atmosphere'. If some kind of spray were to be dispersed into this atmosphere filled with as yet unvisualised information, image-like objects might faintly appear. The act of making architecture today might be described as the discovery of such sprays, that is to say, filters that enable visualisation.

In this sense the Tower of Winds, built some years ago in front of Yokohama Station, could be said to best embody the 'design of atmosphere'. The tower's distinguishing characteristic is that it is an object of light deliberately placed in an environment surrounded by neon lights – not an artwork placed in a museum. While in terms of spectacle the tower cannot compete with the neon lights in

the vicinity, it uses almost the same blinking rhythm, so people are engulfed by the impression that the atmosphere in the vicinity of the tower is being distilled. My intention was not for light to be emitted from a material object set in the atmosphere, but for the atmosphere itself to be converted into light.

The River City 21 Egg of Winds was initially intended to engender a future house, that is to say, it was to be an image for a new dwelling model. It cost so much to create the shell alone that the image could not be realised; still, what should be discernible in the original atmosphere is a new lifestyle for a simulated city. On the other hand, the Brussels 'Egg of Winds' is also named 'Pao for the Tokyo Nomad Girl', which was for me the image model for an urban dwelling. Parallel to the increasingly imagistic quality of urban lifestyles, it depicted an image of an urban lifestyle that departs from reality as the days go by. Therefore, the attribute common to both eggs is that they are containers suggestive of new lifestyles. In short, I wanted to indicate here that the loss of reality in urban lifestyles has a complementary relationship with this image-like architecture.

In every era, dreams of new lifestyles lead to the emergence of new spaces. For instance, the dreams of 'modern living' given to people in the 1950s were spatially materialised in images of a bright, electrified lifestyle. Well-lit houses with large openings, sheltered by flat roofs or very low-pitched roofs, industrialised kitchens with built-in refrigerators and gas stoves, dining chairs with chrome-plated pipe frames and thin bent ply backs – these bright images promoted a modernised lifestyle focused on the nuclear family. Wearing a clean white shirt, the father works in a bright steel-and-glass office building and comes home to his smiling wife and children waiting in an electrified kitchen and dining room. The picture is completed by a Volkswagen Beetle or a Citroen 2CV parked in the garage.

If the ideal lifestyle for the electric age was spatialised as this kind of modern living, we have not yet found spaces

appropriate to the ideal lifestyle of the computer age. Rather than houses, the recent situation is best symbolised by the differences between the Volkswagens and Citroen 2CVs of former times and the Toyotas and Nissans of today. That is to say, as opposed to the Volkswagens and Citroen 2CVs, which were designed with forms directly alluding to the functions of their various mechanisms, today's Japanese cars are entirely wrapped in smooth, superficial designs that conceal the technology – the intelligent electronics – inside. Today's cars are based on image designs that are mostly unrelated to their internal workings. Various other household electric appliances could be described as following almost the same design concept.

Just as automotive design and industrial design have adapted to consumer needs – in other words, to fashionable modern styles – we can see the same increasing superficiality in the case of dwellings, though here the designs are solely oriented toward conservatism. In the world of architecture, where functions and forms have never been strictly related, styles tend to express a nostalgic longing for an economically stable lifestyle.

However, what actually constitutes the new lifestyle of today? It seems this is a question we are too busy to think about, distracted as we are by the constant parade of gorgeous new items and spaces. The multiple foodstuffs, items of clothing and daily necessities that we see glittering on the shelves of department stores and convenience stores promise to fulfil our dreams of a new lifestyle. But the moment we eat, wear or place them in our dwellings, they lose their lustre, and we have to start our pursuit of novelty all over again.

From daily necessities to houses, products that may superficially appear quite individualistic in fact conceal a homogenisation that increases day by day. Conversely, as symbolised by contemporary automotive design, it is the homogeneity of their contents that sustains the individuality of their outward appearance (albeit with slight variations). Not just houses but larger works of architecture are heading for the same fate. For example,

the development of air-conditioning technology isolates architecture from local climates, ensuring that architecture of the same style is possible anywhere in the world. Moreover, any style of architecture may be supported. Even the apparently rich individuality of the multiple works of architecture in our surroundings is, in many cases, no more than the superficial decoration of homogeneous content with differing forms. These buildings are like the perishable, Saran-wrapped goods that you see in the windows of convenience stores. A display of such rich variety is only possible by covering it with Saran wrap, freezing it, and placing it in a homogeneous state.

Since the emergence of steel and glass, we have been in pursuit of the homogeneity known as 'universal space'. However, this universal space, like the coordinate axes of Euclidean geometry itself, may be rationally homogeneous but finally does not quite attain homogeneity. Rather, the tendency to express regionalism in architecture, and the desire for a strong sense of monumentality, could perhaps be said to have prevented neutral homogenisation.

The phenomenon of homogenisation in today's architectural space could therefore be said to have a very different appearance from the former aesthetic pursuit of universal space. What is being homogenised today is society itself, and for architects to oppose this is futile. The more that architects rely on individual – or rather, personal – expression, the more they fall into a homogeneity that just connects points on the coordinate axes of Euclidean geometry. The whole of society is becoming enveloped with a large sheet of Saran wrap.

Architects used to yearn for homogeneous grids because society was assumed to be opaque. They attempted to incorporate transparent, neutral grids into a society that seemed as opaque and heterogeneous as lava. Consequently, even if homogenisation was achieved in a universal office space, this was an experiment within a closed field. If they took one step outside of the office, they found real, opaque spaces.

Today, our environment is suffused with a vacant brightness. Just like the commodities crammed on convenience store shelves, our cities have become desiccated and bleak. Over the last ten years, moisture has been removed from cities, as if they had been thrown into a huge tumble drier. While surrounded with a variety of goods, we are living within utter homogeneity. Our affluence is supported by a sheet of Saran wrap.

The formation of a simulated lifestyle is predicated on the Saran wrap that envelopes society. For instance, rather than going directly home at the end of the day, businessmen and office ladies will stop off downtown. There they drink, eat, sing, dance, talk. Sometimes they amuse themselves at the cinema or theatre, play video games, or go shopping. Swim or run at a sports club. The times and spaces that belong to the interval between office and home are, for them, completely fictional. They eat and drink as if it were their own mothers' cooking, sing and dance as if they were celebrities, converse drunkenly as if with their closest friends, purchase their dreams of affluence, exercise in artificial spaces as if they were swimming in the sea and running around a field. Each of these spaces, actions and even the objects acquired in this intermediate zone, are all simulations. Moreover, these simulated lifestyles and spaces, no longer confined to the intermediate zone of downtown, have infiltrated offices and houses. Our entire lifestyle, including family and work, is now simulated. The distinction between real and unreal has been lost.

Needless to say, from our sense of sight through to taste, hearing and touch, we have lost our sense of reality. We have completely lost our sense of conviction about what is truly delicious, what we are actually hearing, what we are really touching. That is because our body itself undergoes transformation without relation to our consciousness. Or because our mutual communication systems have undergone radical changes. We have been provided with bodies that may easily invert the relationship between reality and unreality by the single movement of an image.

The growth of media has detached words from things, and diluted the reality of the things themselves. By means of words and pictures alone, unaccompanied by things, we are increasing the proliferation of images. Thus, a simulated lifestyle expands our own selves into other fields. Communication through media – that is to say, communication unaccompanied by physical substance – has become normal for us, and unmediated communications finally have become ineffective. The old communication networks, rooted in regions and places, have become almost meaningless. Under the abnormal influence of dwelling in cities, this could be described as the negation of physical distances due to the increase of an instantaneous, temporary network formed by innumerable types of media.

Thus, when building architecture for a simulated city, we must answer two difficult questions. One is the question of how to make substantial architecture while substantial things are losing their meaning, and the other is the question of how we can build enduring architecture within the process of regional communities being negated as media communication networks appear and disappear, disappear and appear.

These two questions are truly perplexing. Both are contradictory conditions. What kind of architecture is possible within such contradictory relationships?

Of course, there may be no definitive solutions for such abstruse questions. What is clear, however, is that it is meaningless for us to stand outside and view a contradictory place as non-contradictory, that is to say, to not acknowledge the contradiction. All that remains for us is to close the gaps in these contradictions as best we can. That is to say, the first problem is how to make fictional architecture or imagistic architecture, and the second problem is how to make ephemeral architecture or temporary architecture. These adjectives do not mean that architecture should be replaced with images, or that temporary things should be used as architecture. Rather, we must build imagistic (fictional) and temporary (ephemeral) entities as permanent architecture. Today,

when all of society is wrapped in a large sheet of Saran wrap, it is impossible for us to make foodstuffs covered in Saran wrap appear to be the genuine article. We can, however, beautifully visualise the Saran wrap itself. I think that the future of architecture now depends on how we reveal the structures of these fictions.

ARCHITECTURAL SCENERY IN THE SARAN WRAP CITY (1992)

Recently, for the first time in three years, I saw the waterfront of Tokyo Bay from a ship. Every time I come here, I'm seized by deep, inexpressible emotions as I catch glimpses of an aspect of Tokyo's grandeur that remains unseen when one is inside the city: the innumerable clusters of shipping containers sliding down unmanned conveyor belts, the incredible mountains of garbage piling up, the many and varied vessels plying the polluted sea. Rather than a waterfront, I comprehend this as the backyard of a huge metropolis. Inside it every day, I experience nothing but spaces of dazzling fictions, but when seen as if from backstage, the vast quantities of energy and machinery, and the real spaces that support these fictions, are made visible.

However, the waterfront has undergone great changes in a mere three years. This backdrop to the huge alien life-form that is the city – that is to say, the bay area on its outer edge – is imperceptibly transforming into a new interior. The waterfront from Shinagawa to Harumi is lined with huge numbers of skyscrapers, highways stretch over the sea to connect the landward side to the reclaimed land of Ariake, while the artificial islands adjacent to Yumenoshima are linked to the existing city by a multitude of pipelines and densely packed with an unbelievable number of cranes.

Standing on top of the 120m-high abutment of the crossing bridge, I am lost for words at the immensity of the energy concentrated in this constantly reborn city. I'm just stupefied. Any sentiment for history is utterly crushed.

Perhaps within a few years dozens of skyscrapers will have arisen on these artificial islands, and surely urban activities will then commence. It's like an efficient artificial organ connected to the alien.

Utterly new kinds of urban spaces are constantly emerging here, of a kind we have never before experienced. Groups of buildings are erected on arid, homogeneous plots of land. They are completely detached from their *genius loci*. To be sure, architecture estranged from the land can still be impressive. Cities unburdened by history, such as Houston and Atlanta, are not uncommon. Tsukuba University Town and Tama New Town are highly artificial constructions. However, given the ferocious speed of construction with which crisp-edged plots of land continue to suddenly appear in the sea, this waterfront is dominated by an unprecedented and strange homogeneity. By comparison, even the business district near the west exit of Shinjuku Station, crowded with uniform skyscrapers, is a serene and sentimental scene.

If architecture has become estranged from the land, can the field of architecture itself truly survive? When thinking about the homogeneity that pervades Tokyo, our insistence on the specialised logic of architecture begins to seem pointless, even without witnessing stupefying scenes like those on the waterfront.

More than being difficult to resist, it's a pleasant feeling of being detached from your own body. This vast, homogeneous space pervading Tokyo is not so old. It probably goes back only a few years, or about ten years at the most.

Since entering the 1980s, we have begun to live in two cities. One is the city-as-substance, a city supported by physical existence and objects, and with which we have been intimately accustomed since ancient times. It has a spatial hierarchy that corresponds to the social organisation of individual-family-regional community-nation. Accordingly, it's a city with a network system that extends in concentric circles, and provides a static, stable order. All modern urban planning theories seem to have been predicated on the notion of the city-as-substance.

By contrast, the city-as-phenomenon appeared after 1980, together with the sudden development of a society permeated by electronic media. This is the city as information, the virtual city as event. Without the stable spatial and temporal order of the city-as-substance, it's a city without hierarchy that extends topologically in space and time.

These two cities have arisen like the two sides of the same coin, and needless to say they cannot be clearly separated. However, the city-as-phenomenon kept expanding throughout the 1980s, and gradually began to form unique spaces independent of the city-as-substance. While this is by no means limited to the city, in a developed consumerist society it occurs parallel to the way signs are inevitably detached from substance and become phenomena that can walk on their own two legs. Put conversely, we consume only signs and progressively discard the objects themselves, and finally even begin to apply such consumerist society mechanisms to architecture and urban space. As a result, the built surfaces that cover the city are clad with innumerable ornaments, and architecture-as-substance is hidden. Not limited to the neon lights and various signboards and show-windows of commercial architecture, this applies to the brazen, luxurious expressions of entire facades. This phenomenon is also obvious in the commodified houses made by kitset housemaker companies, even if their exteriors may look stylish. So in the afternoon, all these urban spaces are like places for storing bulky garbage, but from evening onward, they change radically and into scenes that make you wonder if you are standing within a kaleidoscopic interior. The thickness and weight of the object-as-substance is diluted, and the most enchanting moment for a city like Tokyo is in the evening time when urban spaces composed only of phenomena of light and image begin to appear. This is a moment in which the body becomes intoxicated by the city-as-phenomena, and dissolves. The body that should have resisted being consumed is now swallowed by a city that is like an alien without substance.

The city-as-phenomenon is timeless and placeless. Such urban spaces can be characterised by the five words homogeneity, transparency, liquidity, relativity and fragmentation. We arrive at a space that is neutral, unambiguous, dry, odourless and homogeneous. A rarefied, transparent space in which the thickness and weight of objects cannot be felt. A transient space of ceaseless flow in which each sign gives rise to the next sign. A relative space that prepares alternatives able to be copied at any time, a fragmentary space unable to attain a spatially and temporally closed cosmos.

We can see the apotheosis of such spaces in the typical convenience store. The shelves are inundated by every possible lifestyle commodity, with no hierarchy among them. All the commodities are set parallel. They aren't gaudily decorated, and the distinctions between high-level goods and cheap items are relativised only by simple differences in cost. Perishable foods are covered with Saran wrap, and thereby homogenised and relativised. By being wrapped with sheets of thin, transparent film, all perishable foodstuffs are deprived of any sense of vitality, and take on a neutral, abstract, symbolic existence. Rather than its original function of preserving freshness, the primary role of the transparent film is to ensure a homogeneity that guarantees the ability to make a fair selection.

However, the characteristics of homogeneity, transparency and liquidity that seem to pervade the real city are all attributes that were pursued in the modern architecture of the early twentieth century. For instance, homogeneity is symbolically expressed in Mies van der Rohe's concepts of universal space and the aesthetic of 'less is more'. These were spatially embodied by the neutral grid of the steel frame. Transparency was an extremely important term, as demonstrated in the concepts behind the early works of Walter Gropius and Le Corbusier. According to Colin Rowe, analogies may be made between their buildings and the paintings of László Moholy-Nagy and Fernand Léger. Liquidity was candidly expressed in Giedion's concepts of space-time and the mutual interpenetration of interior and

exterior space. Moreover, relativity and fragmentation routinely appeared in the collage techniques of the Russian avant-garde. In short, these keywords indicate the fundamental aesthetic concepts that wrap modernist architecture and art.

In this sense, it might be said that the modernist aesthetic has been fully realised in urban spaces based on consumerism. To be sure, rather than being a world of individual architectural and artistic expressions, our city is collectively far more homogeneous, transparent, fluid, relative and fragmentary. A neutral and invisible grid seems to extend infinitely throughout our surroundings. All personal, phenomenological expressions can be seen as the play of transparent signs within these coordinate axes. No matter how much individual works of architecture attempt to assert their originality, the instant they are placed in the city, they start to look like the food items covered with Saran wrap arrayed in the windows of convenience stores. Put conversely, all personal, phenomenological expressions are given the possibility of implementation by being covered in Saran wrap. Without the Saran wrap, homogeneity and transparency cannot be preserved in this city.

Originally the steel and glass, or pure-white cubes, of Mies and Corbu were inserted into Europe's cities of stone and brick – in other words, into the spaces of an opaque, heterogeneous and extremely substantial city. However, the circumstances are now completely reversed: the spaces in which these structures are grounded are shrouded in transparency and homogeneity. What kind of architecture can we embed in such ground? Are all our attempts enabled by the presence of Saran wrap? Without the persistent presence of this transparent film, it's impossible to ascertain the domain of architecture within this city.

In contrast with the attempts of the city-as-substance to preserve regional communities, the city-as-phenomenon nullifies the tyranny of the former through media. Moreover, in the city-as-substance, the house expresses

a closed cosmology. In the spaces of a house, the relationships between individual–family–society are explicitly replaced by diagrams of private room–living room, or the route from dining room–entry hall. The centre of the domestic spaces is composed of the living and dining rooms, expressing a strongly centripetal form with regard to the exterior. The private rooms are peripheral spaces enclosing this strong centre.

However, in the city-as-phenomenon, rather than confronting the family, individual family members confront society through media and multiple interlaced networks. Particularly with the telephone, communications expand so as to transcend time and space, followed by diverse transportation networks. Individuals are tied to each other through innumerable tree-shaped networks. Individuals turn their faces directly and completely toward society, and faces that are turned toward the family become secondary. The compositions of conventional domestic spaces now give rise to large disjunctions with reality. A planning layout in which each private room in a dwelling directly confronts society, while the living and dining rooms exist behind them as optional spaces, seems much closer to real lifestyles. At this moment, the centrality of the house is demolished, and simultaneously the cosmology of the house too. A dwelling cannot avoid being transformed into flat and homogeneous spaces.

But in order to maintain the system in which the family unit is the most important unit of society – whatever the degree of its collapse – the cosmologically complete dwelling will not vanish. To the extent that individuals directly confront society, the living and dining spaces must be kept as simulated spaces that symbolise a pseudo-family. The diagram of the confrontation between decorative, stylish detached houses and one-room apartments in residential areas graphically reveals the hidden conflict between these pseudo-cosmological spaces and those isolated individual spaces that have lost their sense of community.

Enormous commercial complexes provide places for face-to-face communication among those innumerable

contingent groups that are conspicuous throughout the city. They fragment and manifest the functions that formerly were found inside the house, dispersing them throughout the city. Cafés, bars and restaurants stand in for living and dining rooms, 24-hour convenience stores for refrigerators, boutiques for wardrobes, gymnasiums for vast gardens, fast-food chains for kitchens, and so on. While honing their infinitesimal differences, each space summons people across time and distance, providing extremely ephemeral and accidental community spaces. Similar to the way that the living and dining rooms inside a dwelling function as simulated spaces for a family, the huge commercial spaces in the city are fragments of the simulated spaces of a dwelling. The spaces that act as the nuclei of dwellings and regional communities continue to be nullified by these simulated spaces covered in Saran wrap. Urban lifestyles are unilaterally compelled to become simulated. As a result, in the city-as-substance we carry on living in permanent residences that are unchanged from the past, while in the city-as-phenomenon we are nomads assembling a virtual house by linking simulated spaces. The nomadic lifestyle is possible only in a city covered with Saran wrap, and the moment it is removed, we will settle in a permanent place. The nomads of the Saran wrap city are sustained by such a double life.

The body-as-consciousness can live in the virtual city-as-phenomenon, whereas the physical body cannot transcend time and distance. In the same way, architecture-as-image can exist in the city-as-phenomenon, whereas architecture-as-substance cannot exceed space or time. Just as the physical body is unable to completely unify its lives in these two different cities, architecture is also unable to support this contradiction: it may have become estranged from its land, but as a physical presence it cannot detach itself from the earth and float about in space. The result is that, while architecture is no more than an exterior surface decorated with facile, gaudy symbols, the backdrop remains the same old kind of solemn substance. Architecture in the Saran wrap city doesn't seem to lean in either

direction. That is to say, it can't be biased to the indulgent, temporary symbolic expressions enabled by the Saran wrap, and neither can it insist on the presence of only those things that have discarded the Saran wrap. To the extent that the two cities in which we live form two sides of the same coin, we live in these two cities simultaneously, and it's impossible to abstract just one of them. In this sense, the architecture we now pursue is nothing other than a manifestation of the Saran wrap.

To manifest the Saran wrap – in other words, to give that transparent film a structure – is to produce a 'device that generates phenomena'. It doesn't exist as phenomena itself; it is a substance that produces and enables phenomena. It is a device that generates landscape, a device that visualises the flows of invisible things like air, and a device that hints at human activity (communications) – that is to say, architecture as a device that generates programming. Though I call it a device, it has a completely different topology from the morphological analogy of the machine pursued by modernism at the beginning of the twentieth century. Rather, it is like a 'barcode', completely without formal expression itself; while an extremely simple substance, it is architecture as a system that triggers diverse meanings. I can't seem to stop myself from coming up with new keywords, but the architecture of the Saran wrap city might also be called 'barcode architecture'.

A GARDEN OF MICROCHIPS (1993)

THE VISUAL IMAGE IN THE ERA OF MICROELECTRONICS

I believe that the 1990 exhibition *Information Art – The Diagramming of Microchips*, held at the Museum of Modern Art (MoMA) in New York, was an event of great importance for the world of architecture and design. I did not see the exhibition but, judging by the catalogue, it consisted of numerous photographs of microchips blown up hundreds of times, in other words diagrammatic images of the integrated circuits used in computers.

The microchips look like delicately woven textiles, made up of patterns of bright colours applied to the silicon in such a way as to form grids. Each image, however, is different from the others. In some striped patterns are repeated, while in others they are subdivided into a patchwork of blocks of different patterns and colours. Many chips have borders and are composed of cell-like squares, arranged like the representation of buildings in a plan. One shows a complex diagram with a pattern that is reminiscent of an organic form, looking like the nervous system of the human body superimposed on a chequerboard.

In any case, the patterns of microchips are electronic textiles that suggest the image of the plan of a contemporary city. A chip, so small that it has to be enlarged hundreds of times before it is visible to the naked eye, can contain millions and, more recently, tens of millions of transistors. Currently, a chip containing billions of them is under development. In addition, the patterns that look like flat surfaces are in reality three-dimensional structures made up of anything from 10 to 25 layers.

The exhibition at MoMA seemed truly innovative to me because the photographs of microchips were used to make the aesthetics of the era of microelectronics visible in images. It succeeded in giving form, for the first time in a decisive manner, to the image of a new aesthetics that is replacing the dominant machine-age aesthetic of the twentieth century.

Almost 50 years have passed since the invention of the transistor and as far back as the 1960s the computer had already made surprising progress. You will probably be asking why it is only now that I am referring to the microelectronic era, given that the transition from mechanics to electronics occurred a long time ago. It is true that even at the time of the Tokyo Olympics, the booking system for the Shinkansen bullet train showed us that computer technology was going to modify society in an irreversible way.

And yet, despite the fact that microelectronics had made amazing progress, we had not yet succeeded in moulding it into clear visible images, as had been done for the machine age. In the field of architecture and design, however much effort we made to imagine the society of the future, we continued to be dependent on visual forms of expression. This difficulty was evident in the images of the city and the works of architecture produced in rapid succession by the Archigram group, which so fascinated young architects and students in the 1960s. Projects like Peter Cook's Plug-in City (1964) and Instant City (1969) and Ron Herron's Walking City (1964) represented visualisations of a technological utopia arising out of a system made up of the machine and the human being playing with the computer.

Although extraordinary imagination went into their design, these cities of the future remained within the aesthetic realm of the machine. They were collages of mechanical objects like huge cranes, three-dimensional structures, launch ramps for missiles and space shuttles on their way to the Moon. Looking back at these projects, only the one called Computer City (1964) by Dennis

Crompton traced the image of a network, a grid, resembling the nervous system. Nevertheless, even this project seems to be a substitute for an integrated circuit, enlarged and configured as the layout of a city plan. In other words, the structure of the city is once again determined by a simple visual analogy. It is precisely at this point that we discover the reason why it is almost impossible to outline the aesthetics of the era of microelectronics. Whereas in the machine era aircraft, ships, cars and their mechanical components such as motors, screws and hubs in and of themselves constituted an image of the age, in the electronic era we have not yet found a visual form that can produce a representative iconography.

The form of mechanical objects expresses some sort of causal relationship, however ambiguous, with their function. In the case of vehicles, a dynamic form that opposes less resistance to the air or water results in greater speed. The myth that the best form is the one that most closely matches function dominated the world of design throughout the twentieth century. In the case of electronic objects, on the other hand, there is no causal relationship between function and form. Even in objects that generate images or sounds, such as audiovisual devices, form does not follow function. The enormous memory and calculation capacities of the computer conjure up no formal image. All that appears before our eyes are the data to be entered and the results obtained. We cannot even imagine the electric current, its speed and its huge volume. It is for this reason that, in order to 'see' the image of the electronic age, we have started to use the image of mechanical objects as a surrogate. Yet microchips set out in this way clearly suggest images totally different from those of mechanical objects. Such images are not so much forms as spaces in which invisible things flow. It could be said that what we are dealing with here is a transparent space in which, as soon as the flow is produced, different phenomenological forms emerge. It seems, in this case, that the visualisation of the image of a space that generates expressions is more important than the forms expressed.

It is often claimed that the design of new cars in our country is a product of the electronic era and does not express an immediately recognisable, solid form, as in the case of such celebrated European cars as the Porsche or Mercedes-Benz. Japanese cars are delicate and present an image as subtle and elusive as mist. Their speed is not necessarily translated into an aerodynamic form; on the contrary, one has the impression that they have been designed to circulate silently in a world with no air. At the base of such vehicles must lie the electronic and transparent pace symbolised by the microchip. Does that not mean that forms as subtle and elusive as mist are fragments of phenomenological design, images that are born and vanish in the middle of that space?

THE CITY IS A GARDEN OF MICROCHIPS

The blown-up diagram of a microchip looks like an aerial photograph of a city, processed on the computer. If transformed by means of an effector, the photograph of an urban area can become an abstract diagram that shows only the empty outline of the buildings and the works of civil engineering, filled with luminous and coloured points. The real appearance of urban space is cancelled out and the image starts to resemble a photograph of a microchip.

A symbolic value attaches to the fact that as soon as the substance of urban space is eliminated another city emerges: the city as microchip. In that moment the city is not just diagrammatically analogous to the microchip, but even begins to display similar characteristics, which can be summed up by three terms: fluidity, multiplicity of layers, phenomenality. I have already pointed out on several occasions that urban space is made up of immovable objects like buildings and works of civil engineering, and is at the same time an accumulation of various elements that flow. These flows are generated by a range of different forces such as water and wind or people and cars, as well as by different types of energy and information.

Originally Japanese cities developed by exploiting the variety of the natural terrain, shaped by the topography of the ground and the action of rivers and other currents of water, and then overlaid with the networks of roads and canals constructed by human beings. At Edo [the old name of the city of Tokyo] in particular, an interesting urban space was created, where natural variations of relief, roads and canals were fused in a harmonious way. Looking at the *Bushū Toyoshima-gun Edo Shōzu*, considered the oldest surviving map of Edo and representing the city as it was around the middle of the seventeenth century, what we see is a network of rivers, roads and canals that extend outwards in spirals from Edo Castle as if in a dynamic configuration. Here we see clearly how the pattern, which in theory should have been traced by the roads, is twisted and bent under the influence of the spiral configuration of the different undulating lines and transformed into a profoundly organic and fluid space. The space formed is totally different from the Western one, in which geometric patterns are imposed in a rigorous fashion on the natural relief, even though based on it. In the *Edo ikkenzu byōbu* [a screen with a panoramic view of Edo], which is thought to have been painted at the beginning of the nineteenth century by Esaitsuguzane Kuwagata, the spiral configuration of the place is even clearer. The picture is a view from above, looking in the direction of Edo Castle and Mount Fuji, painted from the highest point of the Fukagawa district. In it we see groups of houses, corresponding to the residences of feudal lords and the homes of ordinary people, which form undulating lines along the watercourses and the areas of greenery. And it is clear that at that time there was a living urban space which flowed in a dynamic manner, something totally unimaginable in modern Tokyo.

Referring to the construction of this city, beautiful as a 'garden', in which the groups of houses, the vegetation and the water were combined in an extraordinary fashion, Hidenobu Jinnai asserts that it 'can be interpreted as a balance between the "desire for planning", common to all

cities that grow up around a castle, and the "flexible adaptation to the uneven terrain" of the Musashino highlands':

A clear and strong urban structure that would dominate the surrounding space was not created. Rather the area was carefully studied, taking the terrain with its delicate changes of level as a reference, and a pattern traced that was similar to a harmonious mosaic embedded in the ground, with the aforementioned individual urban elements distributed in an appropriate manner.¹

So it appears that the garden-city called Edo consisted of an area in which the artificial elements, such as buildings, roads and canals, blended in with nature at all levels, forming a single space. In other words, it seems to me that technology and nature were fused into a single system, from the urbanistic macro-scale that formed the general plan of the city to the micro-scale that coordinated the relations between the individual houses and the gardens.

From the Meiji period onwards, new and artificial elements, such as means of transport, were introduced into this extraordinary space that destroyed the balance in a one-sided way. In particular, the increase in the size of the buildings and the introduction of the network of expressways, together with the rapid economic development of the postwar period, contributed in a decisive fashion to the elimination of the natural system.

In the Tokyo of today the confusion created by the tyranny of technology and the accumulation of heterogeneous systems is evident. In my view, however, it makes more sense to try to discover the fascination of what is concealed in the urban space of our own day than to complain about the disastrous conditions of modern Tokyo and to look back with nostalgia to Edo, the garden-city of the past.

In comparison with the urban space of Edo, it is clear that Tokyo has lost the dynamic fluidity of plants and water. As I have already pointed out, what has increased

instead is the flow of artificial elements. In the centre of the metropolis, in particular, vast systems of transport have been superimposed on one another at different levels, from a depth of tens of metres under the ground up toward the sky. At each level there is a highly complex horizontal transport network, linked to the other horizontal networks by a vertical system. In different zones of the metropolis these networks form different layers, something that could certainly not have been imagined in ancient Edo.

In addition, it is significant that it is not just people and vehicles that flow through the city. The flows of energy and information have increased explosively, to the point where it can be said that these invisible currents are dominating the urban space to an ever greater extent. We cannot mould this space of information into visible images inasmuch as it does not constitute a physical network and can only be observed through terminals. Given the increase in electronic flows and consequently in data, urban space can only be phenomenological. In other words, the real urban space made up of works of architecture is overlaid with another that stems from phenomena such as light, sounds, images, et cetera. This phenomenological city also comprises different areas, from the space created by light and images in a totally spontaneous manner to the abstract one formed by the web of signs of the so-called media. As a phenomenon the city is, after all, a space with a transient function (effect), generated by the invisible flow of electrons, and does not assume a morphological expression. The city-as-phenomenon transforms the real city into an illusory one, coated with light, sounds, images and signs. If we were to eliminate the concrete part, an enormous quantity of energy would be revealed, along with the network of electronic flows that manipulates this illusion.

As a consequence, the spatial characteristics of the contemporary city are fluidity, a multiplicity of layers and phenomenality, exactly the same as those of the microchip.

Nevertheless, I believe that describing this city as a 'garden of microchips' would be an excessive idealisation, on account of the overwhelming presence of the artificial

objects introduced during the process of modernisation, of the networks of different means of transport that ignore the natural relief, of filled-in canals and above all of groups of huge buildings that completely ignore the natural flow. So we have to bring to light the delicate network of flows covered up by these other presences, as if we were carrying out an archaeological dig.

Could we not uncover the structure and the natural flow historically present within the constructions of the machine age, superimpose on them the networks of the electronic era and allow the whole thing to be recreated as phenomenological space? Only then would it be possible to describe this city as a 'garden of microchips'; only then would the superimposed layers of the networks of new technologies and the flow of nature itself begin to give rise to reciprocal effects.

ARCHITECTURE AS A DEVICE FOR STORING AND TRANSMITTING INFORMATION

If urban space today has already been transformed into a garden of microchips, is it possible to give this phenomenological space a concrete expression in the form of architecture?

I have always conceived my architecture by superimposing it on a garden, which means that I saw my works as gardens and not that my aim was necessarily to create an architecture that blended into the landscape. Nonetheless, in several of the projects I have produced in recent years I have tried to integrate the architecture into the landscape. So I have attempted to conceal the volume of the buildings or to establish a positive relationship between the individual buildings and the space outside by removing or adding earth. These intentions were very stimulating in themselves. In addition, the insertion of a natural environment of artificial form between buildings in the urban areas of Japan, where it is difficult to find a context between the constructions, seemed an effective stratagem.

Yet when I talk about architecture as a garden, I am thinking of an architecture as fluid and phenomenological as urban space. It does not reveal itself as a whole straightaway. Rather, it is people who link up the phenomenological spaces that succeed one another in each scene, in such a way that the overall image emerges in the end as a continuous series of all the scenes.

The scenes should not remain detached like the rooms of a building. What I want to create is a space in which some of them leave room for the following ones, leaving behind a sort of echo, just as happens in a film in which the images progressively appear and disappear.

It can be argued that architecture in which the temporal sequence takes on a fundamental importance is closer to the space of sound than to that of vision. It is a space in which innumerable sounds float. Of course these are not sounds emitted at random like those of urban space; rather they are selected in such a way as to insert them in a relationship based on choice. Not even the whole is organised into a form, like a classical music score or a Japanese *kaiyu* garden. As far as the choice of sounds to be combined is concerned, everyone can pick the ones that he or she prefers. As a consequence, even though there is a musical space that generates the score, the chronological order in which the notes are placed varies from person to person. For me, architecture understood as a garden has the image of a soundscape.

Yet my first attempt to produce a work like a garden, the House at Nakano or the White U, resulted in a space that resembled a *kaiyu* garden. A 'garden of light' was created between two concrete walls that curved to form a U. A luminous space rich in effects of light and shade, produced by the natural illumination from above and the sides, was formed within this tubular ring of spotless white. The phenomenon of light was used to create a space filled with currents and vortices. People entering the space could linger for a moment but could not change their route. They were only allowed to circulate around the empty space in the middle of the courtyard. The space

was vigorous because the simplicity and clarity of the closed ring made it so, alluding precisely to a complete universe, ie to the force of cosmology, just like in a *kaiyu*.

The recently completed ITM Building in Matsuyama could also be described as a 'garden of light'. Rather than the White U's interior enclosed by concrete, what has been created here is a space filled with delicate light wrapped in translucent glass; the intensity of the light is controlled by a transparent membrane. The various architectural elements situated inside this volume of light reveal their dimensions in a horizontal as well as a vertical direction, maintaining a gradual relationship between them as if they were sounds wafting through the air. Although the horizontal and vertical relations are maintained, the terms 'above' and 'below' have little significance here. Hence those architectural elements whose significance derives from their relationship with the force of gravity, such as floors, walls and roofs, have been lost and even if we were to imagine the space rotated through 90 or 180 degrees, their significance would not change at all. The floors, stairs, partition walls, etc are made of translucent panels that let light through. Inside this new 'garden of light' the public, no longer confined by gravity, can walk around freely choosing sounds (the architectural elements) and singing their own musical notes.

If the House at Nakano and the ITM Building in Matsuyama are 'gardens of light', the Silver Hut and the Municipal Museum of Yatsushiro are 'gardens of wind'. What the two projects have in common are their continuous, light and thin vaulted roofs, constructed out of a framework of steel slats, and the free space between the independent columns that support them. Should not such a space be regarded as a garden that induces currents of air, like the wind blowing through a wood? In the case of Yatsushiro in particular, the different scenes staged vary in sequence: the curved bridge built on the top of a small hill covered with vegetation, followed by the space under the vaults that offers a view from an elevated position and then the exhibition hall with its supports resembling a

natural clump of trees, the room open to the sky that offers a totally different space next to the entrance of the museum, etc. This building has been assigned the function of a museum, but a garden divided up into internal and external areas has been created in the zone that serves as the exhibition space proper. Visitors perceive the currents and vortices of air, and by walking and stopping weave the 'garden of the wind'.

My interest in electronic phenomena commenced with the Tower of Winds in 1986. The project cannot exactly be defined as a work of architecture, but it was the precursor of a series of works in which both light and images have been utilised. At the base of the Tower of Winds lay the intention of selecting the air (wind) and sound (noise) from the various currents flowing through the surroundings and turning them into luminous signs, ie into visual information. To put it briefly, it was a question of introducing information into the environment.

The project that I presented at the Yokohama 'Urbana Ring Exhibition' in 1992 had a similar aim. In this case, data on the conditions in Yokohama Bay had to be transformed into a visual and aural space by means of instruments like light, sound and images. The space of light and sound that resulted from this – and that was to have been called a 'media park' – was in reality another space of phenomenological water superimposed on that of the real water. Thus the project set out to turn information into environment and at the same time to introduce information into the environment itself.

So it might be asked how it is possible to transform data into environment in order to formalise architecture as a 'garden of microchips'. By its very nature the architectural act represents the creation of a new environment that is at one and the same time physical and phenomenological through the addition of information to the existing environment. In this case architecture becomes a device for emitting information and storing it. The architecture has no need of a physical form of its own but is transformed into a means of interpreting form as phenomenon (environment).

In the competition project for the University of Paris Library, drawn up last year, I also tried to create a work of architecture that could be used as a means of controlling the environment. In the first place, this consisted of a large oval room (centre) on a vacant site between three buildings of the university campus. That room is the information centre which, by linking the three constructions, transforms the free space from negative into positive.

In concrete terms, it is a functional space laid out around the reading room of the library, ie an instrument for the storage and transmission of information, since it is also a communication centre for students and teachers. The oval space is traversed by two levels of walkways arranged in parallel lines, architectural elements that make up the floor and ceiling and at the same time serve as a device for controlling the environment, for controlling light, sound and heat. They constitute a large horizontal slit for ventilation, making the oval room a pleasant place, suitable for reading. Just as these openings are devices for regulating the passage of light and wind, the two layers of walkways do not separate the interior from the exterior but create an environment that is similar to the outside, only more comfortable. So the concept of facade is absent from this architecture. However much the space is subdivided by panels of glass, you have the impression that it is continuous. On the one hand, what we have here is a device for the storage and transmission of information, a place in which the electronic flows form vortices; on the other we are in the presence of a mechanism for filtering light, heat (air) and sound, a place in which the flow of nature is modified. The oval and the line, respectively symbolising the two aspects, are superimposed, forming a layered space. So could not this project be considered the architectural realisation of the garden of microchips, inasmuch as it is characterised by fluidity, a multiplicity of layers and phenomenality, especially since such characteristics take the material form of architectural elements like walkways and screens?

The same concept of layered space has been adopted in the two projects still under construction in the

municipality of Yatsushiro, the fire station and an old people's home. In both cases, what I wanted to create was a place that would not only be able to fulfil the functions specific to the two constructions but also resemble an open garden. In my view, in the first case it was not just a question of solving the problem of the physical construction of the layered space, but also of overlaying the specific functions of this fire-fighting park with the more ambiguous one of the garden and ensuring that these functions interacted with one another, creating a particular garden within the park as a consequence of their mutual permeability. The latter consists in the transparent relations between the two social functions, and is what we have to compose as materialised architecture. The situation is absolutely the same in the case of the old people's home.

Projects like the redevelopment plans for the city of Antwerp or the Lujiazui central area of Shanghai also set out to create a 'garden of microchips'. Here it is easier to take real urban space as a reference, in so far as they are projects on an urban scale. By organising the multitude of networks present in the real urban space, and establishing a transparent relationship between the networks that form layers, new gardens appeal.

In any case I am convinced that the task of visualising the images of the microelectronic era coincides with the aim of designing the dream of the 'garden of microchips'. That is to say, it is a question of producing an electronic vortex in the space of the electronic current, of creating a place of information that will take the place of the *genius loci* of the past.

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NOTE

- I. Hidenobu Jinnai, *Tokyo no kukan jinruigaku* [Tokyo: A Spatial Anthropology] (Tokyo: Chikuma, 1985).

TARZANS IN THE MEDIA FOREST (1997)

Mies's Barcelona Pavilion (1928–29) stands out as the most remarkable of all twentieth-century works of architecture. This is overwhelmingly true even in relation to all of the same architect's subsequent works. Nowhere else do we find a space filled with such 'fluidity'.

Although the structure is a combination of steel, glass and stone, it does not imply the hardness of these materials. The glass and stone are merely the flat and simple, planar components of the space. Spaces created by the combination of abstract, horizontal planes have an infinite extension, described by Sigfried Giedion as a mutual interpenetration of interior and exterior spaces. Similar effects can be found in works of that time by Frank Lloyd Wright and architects belonging to the De Stijl school, but none of them produces as strong a sense of fluidity as the pavilion in Barcelona. This is not simply because of its spatial composition, but owes a great deal to the brilliance of the materials. Everything, from the glass to the stone and metal, appears to fuse and flow out into the space. All the elements interact and create an atmosphere of eroticism within the space by their reverberation with the nearby surface of the water. The sensation created by the space is not the lightness of flowing air but the thickness of molten liquid. In the early 1920s, Mies made several drawings of skyscrapers. His later works, such as the Seagram Building and the Lake Shore Drive apartment houses, are generally considered to represent his idea of a high-rise. Personally, I think it is the pavilion in Barcelona that best embodies the image presented in those drawings. The space composed of glass is given no distinct structure but stands like a pillar made of ice, beginning to melt in the air. It is an architecture born

out of images alone and does not yet have a definite form. Of course the pavilion in Barcelona has a structure and a form as it stands on the ground, but the original image of the glass architecture contemplated by Mies in his earliest days is brought vividly to life. This is a work of architecture in which the architectural style is not yet manifest.

Mies is said to be a proponent of the 'universal space' which swept through twentieth-century cities: a space created by a homogeneous continuum of grids extending both vertically and horizontally. True, Mies was one of the very first architects to come up with a skyscraper supported by a glass-and-steel curtain wall. And yet the image of a skyscraper that looks like a pillar of ice or the space embodied by the Barcelona Pavilion appear to differ considerably from the transparent office buildings that fill contemporary cities. The transparency of Mies's space seems to be entirely different from that of other modern architecture.

In the essay entitled 'Chicago Frame', Colin Rowe discusses this difference.¹ Rowe points out how the space defined by steel frames that already existed in late-nineteenth-century Chicago differs from the universal space studied by Mies van der Rohe. It is the difference between a space created as the result of a rational pursuit of pragmatic economic advantage and an ideological manifestation, symbolic of a future world based on technology. This difference, or antagonism, is still seen today between large corporate firms of architects and so-called avant-garde architects. Since there are no other architects who have been as faithful to the use of steel and glass as Mies, his buildings are unquestionably transparent. But the transparency of the Barcelona Pavilion is not that of clear air. Rather, it makes us feel as if we are looking at things deep underwater, and would better be described as translucent. The infinite fluidity we sense in the pavilion must arise from this translucent, liquid-like space. What we experience here is not the flow of air but the sense of wandering and drifting gently underwater. It is this sensation that makes the space distinct and unique.

The simultaneous fluidity and density of the Barcelona Pavilion gradually disappeared even from Mies's own architecture. Its place was soon taken by architectural formalism instead. The once fluid space was lost, as if a liquid had been turned into a solid. And as we await the arrival of the twenty-first century, we are once again in search of an erotic architecture that fuses with the environment.

One night I was given the opportunity to speak at the side of the pool next to Mies's now restored pavilion, using visual images reflected in the water. Several days later, I landed on Lanzarote in the Canaries. The island was a staggering place. It was quite unlike anywhere else I have ever been and far exceeded our expectations. It felt like sitting on the sea bottom. The island must once have been submerged by the sea. There was little fertile soil for plants to grow and most of the surface was covered by rock, gravel and sand. Strong winds must blow constantly, as there were no plants that grew higher than the waist of a human being. In spite of the fact that it was mid-summer, the plants looked withered and had hardly any green leaves. The bare bushes resembled a coral reef – a coral reef on dry land, the terrain of the sea bottom exposed on the surface.

Underwater, organisms have far greater flexibility than on dry land. On dry land, gravity makes it necessary for fauna and flora alike to be armoured with a rigid and self-supporting framework. Animals can never overcome the rigidity of motion imposed by this framework. But in water, the bodies of animals are subjected to pressure as well as the effects of buoyancy. Pliant and flexible structures stand up better to the flow or pressure of the water. It is better to be receptive and surrender to the forces than to resist them. Thus aquatic flora and fauna tend to sway and dance gracefully. These motions define the forms of living beings. The forms of aquatic creatures represent motions more explicitly than those living on the land. The forms of living beings are the loci of their motions. Indeed, they are 'fluid bodies'.

What characterises the Sendai Mediatheque project is the tubular columns that support the floors in six tiers. The slabs, measuring about 50m on a side, are supported by 13 tubes that act as the structure. Each tube is made up of a combination of thin steel pipes and looks like a bamboo basket. The tube houses the means of vertical distribution, such as lifts and stairways, ducts for the air-conditioning system and conduits for the power supply, but it is essentially hollow. Natural light enters from the top of the tube. The tubes have different sizes and shapes depending on the functions they house. The design can be modified to adapt to the plan of the corresponding floor. In other words, these tubes are organic in nature, resembling plants in their forms and actions. They can be said to be biomorphic structures.

On the drawings that I made at the very first stage of the project I scribbled the words 'seaweed-like columns' next to the tubes. The columns were conceived as structures that sway and dance like seaweed in the water. Thus the volume, measuring 50m on a side and about 30m in height, is the embodiment of a tank of water. What we had pictured in our minds was 13 tubes softly swaying in the virtual water that fills the tank.

The Sendai Mediatheque is a new type of public facility that features a library and art galleries. Naturally, it should be a model library and a model museum of the next generation, equipped with an advanced computer network. What is the true image of an architectural space where new media are used in abundance? Why must we picture the space intended for electronic media as 'water' or as 'fluid bodies in water'? A graphic designer skilled in the use of the computer says he has the odd sensation that part of his body starts to flow into the screen whenever he sits at a computer. 'The inside of a computer is of course not inside myself, but it is not outside either.' The boundary is vague and he cannot tell how far the self extends. In the electronic media, time and space are different from those we experience in daily life. As we step into their world, as the designer says, 'a strangely comfortable sensation surges up

inside me'. And he goes on, 'when I am sitting at a computer, I feel like I'm wading in the water's edge, that I am being linked with another world'.²

Fluids such as blood and lymph make up some 50 to 60 per cent of the human body and more than 80 per cent in the case of a newborn child. We may compare the human body to a stream insofar as fluids flow and circulate inside it. It connects with the world by means of water. Notwithstanding the fact that people, even today, cannot live without water, the system by which it is supplied to us is completely hidden from our eyes in contemporary cities. And we tend to forget that our bodies are part of nature. But we are reminded of this fact very clearly if we pay a visit to Bangkok. The city of Bangkok has a very well-developed network of canals and a large number of people live by and on the water. Looking at the way they live, we realise that our own lives must once have been very closely related to water. Water jugs stand in line on terraces. People dip and bathe in the turbid water and wash their clothes and dishes in the canal. They live like amphibians. Watching them, we can understand why Buckminster Fuller assumed that humankind originated at the waterfront in Southeast Asia.

The fact that the Thais worship Naga, the god of water, supports this. The gently rippling sea-snake Naga frequently adorns buildings and ships in Thailand. The elegant movements of Thai dancers also remind us of Naga. It is hard to believe they have the same rigid skeleton as other terrestrial organisms. Rather, they seem to lead a supple existence like plants and animals that sway and dance in the water.

The graphic designer poses a serious question when he says, 'just as water makes us realise that a human being is part of a greater nature, electronic media may modify or change the meaning or boundary of a human being, especially of the individual'. By entering into the computer screen, he became aware of the possibility of orienting the self toward the outside, a self that used to be excessively introverted. In other words, recognising the flow of

electronic media inside him made him realise once again that the human body is part of nature. The new technology is not antagonistic to nature. Rather, it is creating a new kind of nature. If nature as we have always known it is to be considered real, then this artificial nature should probably be called virtual. And we people of the modern age are provided with two types of body to match these two types of nature: the real body which is linked with the real world by the fluids flowing inside it, and a virtual body linked with the world by the flow of electrons.

In the East, 'nature' has always meant the basic principle of the cosmos. In 4 BCE, for example, the Chinese philosopher Lao-tzu taught that nature continues along its own path in accordance with cosmic rules regardless of any human act. According to this philosophy, the human body is not independent of the world but an integral part of a continuum that links it with the world.

Banzan Kumazama, a Japanese philosopher of the early Edo period (seventeenth century), discussed the integrity and continuity found in humankind and nature in terms of the Neo-Confucian concept of *ki* or 'spirit':

As our body is born from nature and nurtured by it, we human beings exist in nature as its children, no matter how small we may be physically. The *ki* of yin and yang and the five elements that fill the heaven and the earth make up our body. Turbid and thick *ki* takes a physical form and becomes the body, while clear and light *ki* fills the inside of the body to make it act.

Circulating in the cosmos like air, the spirit, or *ki*, becomes condensed and solidified to form the bodies of organisms. Bodies are made up of liquid and solid, but basically they are gas. The gas condenses and solidifies to form the body, and the air is taken inside and fills the body. Once inhaled, the air is quickly exhaled again, and there is no distinction between the self and others.³

According to this way of thinking, each creature in the cosmos is given a certain form, but creatures are all fluid and constantly changing. They continually undergo phase shifts from gas to liquid to solid while remaining linked with the world. 'All things are in flux' indeed.

In the modern era, however, this cosmic view was forgotten, and people began to attach importance to the individual, physical body. People are now obsessed with a way of thinking that places the individual at the centre of the world, and then dissects the world into pieces. We have lost sight of human relations rooted in the community and are now beginning to lose sight of blood ties as well. Today, even the family unit is no longer secure. People end up as isolated beings and start to feel alienated and empty.

Just as we reached this point, electronic technology began to emerge and reminded us of the world we had almost forgotten. The 'flow of electrons' overlapped with the flows of *ki* and water.

Electronic devices such as personal computers, fax machines, mobile telephones and car navigation systems alter our physical senses from day to day. Mobile telephones are an essential tool for today's high-school students. They carry them wherever they go and are constantly communicating with their peers. For them, talking with their friends over the mobile telephone is like chewing gum. It is not their mouths but their eardrums that demand stimulation. By hearing the voices of their friends at all times, they seek to avoid being left alone. Their bodies crave the flow of electrons just as they need water and air.

A car navigation system also alters our physical senses. It allows us to confirm the position of our cars by radio waves transmitted from a satellite. The location of a car and the instructions needed for it to reach its destination are displayed on the screen at all times by means of a map on CD-Rom. With a conventional map printed on a sheet of paper, our physical bodies existed on a different plane, outside the map. The space on the map was abstract and we had to translate it into a three-dimensional space in

our minds in order to learn the actual location by comparing it with reality. With the new system, the location of a car on the display overlaps with reality. We no longer have to dislocate our physical bodies to a different plane from that of the real world.

As the aforementioned graphic designer said, our isolated self is linked with the outside world by means of electronic media whether we like it or not. The concept of inside and outside is deeply rooted in the autonomy of the self. The emergence of new media obscures the boundary between the inside and the outside without our realising it.

When viewed from that angle, we have to admit that the real, physical body and the virtual one no longer contradict one another but overlap completely. To an analytical mind, there may appear to be a division into two bodies, but in fact they are integrated and unified. If we are determined to make a distinction, we could say that the former is an analogue kind of body which is not transparent, while the latter is a digital body and transparent.

What I have said so far about the physical body also applies to architecture and urban space. We have long defined architectural and urban space as something independent of nature. In Asia, however, they were extensions of nature and therefore fused with it. They maintained a relative position in nature and were alive, breathing in and out in response to the natural flux. The boundary between inside and outside was vague both in architecture and in urban spaces.

The houses that line Bangkok's canals clearly show us that the people who live there are totally free from the architectural concept of inside/outside. Broad terraces overhang the water, stairs run down into it and rooms are usually left open onto the terrace. Bougainvillea in full bloom almost invades the houses. Even though the canals provide their essential means of transport, their homes are left exposed to them, defenceless. There is no vanity or concealment. Here the concept of inside/outside refers to the relationship between architecture and environment

and not to that of interior/exterior in the symbolic sense it has in society. An ideally comfortable relationship is formed between a human being and nature as there is no boundary between inside and outside, no matter how poor he or she may be. Not very long ago, we used to live like this in our traditional houses. People in contemporary cities, however, can no longer return to such a life even if they see it as a kind of utopia. It would be inconceivable for them to give up their mobile telephones or fax machines.

So what kind of environment should people be looking for when they are surrounded by electronic devices?

Marshall McLuhan once said that clothing is an extension of our skin and that shelter is the communal skin or clothing. As early as the 1960s he predicted that the development of electronic media would cause our then heavily vision-oriented culture to shift toward a dependence on cutaneous sensations. If we are to define hearing as one of the cutaneous senses, people fitted with electronic devices like a cyborg will no doubt grow obsessed with cutaneous sensations. Young people who cannot live without a mobile telephone need to stimulate their skin continually through their organs of hearing.

If, as McLuhan said, clothing and architecture are both extensions of our skin functioning as mechanisms for controlling energy and protecting us from the world outside, then their function as membranes would certainly be very important. In other words, clothing, architecture and cities must train and polish their epidermises (outer layers) to make them extremely sensitive and delicate. This epidermis can no longer be the conventional thick and heavy layer of cloth or wall that used to protect us from the outside world. It must operate as a highly efficient sensor capable of detecting the flow of electrons.

Moreover, the membrane needs to be soft and flexible. Rather than being rigid and dense like a wall, architecture as epidermis must be pliant and supple like our skin and be able to exchange information with the world outside.

TARZANS IN THE MEDIA FOREST

It would be more appropriate to call architecture clad in such a membrane a media suit. Architecture is an extension of clothing and therefore a media suit. It is a transparent suit meant for a digitalised and transparent body. And people clad in transparent media suits will live in virtual nature, in the forest of media. They are Tarzans in the media forest.

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SHEDDING THE MODERN BODY IMAGE: IS A HOUSE WITHOUT CRITICALITY POSSIBLE?

(1998)

RIFTS WITH CONTEMPORARY SOCIETY

It is already 28 years since the completion of the first house I designed, and so my first message to society through the medium of architecture also dates from that time.

It seems certain that the status of architecture in the city is rapidly losing social significance. Yet if one continues to design as a lone, fragile person after the unparalleled futile collapse of the logic of the architectural world, the only available option is to expose the surrounding absurdities for what they are... For me, the design of a house is just the task of tracing the insurmountably deep rift between myself, as the designer, and the client, as the eventual inhabitant of the house. Rather than 'tracing', I should perhaps use the expression 'filling', but nowadays a shared terminology for filling the gap barely exists. As a consequence, the task can only begin with the contradictory acts of acknowledging the deep rift and building walls that cannot be backfilled.¹

NOTES

1. Published in *The Mathematics of the Ideal Villa and Other Essays* (Cambridge, MA: MIT Press, 1976).
2. *Asahi Shimbun*, 19 July 1994.
3. Toshio Kuwako, *Kisō no tetsugaku [Philosophy of Kisō]* (Tokyo: Shinyosha, 1996).

Hence for me the act of design begins with a personal expression of my unbearable frustration with regard to the state of society and the city. I openly expressed such sentiments with almost meaningless tubes of light protruding upwards, or aluminium-clad exterior walls that appeared rough and uneven when hit by sunlight. These were my only possible – and therefore strongest – acts of