Cultural Artifacts as a Springboard for Beginning Design

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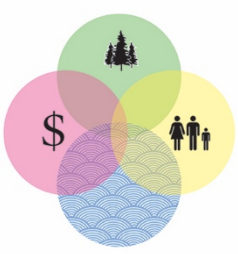
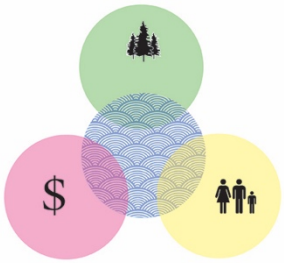
INTRODUCTION — THE INSPIRATION OF CULTURAL ARTIFACTS

For several years we have been teaching an architecture studio that examines culture as an integral part of architectural production. Our underlying goal, in addition to broadening students' exposure to other histories and ways of thinking, is to reinforce the notion that achieving a deeper level of sustainability in architecture requires a thorough-going engagement with culture. This concept is captured in the third diagram adapted from a 2015, European Cooperation in Science and Technology Action IS1007 publication entitled "Culture In, For and As Sustainable Development." (Dessein at al (Eds)2015, p. 29) (Figure 1) In the first diagram, culture is added as a fourth pillar to the three (ecological, social, economic) pillars of sustainable development. In the second, culture becomes the mediator for the other three pillars, while in the third, culture is the underlying context which both encompasses and determines a society's approach to all pillars of sustainable development. Achieving the third requires a deeper thinking on the ways in which culture can shape architecture (which in turn should further act to shape culture).

What culture is relative to architecture, and especially how designing for a specific culture can inform an architectural design process as well as built work, needs more careful analysis. It is our foundational belief that a regional architecture needs to perform both ecologically and culturally. How to design for such a performative regionalism? As beginning design educators, how to structure design studios to introduce a design process with cultural nuance and specificity? Do buildings need to look a certain way to perform culturally? To what extent does the built fabric of the past and present inform the visual and lived culture of a place to impact future design?



Culture in Sustainable Development



Culture for Sustainable Development

Culture as Sustainable Development

Figure 1: Diagram showing relationship of Culture to Sustainable Development. (reinterpretation by Darling of published diagram) (Dessein at al (Eds) 2015, p. 29)

Drawing upon a studio that we have been co-teaching that focuses on designing a project in Japan, we will posit that one way to initiate a design process in an unfamiliar culture is to begin by broadening the analysis of and response to cultural artifacts, literature and information beyond the confines of architectural production. We have found that this sparks understandings not only of deeper aspects of the society being studied, but of how culture is both persistent yet dynamic across time and circumstance. In doing so we also challenge inhibitions rising out of concerns for "authenticity" on the one hand and "appropriation" on the other—both of which treat culture as a static condition rather than one that is inherently dynamic and robustly able to embrace change and reconceptualization over time. In the words of colleague Sue Darlington, Anthropology Professor at Hampshire College, "Culture is a verb."

The studio is for undergraduate seniors in the University of Massachusetts BFA Architecture program and the Five College Architectural Studies liberal arts major. For most students, this studio is the first where culture is introduced as a driving component in the design process for both architecture and sustainability.

WHAT WE MEAN BY CULTURE

> *"Performative regionalism provides an understanding of the interaction of people and place that allows architecture to be understood as, in part, an enabler of cultural practices." (Canizaro 2007, p. 426)*

What "culture" means is slippery, particularly in relationship to architectural production. Culture is an expression of societal values, manifested in how we express ideas, in the way we choose to make things and shape our environment, and how we enact our daily lives. Culture infiltrates every facet of life, continuously changing while also persisting to a surprising degree. The values reflected can be complex and even contradictory, nonetheless, almost all behaviors and products of a society emerge in some kind of relationship to these underlying values.

Within this broad-brush definition, buildings have a multi-faceted existence. Their configurations can support or hinder culture as enacted through patterns of daily living; their materiality can embody everything from what is practicable (or not) to build in a particular place, to what attitudes inform construction and detailing, to what values are to be projected back to their audience. As complex objects and signifiers, buildings can reflect multiple and even contradictory permutations of all of the above.

While Critical Regionalism—as first introduced by Alexander Tzonis and Liane Lefaivre, and further developed by Kenneth Frampton—has served as a primary entre into architectural localism, it has

tended to focus on formal or stylistic identity over how spaces might support and enable cultural practice. In contrast, theorist Barbara Allen argues that, "Regionalism can be thought of in the active sense as a relationship between people and their place of performance….an inhabited regionalism." (Canizaro 2007, 422) Turning our focus to how space can support performance or "lived culture", she argues, leads to more culturally embedded results. We felt that starting with artifacts instead of architecture would help avoid the temptation of getting caught up in the formal appearances of buildings alone and serve as an entry into the interaction between people and built form, albeit at a different scale. We hypothesized that probing beyond the architectural would get us further.

There were several subthemes that drove the pedagogical agenda for the studio. Much of what gives cultural responsiveness to architecture exists in the "liminal" spaces—the spaces that service and equip the program spaces, the transitions that mediate between spaces -- often climatic zones between the inside and outside. The very spaces that are often not clearly articulated in "program brief" square footages. We wanted students to fully consider these spaces in their design, because we believe that they are essential for making buildings that are more performative both ecologically and sociologically. Often it is through these liminal spaces where the daily rhythms of culture are enabled. The structure of a building defines and gives form to these layers of programmed space. As the program and structure is layered, so too are the more ephemeral intangibles that give shape to the architectural experience—sunlight, wind, noise, humidity. Our challenge was how to help students internalize these issues in the design process, rather than just learning about them and then leaving them behind or adding them in as an after-thought.

WHY JAPANESE CULTURE?

Full disclosure—this is a Japanophile studio where we focus shamelessly on the culture of Japan, though not without some critical distance. One instructor is nissei or 2nd generation Japanese, the other is ha-fu or half-japanese—each in our own way has an inside track on Japanese-ness, and yet is also an outsider. As cross-cultural beings, we agreed that there are facets to the culture that are worthy of sharing. This is also an "armchair travel" studio where we can't actually take students to Japan--so an additional mission was to see if we could make a culture in the east that is unfamiliar to most of our students, relevant. In the process of doing a hypothetical project, could one absorb a cultural milieu enough to design a project, and also to bring its lessons home? Japan offers great material on several levels, and as the architectural profession continues to become more globalized, it is important that students gain exposure to working both locally and beyond. Indeed, sometimes an attentive outsider is able to see things in a place that locals take for granted, which can be helpful:

> *"… performative regionalism emphasizes the fact that architects often come to projects as outsiders, not part of the culture for which they design. Requiring a deeply cultural and perceptive understanding of everyday life as part of the design process expands opportunities for cultural insight on the part of designers. Often when one is inside one's own culture, its norms are invisible…. It can take an outsider, a "valuable stranger," to see the cultural behaviors that locals do not…. By sharing knowledge, they can design for lively, engaged social places and regions." (Canizaro 2007, 426)*

Japan is recognized as having among the world's most developed architectural and design cultures, so its choice as a focus may not seem particularly novel. However, delving deeper into the culture is less common, even though particular aspects of Japan, such as sushi, anime, fashion and product design have spread worldwide. It takes some knowledge to get past these "exotic" representations of Japan to a contextual and historical understanding. From early periods of influence from China and the Korean peninsula, to the intense period of internal development during the Tokugawa period, to the accelerated adoption of Western technology and customs starting in the latter half of the 19th century, the intellectualization of Japan's history and architectural legacy was embraced and further turned into a means of promulgating a Japanese cultural identity back to the West. "Japan…create(d) original hybrid ideas from Occidental and Japanese ideas, in order to construct a Japanese cultural identity in art which was both Occidental and Oriental." (Kikuchi 1997, p. 344) The cross-cultural influences have gone both ways with a flourishing Japonisme movement in Paris in the second half of the nineteenth century and continuing today with something as ubiquitous as a California roll.

Within architecture, the complex assimilation and transformation of influences in the creation of distinctly Japanese cultural hybrids has continued to the present, with the current older generation of architects having come out the other end of post-modernism with an assertion of a more confident, richly varied and distinctly Japanese-seeming architectural idiom that is legible to the now-trained-to-see-it West. This can be seen in the work of Kengo Kuma, Saana, Fujimori and others.

WHY STUDY MORE THAN JUST BUILDING/LANDSCAPE? ARTIFACTS MATTERS—ASSIGNMENT 1

While it is normal to do research about architectural precedents, they are actually too complex as starting points -- all their suppositions are concealed in the finished piece, they are not transparent. We chose to start the semester with a focus on closely associated "making" cultural production that is more accessible. Ceramics, basketry, fashion design, fine arts and furniture. Starting with the artifact puts students into a physical and 3d realm immediately. They are introduced to a sophisticated tectonic made visible by an object that is not a building. Ceramic vessels by Shoji Hamada allowed for an investigation of interior and exterior, surface, texture and finish – all very architectural ideas but contained within objects that we can hold. Furniture by George Nakashima, Sori Yanagi and Shino Kuramata allow an insight into material joints, assembly, and the juxtaposition of the natural and industrial. Fashion and textiles by Rei Kawakubo, Issey Miyake and Nuno also juxtapose the natural and industrial, the body and structure, and a hybrid of the occidental and oriental. Through investigating non-architectural precedents, themes start to emerge about time, materiality, layering, the body, and the relationship to nature that we can see as recurrent cultural themes manifested in the made artifacts. (Figures 1 & 2) Looking beyond architecture is often inspiring for architects: Kuma in Patterns and Layering explicitly examines textiles, graphic traditions and layering both within architecture but also beyond, in things like baskets. Renzo Piano's Cultural Center in New Caledonia and Shigeru Ban's Centre Pompidou-Metz also take inspiration from baskets and weaving.

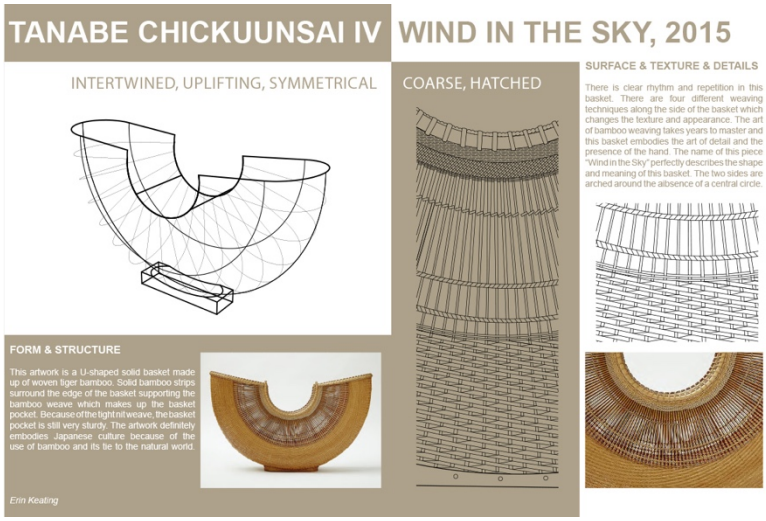


Figure 1: Assignment 1, Analysis by Erin Keating

Figure 2: Assignment 1, Analysis by Nicole De Araujo

WHY SEEING ACTUAL ARTIFACTS / BASKETS MATTERS—FIELD TRIP

Following the first assignment, we took students to the Metropolitan Museum of Art in New York City to see "Japanese Bamboo Art, The Abbey Collection", considered one of the greatest collections of Japanese basketry from the 19th century to the present - a period during which the medium became recognized as an art as much as a craft. By luck, the baskets were accompanied by works from some of the artists that the students had researched, including ceramicist Shoji Hamada and sculptor Isamu Noguchi. The baskets on display were particularly virtuosic - as described in the New York Times, "In a show like this, baskets can start to look like one of the world's most complete, resonant art mediums…we stay remarkably close to the original natural material, which submits to spectacular skill and structural concepts without losing its identity." (Sypkens 2017 [online]) The structure of the baskets was clearly visible, with different thicknesses of pliable materials. Many had long, thin strands braced into elegant positions and multi-layered geometries. The end or edge details where they were then

terminated and held by further bending or interlacing of secondary strands could be clearly seen and visually "felt". While the experience was limited to seeing as opposed to handling, the students nonetheless got an immediate sense of the materiality and the lively interplay of light and shadow, texture, rhythm and their sense of "constructedness". (Figures 3-5)

From the point of view of pedagogy as well as architecture - from Jean Piaget's Constructivism to Gottfried Semper's Four Elements of Architecture - baskets are an ideal object. Even as priceless museum objects, baskets comfortably and familiarly straddle the line between art and function, scaled to the human such that the hand of the maker as well as their relationship to the user is in direct evidence. "Anthropologists working on the traces of our earliest ancestors are now convinced that...their invention of the basket became the most pivotal of tools." (Sekijima 1991, p. 7) As such, they embody Piaget's "primary sources and manipulative materials" that can help learners "acquire knowledge by experiencing things in conjunction with knowledge they already possess." This in turn coincides nicely with: "...the guiding premise of Semper's theory…that the four technical motives of ceramics, weaving (including baskets, we believe), carpentry, and masonry had preceded the formal development of architecture, and thus the laws of architectural style could be more easily discerned and applied by considering these simpler arts." (Semper 2004, p. 44)

Figure 3: Flower Basket (hana-kago), Sakaguchi Sosai, mid-20th century. (photo credit: Darling)

Figure 4: Flower Basket (hana-kago), Kosuge Kogetsu, 1976. (photo credit: Darling)

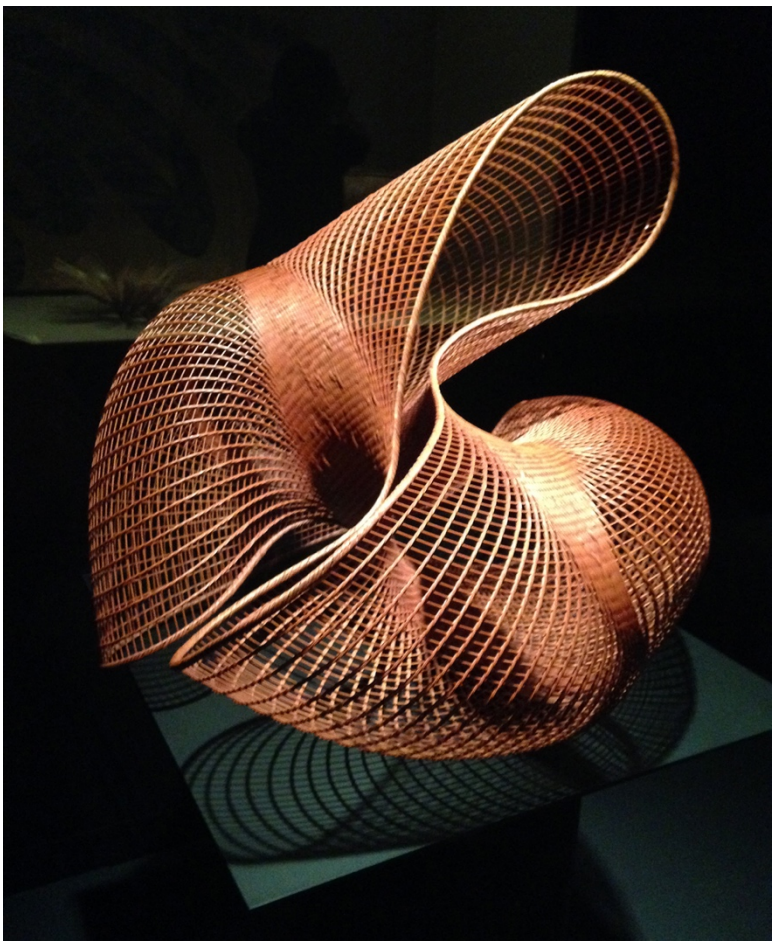


Figure 5: Dance, Honda Shoryu, 2000. (photo credit: Darling)

An important subset of this thought is that basketry underscores structural thinking as integral to design: "Manipulation of the material by twisting or bending it amplifies the inherent resilience of the material...the total of the balanced forces creates and sustains the entire form of the object." (Sekijima 1991, p.10) We wanted to encourage design students that sometimes "playing" with structure to gain an intuitive sense of its expressive potential is key: "play offers education of relatively more difficult problems in an unobtrusive way, and moreover, it supports creativity and brainstorming...It is an invaluable matter in the education of architects." (Ilkovič, Ilkovičová 2015, p 287). For this aspect in particular, seeing the actual baskets from the traditional to the contemporary greatly helped.

By introducing a sense of spatial layering, interweaving and rhythmic delineation through seeing the baskets in the museum where students could walk around them, see their scale and notice details of construction, their spatial sensibility is immediately enhanced including a sense of structure as an essential element of space-making. In other words, students were encouraged to conceive of space from inhabitation outwards, as volumes delineated and constructed, enclosure that is layered with intentionality as opposed to opaque masses that are punctured.

ASSIGNMENT 2 –BAMBOO, JOINT, PAPER

In Assignment 2 immediately following the field trip, students created a construction using a combination of bamboo skewers, several inches of fuel line (a tough, transparent yellow tubing with an inner diameter equal to the diameter of the skewers) and tissue paper. The students were required to extrapolate formal or conceptual principles from their precedent artifact and translate these into a second made object. Through the analytical process of translation, the student confronts how meaning is conveyed through the details of construction. Stipulating only that each student had to use all 100 bamboo skewers and that the dimension in one length had to be a minimum of 1m, we encouraged students to think about how these interactions become energetic and expressive, harnessing an underlying "structurality" such as we could see in the baskets. While the initial conception may be that the bamboo skewers would form the primary structure, the fuel tube the joint, and the tissue paper a skin, in many projects, the individual materials are manipulated and gain expression through their interaction to join, support, bind, interweave, and so on enabling all of the materials to perform in all capacities. What made something start to stand up and be supported or in turn support, or hold together to perform a bend or twist? Students could see that an active collaboration between materials in the act of shaping offered much potential to generate a meaningful result. In comparison to a previous iteration of the same studio, we believe that tackling this project after having seen the physical basket artifacts yielded stronger results. Overall the level of inventive material interaction and detailing of connections was greatly improved, as was the layering and shaping of forms. (Figures 6-9)

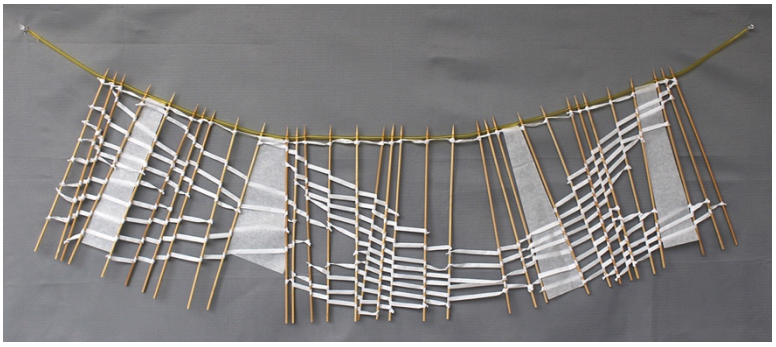


Figure 6: Assignment 2, by Erin Keating

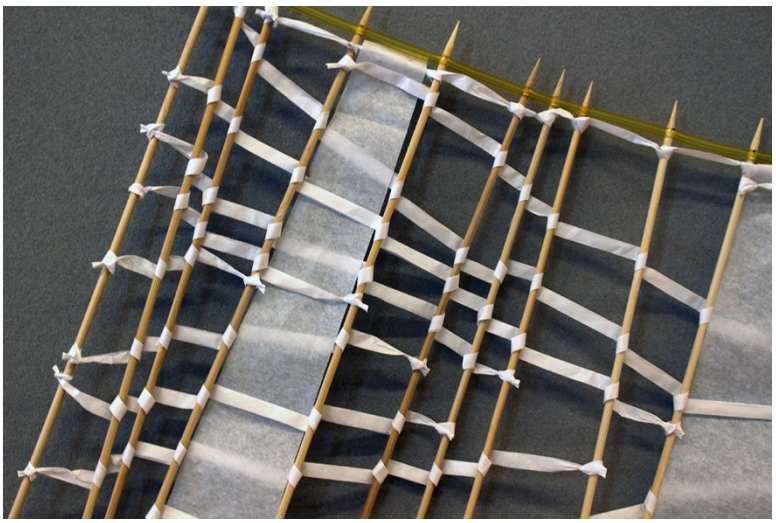


Figure 7: Assignment 2 detail, by Erin Keating

Figure 8: Assignment 2, by Anna Arscott

Figure 9: Assignment 2 detail, by Anna Arscott

ASSIGNMENT 3 THEN 4 –SITE FORCES AS A PATTERNS AND LAYERING MAKING EXERCISE

Continuing to work with the layering and weaving that was so powerful in the baskets, students were introduced to the site in Sapporo and asked to derive patterns to represent three site influences or "forces" of their choice, laser cut these from paper and interweave them to create a 3-dimensional site analysis mapping in lieu of the more typical site diagrams. (Figures 10 & 11) This followed a broader based research module and reading Kengo Kuma's thoughts from the book "Patterns and Layering," about how the long Japanese tradition of abstracting nature through sophisticated pattern and layering techniques embody a strategy towards a more performative architecture. We asked the students to think carefully about what kind of patterning could describe the character, impact and gradients on the constricted urban site, to consider factors such as solar gain and obstruction, traffic flow and noise, desire lines of pedestrian movement and views, and so on. Among the several agendas, including the continuation of a "basketry" kind of making and examination of pattern-making historically and generatively, was the goal to make physical the less tangible and therefore more easily ignored site factors that must truly come to the fore in a performatively sustainable architecture.

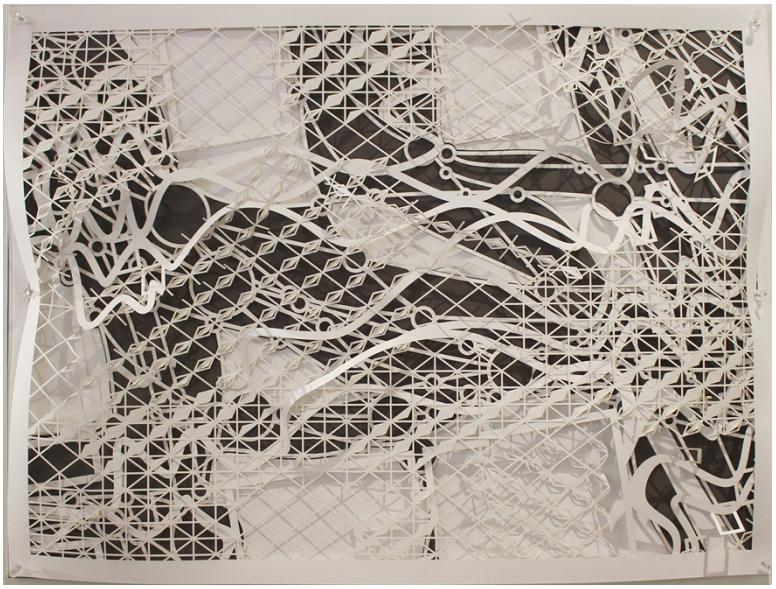


Figure 10: Assignment 4, Site Forces by Erin Keating

Figure 11: Assignment 4, Site Forces by Michael Chauncey

CONCLUSION: IMPACT OF BASKET STUDY ON FINAL BUILDING DESIGN

The initial emphasis and investment made in studying and viewing the physical basket artifacts had a significant impact for the remainder of the semester and transformed the design process when the studio transitioned to designing a memorial hall. Moving into building and program, we continued the use of "basketry" techniques as students moved into design, as a kind of method for 3-D "sketching". These rhythmic spatial delineations could be generated quickly, and even as program specifics and sizes were being worked out, the process could unfold as integrated rather than sequential. Concurrently, we turned to architectural precedent analyses focused on work from Japan, with an emphasis on projects that highlight structural awareness and environmental interactivity and performance. Descriptions and discussions about the program returned our focus on cultural practice and the "liminal" spaces in which they often happen, as we asked the students to imagine and integrate thinking about activities and actions that embody cultural practice. Many of these activities take place in in-between spatial and climatic conditions - outdoors but weather-protected, enclosed but unconditioned, heat-trapping and semi-conditioned, and so on. Architectural precedents such as Kuma's UC Berkeley Nest We Grow and Nezu Meusem, Ito's Tama Art University Library and Sendai Mediatheque, enabled a focus on integrated structure, liminal spaces such as entry transitions, including shoe removal, and design elements that support and equip family- and community-based activities. Nest We Grow, a project in which the traditions for food processing and preparation such as hanging fish and vegetables to dry become key generators for the architecture, were particularly relevant as the program needs and design support the harvesting of sunlight and rainwater, natural ventilation and earth cooling, as well as the sense of ritual that accompanies such season-based activities. Perhaps this project bears a tinge of nostalgia, but these food practices that are alive and well, and seeing a resurgence as their resource-efficient attributes gain new appreciation and clearly demonstrating a performative regionalism.

While students varied in their ability to absorb and respond to our barrage of lessons, there were many successful products generated throughout the semester, and certainly enthusiasm in learning about Japan. Quite a few students struggled with nuanced spatial layering since it was so outside their previous lived experience and training and yet, as a whole the baskets proved their worth time and again. The result is a layered architecture that necessarily requires more work to plan, but ultimately offers a deeper functionality and meaning. When Kuma states playfully that "Japanese architecture is a treasure-trove of boundary techniques," (Kuma, 2010) he is offering up the possibility that concepts such as patterning and layering are simultaneously embedded in Japan's culture but also available for borrowing by others:

> *"Spatial layering is a tool that can radically redefine the role of architecture and its way of interacting with context, both physical, social and cultural. The rediscovery of the heritage of traditional Japanese patterns and boundaries can unveil new horizons and new challenges to sustainability in world's architecture. Through layering we can protect ourselves from natural elements, without detaching us from nature." (Liotta, Belfiore, 2012, p. 94)*

In other words, culture is the key for unlocking a sustainable architecture, and an initial investigation into culture through made artifacts, in particular baskets, proved productive and valuable.

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