

Collapsing the Material and the Haptic: Explorations of Japanese Architecture and Design

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In his book *Designing Design*, Hara covers a breadth of his work, including the 2004 "Haptic" exhibition that involved collaboration with architects such as Toyo Ito and Kengo Kuma to name a few, his work as a graphic designer in print media, and as a professor at Musashino Art University. In his discussion, Hara approaches materiality in two distinct ways: as the "haptic" experience and through the vehicle of what he calls "emptiness". Hara defines Haptic as:

...the term...indicates an attitude that takes into consideration how we perceive things with our senses. While dealing with shape, color, material, and texture are one of the more important aspects of design, there is one more: it's not the question of how to create, but how to make someone sense something. We might call this an awakening of human senses. A human being is a bundle of senses working hard to perceive the world. Eyes, ears, skin, and others are called sensory receptors, but the images carried by these words are much too passive for sensory organs. Human sensors are boldly open to the world. They aren't "receptors", but active, positive organs. An unlimited number of invisible sensory tentacles sprouting from the brain are exploring the world. Let's think about human beings with this image in mind. Taking that realm as a field of design, we came up with an experiment call the HAPTIC Exhibition...I asked various creators to design an object not based on form or color, but motivated primarily by "haptic" considerations".¹

Below are some images from the Haptic Exhibition²:



From the kiwi juice box designed by Naota Fukusawa, to Ito's high five gel door knob that greets you with a high five, and to the pachinko box and dehumidifier in the top middle row by Hara himself, each of these objects invites touch on a daily level.³ In encouraging this level of touch, it also provokes conversation amongst people—whether the object is at a home or at the “Haptic” design exhibition. The hesitating questions that result from the sensory qualities Hara describes above are part of a design experience itself that is framed through materiality. For example, is that juice box really made out of kiwi? Will that juice box feel and taste like a kiwi? Or how would the cool, soft grass feel in those shoe compared to the usual shoe? While this may seem intuitive, the questions suggest that design can and should begin with a visual perception that beckons touch, sight, and even taste.

In his discussion of these projects, Hara moves beyond the five senses asserting:

A human being is like a rubber ball wrapped in an extremely delicate membrane. Different areas on the ball's surface elicit different senses. Our image of the world is based on the multifarious stimuli that are perceived on the membrane and transmitted to the ball's nucleus, the brain. Design is a service for these sensitive membranes. In a way, the five senses are interrelated. ⁴(Hara 159)

Through his work at the Haptic Exhibition, Hara has established what might almost be a blatant connection with humans and design. We do not just see or observe design; we experience it. What's more is that this experience can be highly enriched through the development and application of materiality in everyday things. This is perhaps where Hara's work with MUJI comes in, but at a deeper level Hara is also urging those in the design profession to take on this service he describes above as part of our work. As simple and intuitive as this sounds, it is quite challenging in architecture, a field whose influences today range from Rem Koolhaas to Tadao Ando, that is heavily and rightfully in some ways form oriented. This is arguably due to the result of modernist architecture; however, Hara is contending that experiencing design should move beyond form and into a personal experience of materiality. This is not to say that materiality should be prescriptive in design, but that it is phenomenological. Hara is calling for a steeper use of materiality based on all five interrelated senses. The Haptic exhibition illustrates this in the array of projects, be-

cause they each demonstrate how materiality can affect form to prompt an experience of materiality that is unprecedented in design. Some may argue, however, that these projects are successful, but it is because the Haptic projects were on a smaller scale. However, Hara's Matsuya Ginza Department Store demonstrates the ability for materiality to succeed at a larger scale. Though he did not design the department store space, he is largely responsible for the store's façade and its interaction with public space:

I was not involved in the building itself, but the front of the finished building is plated with glass. Applied to the back of the glass are aluminum panels, painted white, whose surface is covered in regular and tight array of convex dots. The only thing I proposed was this design tool of protruding dots, to help stir up tactile perception. The glass exterior walls are set top and bottom with lights, which are switched on at night. To effectively reflect the light, the white exterior walls required the installment of some sort of concaveconvex reflector, but these hemispherical dots play the same role. Comprised in these dots, then is an interrelation between the architecture and the overall design.⁵



Hara's proposal is an example of how materiality can play a role in architecture, specifically in a public space. The area of Ginza in Tokyo, Japan is the home to many atelier architecture projects, where façade plays a key role in branding and brand image. In effect, the facades are an extension of the brand image for most of the stores competing for a consumer's attention on an urban street scale, making Hara's proposal consistent with the surrounding areas. Instead of using LED lighting and/or glass curtain wall facades similar to the Jun Aoki Louis Vuitton Building or the Renzo Piano Hermes Building, Hara's design proposal for a tactile design façade suggests a different way for architecture to interact with the consumer from the streetscape; Hara's design proposal invokes more than just the visual sensory perception through light and massing of materials, but also that of texture.



Figure 1. Louis Vuitton (Jun Aoki)⁸



Figure 2. Hermes (Renzo Piano)⁹



Figure 3. Mikimoto (Toyo Ito)¹⁰

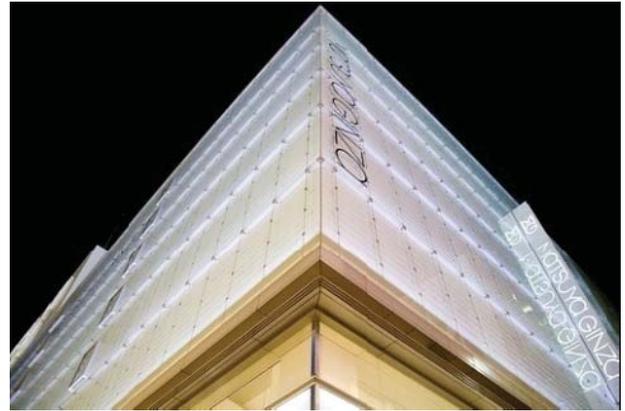
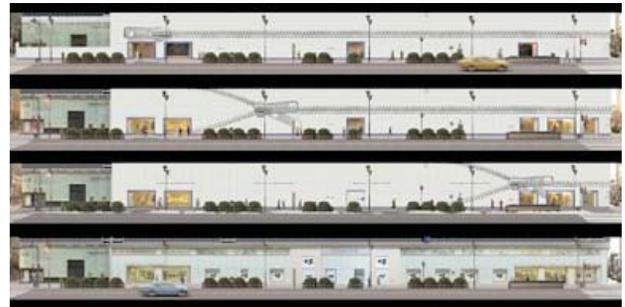


Figure 4. Matsuya Department Store¹¹

Hara's efforts on an urban scale were not limited to the building façade. The tactility of the posters covering the urban scaffolding during construction of the store also functioned on a perceptual level. By mimicking the use of materials, such as a zipper, the passerby is prompted to think of touching a zipper and the action of unzipping something open out of curiosity:

Because we envision the department store as distinct from a virtual retail space, in which we directly experience shopping by setting foot in the store, another important touchstone of our design proposal is the valuing of the texture or feel of materials, which yields a wealth of stimulation to the visitor's sense of touch. One of our operational examples is the dot pattern used for the walls on the front of the building, for shopping bags, and for cards. The posters for the opening announcement are also designed to impress the audience with a tactile presence by using embroidery and zippers.¹²





Through zippers, thread, and the visual movement of a zipper across the urban scaffolding, Hara's design concept invoked the concept of haptic at an urban level. Instead of settling on the building's façade as a way to capitalize on the renewal of the Matsuya department store, Hara literally pushed the haptic experience to the street in a skillful and subtle way by using materials to perceive a visual "opening" of the store.

This point of perception and sensory experience is a key design moment in Hara's work and is defined by the term "emptiness":

When a fragile beauty is hidden inside, we hesitate to touch, for fear of spoiling or breaking it. At that moment of hesitation, we perceive the object a little more sensitively and delicately than usual. I believe it's important to communicate so that I allow the other person to experience this perception, because given the chance, we will try to precisely understand even a message delivered in a whisper... The concept of "emptiness" is one of my methods of communication design. I don't launch a message at my viewers, but instead provide an empty vessel. In turn, I expect them to deposit something there, their own messages or images. This is an important aspect of communication, accepting what the other has to say. Neither the Mukau pamphlet nor the Hakkin bottle is aggressively expressive, and each carries less "information" than the usual pamphlet or bottle, but because of their intervention, images well up in the minds of the viewers, and the designs are ready to accept and hold these images.¹³

When considering Hara's work, particularly those presented in this paper, materiality plays a crucial role in the design that he is advocating and creating, making emptiness seem inconsistent with his design philosophy. However, the emptiness that Hara is describing above is created precisely through the use, and furthermore, experience of materiality.

By designing something as a sensory experience related specifically to the idea of touch, emptiness becomes a vehicle for a personal experience of materiality that is unique to each viewer.¹⁴ That is, as Hara describes above, one perceives how he or she may interact with an item before actually touching it based on their own images or concepts of the material, making meaning open to the viewer. It is at this moment that the design becomes an interactive tool and readily accessible. By appealing to the universal senses of touch, smell, taste, sight, and sound, the material of an item can instantly become personal, and more so, experienced, because it is not prescribed. It simply is. Therefore, Hara's concept of emptiness is rich in meaning. This concept of emptiness, however, is not new to modern Japan, but something that Hara argues has been present in traditional Japanese arts such as the tea ceremony and Noh drama:

Exchanging images via the medium of emptiness is a characteristic common to all art forms of the time, from the religious thought of Zen to the lyrical Noh Drama established around the time of the tea ceremony, but in the birth of the tea ceremony, this trait is particularly striking. The tea utensils Rikyu used and the teahouses he designed seem astonishingly simple to our eyes. The tearoom in particular is extremely small, with no theatrical or dramatic ornamentation....The space is big enough only for the master and his guest to sit face to face. A tearoom is, after all, a small theater. In it there are no pretentious fixtures. A mere picture scroll is hung, flowers are arranged. There, the master boils water and serve tea to his guest. They drink. This is all. Precisely because it is the smallest cosmos, a whisper of production generates the greatest image. For instance, if the master displays a flat vase full of water and spreads cherry blossom petals there, he can thus place the guest under a cherry tree in full bloom...Because a tearoom is a simple space unfixed to any particular location, the consciousness of those who share it for a time becomes so receptive that the smallest bit of ingenuity will engender in their minds the richest image.¹⁵

Therefore, the concept of emptiness is garnered through perception and image, a relationship that has been studied much by psychologists. But how does this perceptive experience, facilitated through the haptic experience of materiality translate beyond façade and into the spaces of modern Japanese architecture?

In an attempt to answer this question, a brief discussion of materiality and immateriality as it is been theorized in Japan and in the U.S is necessary. There has been a great deal of discussion

regarding immateriality in the western discourse of architecture since the 1980s as postmodernism began to take hold. While this discussion is still being framed, a number of examples of materiality and immateriality in architecture exist whose origins lie in Le Corbusier and Mies Van der Rohe. However, some of the most compelling examples lie also in Japanese architecture. The role of materiality in Japanese culture is one that is understudied, and compelling. Jonathan Reynolds has touched upon this in his 2004 article "Ise Shrine and the Modernist Construction of Japanese Tradition" regarding the ritual of building the Ise Shrine and its relationship to the materiality of wood.¹⁶ Blaine Brownell is also doing compelling work in this area in his work *Transmaterial I and II, Matter in the Floating World: Conversations with Leading Material Innovators in Japan*.¹⁷ However, along with materiality, the concept of immateriality is not necessarily new to Japanese culture either. According to Webster's dictionary, Immateriality can be defined as "without material form or substance; "an incorporeal spirit."¹⁸ This idea of the non corporeal is consistent with Buddhist principles and beliefs; the temporal nature of things can be observed in the Japanese attention to seasonal changes as touched upon by Hara in an earlier passage in his description of the tearoom experience. This idea of the fleeting or changing is arguably related to the idea of immateriality; the tangible of what is temporary as an experience that can be framed through seasonal flowers, wall hangings, and the view from the interior space into the Japanese garden are consistent with traditional Japanese values that Hara mentions in his discussion of emptiness. However, how does this relate to design in our postmodern era?

In the 1988 article, *Design and Immateriality: What of It in a Post Industrial Society?*, Abraham Mole argues:

Affecting more than the workshop activity alone, the trend toward immaterialism includes all projectional conception in a concrete model, a process which used to depend on a situation of permanent interaction between conception and construction. The dialectic game between the abstract (the idea, the mental vision) and the concrete (the struggle with the material and disparate tools and appliances) is giving way to work done essentially with computer-integrated functioning at the desk... In this respect, our senses of the close range of those affecting us by contact (touch, smell, sensitivity to temperature, vibration, and balance) remain a relatively unexplored area of human sensorality. We lack the means to evaluate objectively certain aspects of the

real, which we could call transduction (to transform messages from one medium to another) or interfacing (to set up a partition of illusions for projection of tale-images for example, a screen, tactile sensor, a sonorous background, a simulated landscape, or a virtual actor.) The immense technological structure proposed by the post industrial society seems precisely to have to fill this quickly this gap. It is becoming the function of design to examine this new field of "programmed sensualizations" ...¹⁹

Though this article maybe outdated in its discussion of technology, Abraham's discussion of materiality subtly touches on Hara's discussion of the haptic and its relationship to emptiness. In proposing the ideas of touch to examine images of the real in immaterial design, Abrahams is aligning himself with Hara's idea of emptiness or vice versa. By allowing constructed images that are immaterial in nature of what could be real to stand in for what is real or material, Abraham calls for a new field of "programmed sensualizations". This new field is closely related to Hara's discussions of "haptic", the idea of perceiving something through a sensory experiences so that image identification, though vague and broad at first, becomes palpable due to the sensory perceptions of the very individual experiencing the image, making the immaterial material. In other words, based on Abraham's analysis of materiality and immateriality, Hara is suggesting that immateriality is materiality. The emptiness or immateriality is experience and understood through the materiality of the haptic. Through Hara's concepts and Mole's suggestions in discussions of materiality and materiality in postmodernism, definitions of materiality and immateriality in Japanese design begin to blur. The collapsing of these two terms is now becoming critical in studying Modern Japanese Architecture. Space is no longer atmospheric, but both phenomenological and ontological in nature and suggests greater complexities and subtleties to the experience of the space itself.

The work of SANAA, headed by architects Ryue Nishizawa and Kazuyo Sejima, captures this collapsing of materiality and immateriality. Their numerous projects range in scale and site, and continue to challenge concepts of immateriality and materiality. The 21st Century Museum in Kanazawa, Japan (2004) and the Zollverein School in Essen Germany (2006), for example, are key projects that demonstrate an attention to materiality that move beyond the atmospheric. However, the Toledo Glass Pavilion is arguably the strongest example of

Hara's discussions of haptic and emptiness within the trajectories of immaterial and material.

Located in Toledo, OH across from the University of Toledo Center for Visual Arts building designed by Frank Ghery (1992) and a number of other civic buildings, the Toledo Glass Pavilion was designed by SANAA in 2006. The museum consists rounded corner spaces with circulation paths integrated between each space to create a flow between specific parts of the program, perhaps a metaphor for the action of blowing glass. (see photos below)²⁰ As with any museum space, air circulation, temperature, and sound are important elements of the exhibition and enjoyment of art. In the Toledo Glass Pavilion project, there is little visibility of HVAC, lighting, and sound work. The most significant parts of the program are the glass blowing demonstration area and glass display area.

As shown in the floor plan below, the glass blowing room and glass exhibition rooms face each other and are visible to the street. Therefore, the interior glass walls become performative in framing the interior activity of the spaces, such as glass blowing, and visitors taking in the art collection. The exterior glass walls (as part of this double skin façade system) also simultaneously frame the exterior street activity.

The different activities of the floor plan elicit different sounds as well. As a result, sound quality and control, as well as air filtration due to glass blowing is critical. SANAA was attentive to this, allowing for the visitor in the glass room to watch a demonstration but hearing very little of it once the doors are closed. This controlled sound and smell is not coincidental but a demonstration of arduous planning and research. However, while walking through the space, visitors may not realize this at first because of the experience of seamless visual movement from one space to the next.

This visual absence of the mechanics of the building could be argued as a masking or hiding what is truly part of the space's materiality. However, this absence is also an example of how the materiality of glass activates the space by engaging the haptic because the visitor sees what is accessible to the eye. While much has been written about the phenomenological and material qualities of glass, glass, at its most basic level, exposes the contents of space and its inhabitants that creates an open

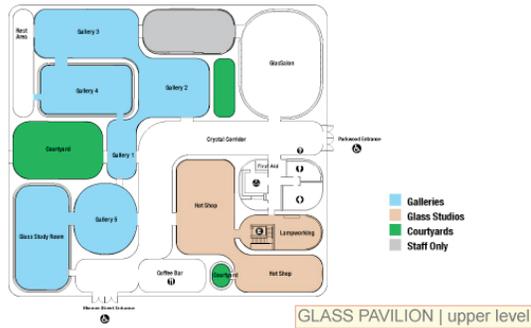
and fluid space or absence of material, leaving the program to enrich the varied spaces.

The "hiding" of the building's mechanics and their resulting materiality suggests an alternative materiality produced by the effects of technology that prevents ductwork and electrical work from ever being seen. This alternative materiality created by explicit qualities of glass and the technology enabling it at its most minimal is an inversion of what is real, what is material. This inversion of materiality, therefore, results in the experience of immateriality. In other words, the careful use of glass as a visual framing of program, in its abstract minimalism of materiality points to the role of immateriality itself in the space. Visitors may not notice that the HVAC and electric connections are hardly visible, but the openness of the space, facilitated through glass is an example of this interplay between the very materiality of glass itself and immateriality it produces in conjunction with the visual, yet unreal absence of the building's mechanics.

Therefore, this interplay of materiality and immateriality becomes of a collapsing of the two terms into one another as a collaborative definition of space: materiality or glass through which the building is experienced visually and programmatically results in the immateriality of the space due to the untrue absence of the space's own building mechanics or corporeality. The space becomes a vehicle of emptiness allowing for its users to inhabit in how they perceive it. Directions through out the building are few with some signage on the flooring, but as with any museum space, the project is realized visually, a key part of Hara's Haptic discussion. Therefore, the space in its materiality of immateriality becomes experiential and definitive. You experience what you see, want to see, and do not see. It is up to the user to engage the space based on how the art, gift shop, glass blowing space, engages him or her.

Just as the zipper visually re-opened the Matsuya Ginza store or Toyo Ito's gel door knob greets with a high five, the building becomes a visual and interactive tool for program by collapsing materiality and immateriality into one experience. Through the "haptic" and "emptiness", the phenomenological experience of materiality and immateriality no longer exist as two separate moments, but as two intertwined, interrelated parts of the design

TOLEDO MUSEUM OF ART



experience, and the idea of locality or place in architecture becomes part of its own inversion or placelessness, that design can feel unique to anyone anywhere. Consequently, Hara's definitions of emptiness and haptic suggest further readings of space that move beyond discussions of form.

As Abrahams noted in the 1980s, a gap between the sensory and technology needed to be filled, and Hara's discussions of materiality and immateriality through the human senses and the concept of

emptiness could arguably be the emergence of this answer. As shown in the SANAA project, the materiality of glass, through haptic experience of the visual, becomes part of the immateriality of the mechanics of the building, as a vehicle for emptiness.

Modern and Postmodern Japanese Architecture has long been admired for its blurring of interior and exterior boundaries, but what seems to be emerging now is an attention to the blurring of materiality and immateriality and its larger place within Japanese concepts of space. As the two seemingly opposite terms begin to collapse into one another through the experience of perceiving materiality, how design is experienced and developed will become a large part of the engaging users on a deeper level that is participatory and engaging. Work by Japanese designers such as Kenya Hara and SANAA will continue to inform architectural education and discourse, and are just the beginning of continued and deeper study of design as it no longer just perceived, but experienced.

ENDNOTES

1. Kenya, Hara. *Designing Design*. Lars Mueller Publishers: Switzerland. September 2007. 68, 69
2. Kenya Hara, p 72-99
3. Kenya, Hara. Edited by Takeo Company. *Haptic Awakening the Five Senses*. Tokyo: Asahi Shinbunshya. 2004. 34.
4. Kenya Hara *Designing Design*, 159.
5. Kenya Hara 174-177.
6. http://www.ndc.co.jp/hara/home_e/matsuya/index.html
7. Kenya Hara, p 72-99
8. <http://www.sparklette.net>
9. <http://www.archiguide.free.fr/PH/JAP/Tok/TokyoHermesPi.jpg>
10. <http://www.execupundit.com>
11. http://www.ndc.co.jp/hara/home_e/matsuya/index.html#
12. http://www.thememagazine.com/index.php?option=com_content&task=view&id=78&Itemid=121

13. Hara cites the example of the Japanese national flag that has carried many meanings over time, ranging from the rising sun, the traditional food of the pickled plum as an example of a geometric figure with multiple meanings that are each valid. 243

15. Kenya Hara 276-278

16. Jonathan M. Reynolds, "Ise Shrine and a Modernist Construction of Japanese Tradition" in *The Art Bulletin*, Vol. 83, No. 2. (Jun., 2001), pp. 316-341.

17. www.transmaterial.net.

18. <http://www.websters-onlinedictionary.org/definition/immaterial>