Sowing Seeds of Diversity: The Influence of Sustainability on Adaptive Reuse

MARK KESSLER
University of California, Davis

INTRODUCTION

Preservation and development are in a perennial state of tension. At the same time, and seemingly unrelated to this tension, architects are assimilating sustainable design into professional practice. The assimilation appears unrelated insofar as architects will presumably apply principles of sustainability to all of their projects--to the adaptive reuse of preserved structures as well as the development of new ones. However, I believe that sustainability demands more of architects than the application of this expertise to whatever projects come their way. Sustainability requires architects to actively advocate on behalf of preservation, conservation, and the adaptive reuse of buildings.

In this paper I develop this assertion by advancing three related ideas: (1) the adaptive reuse of buildings is an essential means by which an architecturally diverse and sustainable city is maintained; (2) adaptive reuse is a rich source of architectural expression; and (3) the present criteria employed to preserve architecture and promote adaptive reuse is antiquated and needs to be revised. Throughout, I will provide examples of preservation and reuse that are drawn from a common building type that is both threatened and easily adaptable: industrial and garage structures built in San Francisco in the 1910's and 1920's.

TWO ARCHITECTURAL APPROACHES TO SUSTAINABILITY

Sustainability is an overused term invoked by those with widely divergent goals and world views. Subtextual meanings provide some examples: Corporations must sustain economic growth and profit. Many Americans want to sustain a comfortable lifestyle. However, for those with a global perspective, sustainability is inseparable from an equitable distribution of resources, protection of diversity in all of its myriad forms, and a struggle for social justice. Dr. Vandana Shiva, physicist and environmental activist, defines sustainability as "the sustenance of the public good and the common good."[1] It is this definition that forms the basis of this paper.

Naturally, architects' involvement in sustainability centers on efforts to reduce the ecological footprint of buildings. However, those efforts vary in approach and emphasis, aligning to different extents with the definitions of sustainability described above. I will discuss two particular approaches, one that emphasizes building performance, and one that favors conservation. While these approaches are not mutually exclusive, the dialectic creates two distinct profiles, one of which--the conservation-based approach--is closely related to adaptive reuse.

THE PERFORMANCE-BASED APPROACH

Many architects focus on building performance, applying design practices and new technologies that decrease energy consumption and create more sustainable environments. In addition to the considerations encompassed in the term "passive design," there is also a commitment to new efficient technology--building products, materials, systems and equipment. Even though the new technology is more efficient, it's ironic that it is usually developed by large companies, acquired through the purchase of new commodities, and advertised to the design professionals who can specify it.

While this approach can be applied retrospectively to existing buildings, it finds its most complete expression in new construction. This is because an

architectural *tabula rasa* is the ideal setting to assemble and integrate all of the interrelated design features and technologies that maximize building performance. It also preserves the traditional role of the architect as the generator of autonomous architectural form.

The goal of a performance-based approach is to decrease the ecological footprint of buildings to the point that we can continue to enjoy our lifestyle, without intense sacrifice. A world of compact fluorescents, cork floors and efficient appliances, brought to us by corporate America, hardly qualifies as the end of a lifestyle. Architects continue to function as the facilitators of economic growth, through "responsible" new construction.

THE CONSERVATION-BASED APPROACH

A parallel role for architects is one that prioritizes conservation and the recycling of existing buildings. This role aligns itself with an approach to sustainability that accepts a world of finite resources, rejecting an economic model of limitless growth. It anticipates the inevitability of a more modest lifestyle, leading to a more balanced ecological footprint around the globe.

Instead of functioning as facilitators of growth, architects become agents of continuity, actively involved in the slow evolution of the city. Working to recycle existing structures, the primary architectural expression is not a singular new building that ultimately represents the ego, skill and mastery of the architect. Instead, the architectural expression is diffused and ambiguous, as new and old construction interact. Architectural autonomy is replaced by an internal dialog of juxtaposed elements of contrasting ages, styles, uses and materials.

The contrast between the two approaches is illustrated by the Folsom + Dore Apartments, completed in San Francisco in 2005 (Fig. 1). This award-winning project, designed by David Baker + Partners, provides 98 units of affordable housing and earned a silver LEED NC certification. In its use, design, and combination of passive design and active technologies, it's an outstanding and innovative project.[2]

However, it also exemplifies a casual approach towards conservation and preservation. On the Folsom Street side, the composition centers on the restored brick façade of an old warehouse that occupied the site. This brick wall is the only fragment of the warehouse that was saved. New wings engage the façade on either side, while a taller mass featuring three towers is set back, both deferring to the façade and incorporating it into a new monumentality. According to Rich Binsacca, writing in *EcoHome* magazine, the façade was preserved "to maintain a semblance of continuity, in part to soothe some neighborhood concerns about the project and also to front the new common areas… ." [3]

Figure 1. Folsom + Dore Apartments. David Baker + Partners (2005).

While well-intentioned and politically expedient, the preservation of a fragment is a greater source of disjunction than continuity. The warehouse is reduced to an architectural frontispiece; its integrity as a building is gone. The new construction isolates the facade as a billboard that advertises the demise of the structure behind. Thus, while successful as an example of sustainability measured in terms of building performance, the design does not seek a sustainability borne out of architectural preservation and conservation of materials.

Assuming that the preservation and integration of the entire warehouse was unfeasible, most of us would choose sustainable, affordable housing over a warehouse. Nevertheless, the reduction of the once rugged industrial building to a bit of nostalgia reveals to us a collective prejudice that favors the new over the old. We tend to regard new buildings replacing old ones as a form of progress--a process

by which the city renews itself. In order to make the case for a conservation-based approach, it's necessary to offer an alternative vision of renewal, one that advances a more fluid--and less violent--means by which existing and new material interact to meet our needs.

THE ROLE OF DIVERSITY

Dr. Vandana Shiva is a strong opponent of globalization and the imposition of modern industrial farming techniques on traditional Indian agriculture. In particular, she rails against the process by which multi-national corporations force "engineered" seeds onto economically vulnerable farmers.[4] Dependency on these seeds causes farmers to abandon the practice of saving seeds, trading seeds and planting different crops side by side. This occurs despite the fact that the resultant biodiversity has, for hundreds of years, been an effective means to maintain the fertility of the soil, ward off disease and pests that could wipe out a single crop, and bring a variety of products to market. While the biodiversity nourishes families and sustains livelihoods, the engineered seeds create "monocultures" that exhaust the soil, cause crop failure, and require the use of chemical pesticides. They also do not reproduce, forcing farmers to buy new seeds every year.

For Dr. Shiva, biodiversity is rightly part of a "commons"--a resource to which all have access. Because of the ties that bind farming, culture and self-governance in rural India, biological and cultural diversity are inseparable, essential components of a broader commons that sustains life. "Thus, for many farming communities, diversity--be it social, cultural, or genetic--means security."[5]

Drawing a parallel between the Indian farming community and the American city, between agricultural development and real estate development, one reaches surprisingly similar conclusions about the value of diversity.

Like a farm, the city is also a commons that nourishes and provides sustenance. Its physical reality is a common heritage that includes features unique to its culture and history. Its building stock is a man-made version of a natural resource, offering a rich diversity of types, scales, materials and ages. This diversity is irreplaceable, because the buildings were built over time, and the conditions that gave rise to them will not repeat. The mix of buildings of different ages supporting a variety of uses is an essential property of this diversity. Through adaptive reuse of existing structures, that diversity is preserved, and the wasteful pattern of demolition of the old followed by construction of the new, is limited.

Jane Jacobs said that a mingling of "buildings that vary in age and condition"[6] is one of the essential pre-conditions to the generation of an "exuberant diversity in a city's streets"[7] and neighborhoods:

> Cities need old buildings so badly it is probably impossible for vigorous streets and districts to grow without them. By old buildings I mean not museum-piece old buildings, not old buildings in an excellent and expensive state of rehabilitation--although these make fine ingredients--but also a good lot of plain, ordinary, low-value old buildings, including some rundown old buildings.[8]

Similar to the case of the seeds, the call for architectural diversity has an economic basis. Jacobs explains that so many of the businesses that contribute to the vitality of the city--"neighborhood bars, foreign restaurants and pawn shops"[9]--can't afford the higher rents associated with new construction. Cultural diversity and architectural diversity are therefore mutually dependent and inseparable properties of a successful city.

In both Indian agriculture and American cities, the establishment of monocultures undermines diversity and the sustenance that derives from it. If permitted, developers demolish older, under-performing structures and build new, larger ones. Often, the replacement buildings are big and bland. The blandness results from the contemporary detailing of low-end materials that is characteristic of projects in which profit dictates design choices. Collectively, this process results in the gradual isolation of historic buildings and districts within a larger banal environment. The process recalls anthropologist Marc Augé's distinction between a diverse modernity and an alienating "supermodernity" of "non-places:"

> What is seen by the spectator of modernity is the interweaving of old and new. Supermodernity, though, makes the old (history) into a specific spectacle, as it does with all exoticism and all local particularity.[10]

If the preservation movement aligns itself with sustainability, the movement assumes a broader mandate that includes the conservation of materials and the preservation of architectural diversity. As the recycling of buildings retards the cycle of demolition and replacement, adaptive reuse becomes the prevalent means by which new needs are met. Via the process of adaptive reuse--fueled by the mandate of sustainability--the goal of an alternative vision of renewal is achieved. A notion of progress based on the replacement of the old with the new gives way to a new conception predicated on the fluid intermingling of existing and new material.

Of course, new buildings are always necessary. Medical, cultural and educational uses are oftentimes better accommodated in new facilities that are not limited by the constraints of existing construction. These are instances in which the integrated, new, green technologies deliver practical and symbolic benefits. Conversely, there are cases in which adaptive reuse is impractical because the material and resources required to save a building are disproportionate to its utility and architectural merit. In this paper, I am addressing myself primarily to instances in which a valuable old building is demolished because an alternative use--like condominiums or live/work lofts--is more profitable.

THE PRESENT SCOPE OF PRESERVATION

Our definition of sustainability gives priority to the public good and the common good. Inevitably, conflicts arise between the financial interest of a building owner and the community interest in preservation and adaptive reuse. Such conflicts are typically mediated by a local planning department, which must determine (1) whether the existing building is historically significant, and (2) whether the proposed changes compromise that significance.

As individual property rights are such an entrenched American value, the criteria used to establish significance, and limit those rights, are rooted in another, unassailable shared value--the preservation of our historical and cultural heritage. Consider, for example, the four criteria used to qualify a building for listing in the California Register of Historical Resources:

> (1) it [the building] is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage; (2) it is associated with the lives of persons important in California's past; (3) it embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic value; or (4) it has yielded or is likely to yield information important in prehistory or history.[11]

Under CEQA (California Environmental Quality Act), if a building is deemed to be an "historical resource," the governmental agency reviews the proposed scope of work to guard against "substantial adverse change," the threshold of which is "demolition, destruction, relocation, or alteration activities which would impair *the significance* of the historic resource [emphasis added]."[12]

In an attempt to satisfy the conflicting interests of individual property owners and the community, the mandate doesn't exactly protect the historic resource, it protects its significance. This distinction sanctions the division of a structure into significant and insignificant parts, with protection only extending to the former. Often, significance resides in the exterior and the facades, to the exclusion of the rest of the building. This affords some flexibility to a property owner, who can preserve the façade and pursue development options or alternations behind. The mandate responds to the reality that the public's experience of most private buildings is limited to the exterior. Let's see how this plays out on the streets of San Francisco.

THE GARAGES OF SAN FRANCISCO

The preservation of some old garage buildings may seem like an unlikely and frivolous demand to be made in the name of sustainability and the common good. Yet the buildings are irreplaceable, and lately, they have been recognized as "historical resources."[13] They exemplify the late application of Beaux-Arts design principles to industrial uses. However, the buildings are nevertheless vulnerable because they underutilize their lots. The protections afforded often "push" the owner towards adaptive re-use as a solution.

The garages occupy infill sites, and present well-composed facades of one or two stories to the street (Fig. 2). An eclectic mix of Mission, Gothic, Renaissance and Baroque inspiration, the compositions are typically symmetrical, and feature portals that celebrate the passage of automobiles. The interiors are industrial boxes of brick or concrete. Roofs

are wood, supported by clear-span metal or wood trusses. Combining historicist fronts and industrial interiors, the garages have precedents in train stations, fire houses and exposition buildings.

Figure 2. Garage, 525 Jones Street. O'Brien Bros. (1922).

These buildings are ideal for adaptive reuse. The facades have great presence on the street, and monumentalize entry, whatever the use. The interiors are flexible shoeboxes of space with minimal columns. Upper floors are lofty, with tall ceilings that assume the bowed or shed profile of the roof.

The garages are at once anonymous, yet easily recognizable, two related circumstances that contribute both to their vulnerability and adaptability. Some of the best were designed by firms--like the O'Brien Bros. and Crim and Scott--whose "reputations have been enhanced by publication in the *Architect and Engineer* and other professional journals… ."[14] However, images of these garages were almost never published in these journals. Sometimes little is known about an identified architect, and just as often, the identity itself is unknown. In many cases, no architect was hired at all.[15]

The overall vagueness in authorship and the low-brow use contribute to an ambiguity in assessing merit. A building's significance is more a function of context and historical association than artistic genius. Each one is appreciated as a bit player in a large diverse system. It is not treated with the deference afforded a true landmark--it is clearly available for reassignment. Familiar, sturdy, small, good but not great, these buildings are great candidates for preservation, conservation and reuse.

Figure 3. Condominiums, 520 Chestnut Street (2006).

The conversion of 520 Chestnut Street illustrates the effect of current preservation mandates on a project in which various interests intersect (Fig. 3). The lot, which previously supported a Gothic-inspired garage, is now occupied by a 20-unit condominium building. Like the Folsom + Dore Apartments, the façade was preserved and the rest of the building demolished. The design represents a compromise between the interests of the owner and the preservation interests of the community. The owner's interest is realized in the change to a more profitable use, and the increase in height and bulk. The community interest is served in the preservation of the façade and the setback of the taller volume to defer to the façade. As the original building is gone, there is no meaningful interaction of new and old, residential and industrial. The preserved façade assumes the residential character of the new, modern doors and windows. With residences on either side, continuity replaces diversity.

Our definition of sustainability reveals the antiquated, convoluted and limiting nature of present criteria and standards. The existing building stock is a source of diversity that nourishes the city and its people. We don't have to settle for a process by which buildings (or parts of buildings) that are neither historic or meritorious create opportunities for development that (1) contribute to an architectural monoculture, and (2) benefit the developer more than the community.

An alternative criteria for listing and protection can emerge from the incorporation of sustainability, interpreted as "the sustenance of the public good and the common good." This criteria would be formulat-

ed around (1) protection of architectural diversity; (2) protection against the wasteful and unnecessary demolition of existing structures; and (3) protection against partial demolitions that compromise the integrity of useful existing structures.

THE EXPRESSION OF ADAPTIVE REUSE

While the proposed criteria may increase the scope of what is preserved, they don't guarantee a positive design outcome. Projects must be undertaken with consciousness about the sustainable dimension of the reuse, respect for existing material, and a commitment to balance the old and new. Without this consciousness, a form of "replacement" architecture can occur wholly within the restored shell.

This quality is evident in the adaptive reuse of the building at 2120 Polk Street from a garage to a Walgreens pharmacy (Fig. 4). Here, the building remains intact. Its new use is compatible with Polk Street, the main shopping corridor in Russian Hill. The public continues to enjoy access, and the store contributes to the street life.

Figure 4. Walgreens Pharmacy, 2120 Polk Street.

This is a rehabilitation in the sense that the new use does not compromise the most noteworthy aspects of the building. The ornament has been restored throughout, and no harm was done of an irreparable nature. While a modern storefront and windows are bulky and insufficiently recessed into their openings, these are not permanent.

Giving priority to brand image and economic expediency however, Walgreens inserted its standard store design of finishes, fixturing and signage. There is no relationship between old and new. It's a banal interior and a lost opportunity.

Adaptive reuse is the means by which buildings are recycled to accommodate change, and this can be a rich source of design expression. It has the potential to promote diversity both within and without the building envelope, from small-scale juxtapositions of interior details to exterior contrasts in adjacent buildings. Conceptually, it's inherently post-modern, not in the stylistic sense of historical caricature, but in the simultaneity of meanings generated by the adaptation. Signs and symbols associated with original use, and the tectonic presence of that which is adapted, mingle with corresponding expressions of the new use. The contrast can be projected onto the façade, as a wall containing a delicate balance of new and old elements. Ironies are inevitable, as the "unsuspecting" host accommodates a new and foreign use that it was not designed to handle.

Figure 5. Patagonia Store, 770 North Point. Richard Altuna and Steve Nelson (1986).

The conversion of the garage at 770 North Point to a Patagonia clothing store illustrates the potential for expression (Fig. 5). The façade is restored in a manner that celebrates the original use and character while sensitively inserting the new identity. The banded ornament is crisp and freshly painted in a highlight color. The composition climaxes in the *bas-relief* and the "1924" sign, details that call attention to the building and not to the store.

A common challenge in garage conversions is the insertion of a modern storefront--with conventional entry doors--into the wider garage-door openings. Here, the storefront breaks away from the façade and moves into the space, establishing a parallel, recessed plane for entry in the center. The solution maintains the large rectangular voids that set the wall in relief, and mimics the appearance of the garage with the doors open. Similarly, the fenestration reproduces the small panes and thin mullions of the original industrial windows. Patagonia is announced by a flag, a hanging sign recessed into the entry, and the merchandising of the storefront. The store relies upon the engagement of the viewer with the building to draw attention to the clothes and the brand. It's an understated approach for retail. This façade signifies adaptive reuse through the balanced interaction of recycled and new elements.

The interior is open to the industrial ceiling, lofty and filled with natural light that enters from skylights. The trusses and ceiling are painted white, and the eye is lifted up upon entry. Here too, the store defers to the building-- store fixtures are low and sparse. The beauty of the rehabilitated interior and its continuity with the façade demonstrates the waste and shortsightedness of encouraging the partial demolition of holistic architectural statements.

Mounted on a wall adjacent to the entry is a frame containing four vintage photographs of the building--the Barsotti garage. The content of the photos verifies the faithfulness of the rehabilitation, while the presentation reflects a consciousness of the meaning of the adaptive reuse. When I inquired about the photos, the store clerks explained to me that the opening of stores in recycled buildings is a company policy. Visiting Patagonia's website, I found the company mission statement:

> Build the best product, cause no unnecessary harm, use business to inspire and implement solutions to the environmental crisis.[16]

Here, the architectural expression of adaptive reuse also signifies the client's prescient commitment to sustainability.

CONCLUSION

Responding to a moral imperative, the discipline of architecture is quickly integrating sustainability into its practice and teaching curriculum. Architects and teachers who are troubled by an architecture that appears exclusively concerned with aesthetic considerations are invigorated by the mandate. However, if we follow the logic of our convictions, our professional engagement with the issue must extend beyond the application of technical expertise, to political advocacy on behalf of adaptive reuse. Our ability to give architectural expression to the fruits of this advocacy brings aesthetics and social purpose into a balanced alignment of shared purpose.

The narrative told by a reused building is a chapter in the history of the city. Its preservation and reuse is itself symbolic of tolerance, co-existence, and a celebration of diversity. In the current environmental crisis, the exposure of repair, decay, stabilization, and damage communicates the commitment to work with what we already have, and to let the old *be* old. At the same time, the new material reinvigorates the old--gives it a new reason to be. The rich interplay of architecture and use--the adaptation--nourishes the building, the city and the people who use it.

ENDNOTES

1. Vandana Shiva, "Vandana Shiva in Conversation with Carol Tang" (City Arts & Lectures, Herbst Theatre, San Francisco, CA, July 13, 2008).

2. "Folsom + Dore," *David Baker + Partners, Architects,* http://www.dbarchitect.com/project_detail/34/Folsom%20%2B%20Dore.html (accessed August 26, 2008). Page includes an image of the warehouse before demolition.

3. Rich Binsacca, "South of Market: LEED-certified Folsom + Dore Apartments in San Francisco Combine Affordable Housing with Sustainable Features," *EcoHome* (Spring, 2008), http://www.ecohomemagazine.com/leed/south-of-market.aspx (accessed August 26, 2008).

4. Vandana Shiva, *Earth Democracy: Justice, Sustainability, and Peace* (Cambridge, MA: South End Press, 2005), 21, 34, 91-95, 121-122.

5. Ibid., 100.

6. Jane Jacobs, *The Death and Life of Great American Cities*, second printing (New York, NY: Random House, 1961), 187.

7. Ibid., 150.

8. Ibid., 187.

9. Ibid., 188.

10. Marc Augé, *Non-Places: Introduction to an Anthropology of Supermodernity*, trans. John Howe (New York: Verso, 1995), 110.

11. Governor's Office of Planning and Research, *CEQA and Historical Resources, CEQA Technical Advice Series; Background on Historical Resources Preservation* (May, 1996), http://ceres.ca.gov/topic/env_law/ceqa?more/tas/page2.html (accessed August 26, 2008).

12. Governor's Office of Planning and Research, *CEQA and Historical Resources, CEQA Technical Advice Series; CEQA Provisions* (May, 1996), http://ceres.ca.gov/topic/env_law/ceqa?more/tas/page3.html (accessed August 26, 2008).

13. United States Department of the Interior, National Park Service, *National Registration of Historic Places, Nomination of Uptown Tenderloin Historic District,* OMB no. 1024-0018 (May, 2008): section 7, 15-96. The Table of Buildings lists twenty-two garages as "contributors" to the proposed historic district. Garage buildings built during the 1910's and 1920's, situated throughout the city, are likely to qualify as historic resources by virtue of their age.

14. Ibid., section 8, 31.

15. Ibid., 31-34. The section "Architects, Designers and Builders" describes the various relationships between the parties involved in design and construction of buildings in the neighborhood during this period. My research of original permits issued for the construction of garages confirms that the arrangements described in the section apply to garages located throughout the city.

16. "Our Reason for Being," *Patagonia,* http://www.votetheenvironment.org/?ln=234 (accessed August 26, 2008).