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Synergisms: Building Modern in the Context of Historic Architecture

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Abstract: How can modern design and historic architecture complement and give meaning to one another? How can new architecture not only be modern and acknowledge its historic context but go beyond that to reveal the underlying principles in both old and new design? Increasingly, architects around the world have explored new ways of utilizing modern architecture and design principles in carefully conceived additions to historic buildings, districts and landscapes. In the best examples, architects have created a dialogue between past and present. For these designers, historic architecture is seen as a resource, as a cultural "found object" that can be mined for meaning, as well as providing a rich counterpoint to modern design elements. This dialogue between past and present has extremely important implications for modern design theory, the evolution of historic preservation and for environmental sustainability. Adapting, engaging with, adding to, modernizing and re-defining existing buildings is one of the most effective tools in working towards a sustainable built environment. This evolving attitude also is contributing to new developments in the interpretation of architectural preservation standards in the U.S., in Europe and elsewhere. Seeing historic architectural fabric as a cultural resource (a resource that can be juxtaposed with modern design to shed light on both historic and modern) is an important development for world culture and for the continued vitality and retention of historic buildings and historic districts. This paper and presentation is based on my own research and writing following a series of exhibits produced for the American Institute of Architects (Seattle Chapter), with case study projects from architects in several countries that illustrate emerging ideas in this important segment of contemporary design theory and practice.

Keywords: Modern Architecture in Historical Context, Additions to Historic Architecture

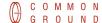




Fig. 1: Castelvecchio, Verona. View of interstitial space and Cangrande statue re-installation.

Architect: Carlo Scarpa. Photograph © Jennifer Milliron/Edward Lalonde

Introduction/Overview

SYNERGISM" IS A word with ancient roots ¹ – representing the phenomenon where certain elements combine, connect and interact – and create a whole that is greater than the sum of its parts. The concept is most often used in chemistry. But synergisms of a different strain can also occur in certain architectural combinations - where new work is inserted into a preexisting historic/cultural context - and a new set of relationships emerge across time.

The act of inserting new buildings into pre-existing historic contexts makes up an everexpanding segment of architecture and development. And throughout the world, every day, in areas where new building in historic contexts is regulated by law, architects and historic

¹ "Synergism" derives from the ancient Greek *syn-ergos*, meaning "working together".

landmarks boards confront a variety of complex issues that deal with building modern in the context of historic architecture.

The projects summarized in this article begin to touch on some of the core questions and challenges that need to be addressed when we graft new to old, including questions such as:

How can new architecture not only be modern - and acknowledge its historic context – but go beyond that to reveal the underlying principles in both historic and new architecture?

How can the new and old complement and give meaning to one another? How can modern design and historic architecture combine to create new *synergisms*?

Background: Twentieth Century Modernism, Anti-history and Rapprochement

Architects in early twentieth century avant-garde circles agreed on few things. But one sentiment was common to all: the historic city was cultural dead weight. Except perhaps for certain vernacular and industrial elements, the architectural legacy of cities, streets, squares, neighborhoods was not a resource to be analyzed or respected – it was expendable.²

No doubt part of the European Modern Movement's extreme reaction to history and to the historical cityscape (particularly in the reaction against the European city by Europeans) can be attributed to the shock of World War I. Out of this cultural post-traumatic stress disorder emerged a desire to start over, to start fresh, unencumbered by history. And reactions to World War II contributed to a new form of anti-history PTSD in America. The old world was fraught with grief, poverty, destruction. A new, better world would rise in America. Cities and city life were abandoned for suburbs. There were many social contributors to this rejection of history, but the upshot was that thousands of landmarks and entire historic neighborhoods in great American cities were demolished in massive and dubious planning developments that echoed the anti-historical vision.

² Examples of this attitude were everywhere, including Wright's statement that London was essentially "senile" and should be leveled, sparing perhaps a few monuments in a "great green park". See Frank Lloyd Wright, *An Organic Architecture, the Architecture of Democracy*, Lund Humphries, London 1939 (as quoted in Manfredo Tafuri, *Theories and History of Architecture*, Harper and Row, New York 1976, p. 46). Wright's rejection of the historical city followed such visions as Le Corbusier's *Villa Contemporaine* and *Villa Radieuse* schemes of the 1920's and 1930's, with cruciform towers marching in a park: at once anti-city, anti-street and anti-history.



Fig. 2: Pennsylvania Station, New York, before and after Destruction

In the U.S., the clash of history and anti-history came to a head with two galvanizing events in 1960's and 1970's Manhattan: first, the demolition of McKim, Mead and White's monumental landmark Pennsylvania Station. Second, the subsequent attempt by Penn Central Railroad to build a Marcel Breuer-designed tower directly over the venerable Grand Central Station.³

Meanwhile, other historic counter-trends were developing. In post-World War II Europe, a new generation of architects began to question the modernist rejection of history. A rekindled appreciation for the historic city (and for preservation) led architects and theorists to revisit the "classic" texts of the nineteenth century that form an important part of the theoretical foundation for preservation and conservation of landmarks. These basic texts include the work of Viollet le Duc, who saw architectural restoration as "re-establishing [buildings] in a finished state" even if that meant embellishing those buildings with newly-created "historical" elements. ⁴ Viollet le Duc's controversial work contrasts with the writings of John

³ In a decision that upheld the rejection of the Grand Central tower, and that would have sweeping ramifications for historic preservation in the United States, the U.S. Supreme Court affirmed the right of local governments to protect designated historic properties and to restrict demolition and redevelopment that affects these landmarks. (Penn Central Transportation Company et al v. City of New York et al, 438 US 104 (1978)). Owners could be prevented by law from altering or demolishing their historic properties and could be subject to local restrictions on altering or adding to historic landmarks, even if that meant that the owner's investment-backed expectations could not be fully realized.

⁴ E.E. Viollet le Duc, *The Foundations of Architecture: Selections from the Dictionnaire raisonne'*, 1854 (translation by Kenneth Whitehead, New York, Braziller, 1990) 195.

Ruskin, for whom historic buildings were to be revered as finite treasures, fragmentary and slowly decaying. Ruskin's sublime remnants, his "mysterious suggestions" were to be preserved, but not restored, and in his view (particularly with cities such as Venice) architects were to avoid the insertion of modern elements.

Moving beyond Viollet le Duc's blended reconstruction-restoration and Ruskin's quasiarchaeological stance, nineteenth century theorists such as Camillo Boito provided an evolutionary view of historical cities and contemporary interventions, advocating a weave of old and new and a renewed attention to authenticity and transparency of historical layers.⁶

Boito's perspective re-emerged and continued to resonate through the work of theorists working in Italy after World War II, especially with the work of such architects as those associated with the "Tendenza" movement, including Aldo Rossi, Giuseppe Samona', Vittorio Gregotti and Carlo Aymonino. For these writers and designers, the historical city was seen as a great architectural organism, composed of evolving building typologies and morphologies, and infused as much with cultural meaning as with architectural meaning. As Giuseppe Samona' wrote in 1959, in describing the historical city/town:

"...along the course of the centuries, there is a vital sense that shapes everything contained within it, and a coherence recognizable in the custom as well as the spaces; so that every part of the city, or, at least, every essential part, has meaning because it belongs to the continuity of extension of the urban texture according to unmistakable characteristics⁷...Any effort towards saving the historico-artistic heritage of our towns must dissolve its negative charge, and allow the old texture to enter the process of reshaping urban life..."

The Public's Interest and the role of Architects and Review Boards in Protection of Historic Contexts

Increasingly, historic centers, historic urban fabric and cultural landmarks around the world are seen as elements of the public realm, as part of a shared cultural patrimony. This public interest component was at the legal foundation of the "Penn Central" U.S. Supreme Court decision (described above) and it underlies the establishment of historic landmarks laws throughout the U.S., Europe and elsewhere.

But public interest goes beyond protection of single, isolated landmark buildings. It also includes protection of the overall character of the historic context, of relationships between buildings and context - which has fundamental implications regarding new development in historic areas.

Anywhere historic properties are protected by law, local historic commissions, architects and government officials are called on to make essential design decisions that impact historic buildings and sites. They are basically given the role of the guardians of the local architectural heritage. In acting in this role, the reviewers are usually provided only very basic his-

⁵ John Ruskin, *The Seven Lamps of Architecture*, New York: Dover, 1989, vi.

⁶ See, e.g., Camillo Boito, *Gite di un Artista*, Milan: 1894, as noted in "Restauro in Venezia" by Ellen Soroka, The Journal of Architectural Education, May 1994, 226.

Giuseppe Samona', L'urbanistica e l'avvenire della citta' negli Stati europei, Bari: Laterza, 1959, 1963, 129 (translation by Giorgio Verrecchia in Manfredo Tafuri, *Theories and History of Architecture*, Harper and Row, New York, 1974).

⁸ Samona', p. 250.

torical background materials regarding the historical/architectural context. They are also provided with generalized guidelines, essentially along the lines of the standards developed by such organizations as UNESCO⁹, ICONOS¹⁰ and the U.S. National Park Service. ¹¹ ¹² They are then required to quickly apply these standards and approve, reject or modify proposals for new architecture to be inserted into historic contexts.

In general, this design review process for historic properties operates at what is essentially the level of a Hippocratic Oath applied to architectural settings: "First, do no harm." The parties labor mightily to at least ensure that (in most cases) no major harm is done to the historic architectural legacy that they have been asked to protect. And in most cases this is as far as it goes. The historic architecture is protected at some basic level and (hopefully) is not irretrievably compromised or damaged by the new work. The old is protected at a minimal level and the new work is somehow differentiated from the old in order to satisfy the basic standards. In many cases that is realistically all the reviewer can expect, for a variety of reasons.

But there are many circumstances where the new architecture and the historic context could do much more to create a new and energized dynamic, a new synergy where the whole could become greater than the sum of its architectural parts.

And so: are there questions, tools, ways of thinking that can help architects and reviewers achieve a higher level "synergism"?

⁹ See, e.g., "World Heritage and contemporary architecture: Towards new conservation standards." http://portal.unesco.org/en/ev.php-URL_ID=27359&URL_DO=DO_TOPIC&URL_SECTION=201.html. As stated by UNESCO in connection with its World Heritage Danger List, there is an emerging "understanding that the outstanding universal value of urban heritage goes well beyond the value of the individual buildings it contains" creating a "pressing need for internationally accepted guidelines and criteria for the preservation of historic centres." And: "City centres that developed over centuries *need to remain legible* with each stratum of their development testifying to its culture and stage of development. The identity of each stratum must be respected, as well as the identity of the whole, *which is the fruit of the interaction between those strataa.*" Francesco Bandarin, Director of UNESCO World Heritage Centre, in "World Heritage and contemporary architecture: Towards new conservation standards." http://portal.unesco.org/en/ev.php-URL_ID=27359&URL_DO=DO_TOPIC&URL_SECTION=201.html.

The International Council on Monuments and Sites (ICOMOS) is an international non-governmental organization specifically founded to foster the protection of cultural places. Nearly forty years ago, in its "Symposium on the introduction of contemporary architecture into ancient groups of buildings" the organization recognized that the ongoing viability of historic contexts required not only continual preservation but new uses and new building within historic contexts in order to remain vital and sustainable. But ICOMOS advocated for only a limited insertion of contemporary architecture in historic settings See http://www.international.icomos.org/about.htm. See also: http://www.icomos.org/docs/contemporary_architecture.html.

¹¹ Since its formation in 1916, the National Park Service (NPS) has operated within the U.S. Department of the Interior as the federal-level organization "dedicated to preserving the natural and cultural resources of the National Park system." http://www.nps.gov/aboutus/index.htm. NPS develops preservation standards and guidelines and administers the National Register of Historic Places that go well beyond the National Park system. For new additions that affect historic properties that are listed in the National Register, or located within historic districts, the NPS sets the ultimate standards for review if those projects involve federal rehabilitation tax credits – a large and growing segment of the historic landmark inventory in the U.S. http://www.nps.gov/history/preservation.htm . For related information and links to other articles by the author on this subject, see the author's web site at www.StephenDayArchitecture.com.

¹² NPS also develops the "Secretary of the Interior Standards" for historic building rehabilitation, restoration, archaeology and preservation – standards adopted and used every day throughout the United States by hundreds of local landmarks review boards. http://www.nps.gov/history/standards.htm

Synergisms

The post-WW II Italian theorists and architects have been enormously influential for those involved with new architectural insertions in historic contexts. Some of the earliest and most pivotal examples of this sensibility can be found in Carlo Scarpa's work, particularly in his restoration and redefinition of the "Castelvecchio" museum in Verona in the late 1950's-1970's (further discussed below).

Since these mid-century projects were realized by Scarpa and others, architects around the world have increasingly explored new ways of utilizing modern architecture and modern design principles in carefully conceived additions to historic buildings, districts and rural landscapes.

In the best examples, architects have created a dialogue between past and present. For these designers, historic architectural elements are seen as a resource, as cultural "objects troves" that can be mined for meaning, as well as providing a rich counterpoint to modern design elements. Various eras and historical strata intersect, bringing the participant into a new awareness of both history and modernity.

This dialogue between past and present has extremely important implications for modern design theory, the evolution of historic preservation and for environmental sustainability. Adapting, engaging with, adding to, modernizing and re-defining existing buildings is one of the most effective tools in working towards a more "sustainable" built environment.

It is instructive to briefly review a diverse group of case studies that illustrate different levels of the Synergism principle – where both the historic architecture and the new architecture stand their own ground – but where their combined dialogue can in some way illuminate both old and new. These synergistic case studies were chosen to include a range of project types that might confront practicing architects and landmarks review boards, ranging from prominent public museum projects to small scale interventions within historic buildings. ¹⁴

¹³ The contemporary use of the word "sustainability" is expanding beyond an energy-focused meaning and including such concepts as cultural sustainability. At the same time the preservation and adaptive re-use of existing buildings (as opposed to demolition and rebuild) is increasingly recognized as one of the most effective means of reducing energy consumption and waste. However, in rating systems such as "LEED", far too little rating credit is given to projects that involve re-use and rehabilitation of existing buildings. As of this writing, LEED standards are being revised to (hopefully) better address this imbalance.

¹⁴ An entire article could be written about each of these examples, so these thumbnail sketches only provide an outline of the important aspects of these projects.



Synergism #1: Castelvecchio, Verona (Carlo Scarpa, 1958-1970's)

Fig. 3: Castelvecchio, Verona. View of Cangrande statue and new pedestrian bridges. Architect: Carlo Scarpa. Photograph: ©Jennifer Milliron/Edward Lalonde

Among Carlo Scarpa's best-known works, this project includes a series of architectural interventions and illuminations in and around this medieval castle, located in Verona, Italy. Scarpa's collaboration with the Comune di Verona on this work began modestly (as a museum installation design project in 1958) and eventually grew to include multiple phases focusing on the castle restoration, new insertions into historic fabric and additional permanent exhibits, continuing into the 1970's. In the process, the Castelvecchio Museum's position as a focus of cultural significance for the city of Verona has been reinforced.

While much of the architectural writing on Scarpa's work in Verona has focused on his exquisite detailing of the exhibit "furniture" and elements, what is often missed are the overall architectural gestures and re-alignments set in motion by Scarpa in his restoration and re-building at Castelvecchio. The foundation of Scarpa's work lies in understanding and "reading" of the Veneto region and its architectural/cultural underpinning, including such elements as the unique local stone, metal and plaster craft traditions and the rich history of Verona and the Veneto region.

Combining elements of thorough historic/analytical research, plus a deep understanding of the underlying cultural and architectural forces and textures (with an undeniable architectural design virtuosity), Castelvecchio has set a high mark as an example of architectural

synergism: it includes both a highly accomplished restoration combined with skillful modern insertions and program *and* something new that emerges from the chemical reaction of combining new/old. The new intervention goes beyond preservation and beyond merely distinguishing between new/old – it serves to illuminate the historic architecture and the participant's experience of that architecture.



Fig. 4: Castelvecchio, Verona. Bridge and passageways. Architect: Carlo Scarpa. Photograph: ©Jennifer Milliron/Edward Lalonde

With this *research* as his foundation and reference, Scarpa was able to guide a series of restoration and rebuilding efforts that used architectural means to illuminate the most significant sequential layers of historical strata at Castelvecchio. Where major elements had been lost or heavily damaged over time, Scarpa saw opportunities to insert modern "stitches" or "sutures" that could both assist in the participant's movements through the museum sequence and enhance visual legibility of the Castelvecchio history. His use of modern materials and the operations imposed on them (scorched wood, blasted stone versus polished stone, concrete in various finishes, material etching, polishing, rusting) all added to and emphasized

¹⁵ As noted in "Restauro in Venezia" by Ellen Soroka in The Journal of Architectural Education, May 1994, at 238, it is questionable if Scarpa and the Comune would have been allowed to complete this same restoration today, especially with regards to the "undoing" of past restorations, given more recent guidelines for restoration and rehabilitation in place in Verona.

the traditional Veronese/Veneto palette of stones and plasters. What had been obscured by neglect and accident became exposed, understandable, poetic: the medieval castle towers, the thick stone walls, the canals/waterways, the landscape, the river, all interact visually and pull these elements into a modern dialogue focusing on humans moving through space and perceiving this dialogue.





Fig. 5: Maison Carree' (foreground) with Carre' D'Art beyond, Nimes. Architect: Foster & Partners. Photograph: © James Morris

As with the Castelvecchio museum, the Carre' D'Art marks another pivotal moment in the lineage of modern architectural insertions in prominent historical contexts. The Maison Carree' is one of a handful of complete buildings that survive from the ancient Roman world virtually intact, seemingly miraculously passed down to us for over two thousand years by successive generations.

Norman Foster was commissioned to design the Carre' D'Art, an expansive municipal art museum to be located on the site of the nineteenth century Nimes opera house that had been destroyed by fire. The old opera house featured a monumental, ionic-columned colonnade that once faced the flank of the ancient Roman temple, across a public space that had been degraded over time to serve primarily as a parking lot.¹⁶

¹⁶ http://www.fosterandpartners.com/Projects/0344/Default.aspx

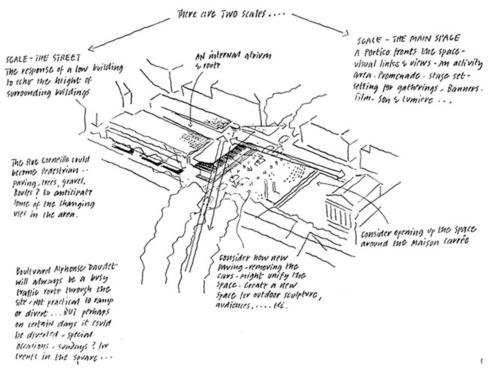


Fig 6: Carre' D'Art, Nimes. Architect: Foster & Partners. Drawing courtesy of Foster & Partners

Foster's various proposals followed an intense period of research and analysis, exploring the ancient monument, the urban context, its history and the spatial relationships between the Maison Carree and the surrounding public space/urban fabric. His focus inevitably turned to the most prominent architectural component of the ancient monument, its splendid Corinthian portico. Early proposals included attempts to restore and reuse surviving elements of the nineteenth century opera house colonnade as a contributing historical layer in the new building in order to establish a dialogue between the new museum and the ancient temple, through this mediating element.

Eventually the determination was made that the opera house colonnade was too heavily damaged for re-use. This scheme was replaced with one that featured a completely new museum building, with its primary façade dominated by a monumental entry portico, with extremely slender columns and sunscreen/brise soleil elements, executed in white-painted steel. The new building provides a clearly modern contrast with the historical monument, but goes beyond mere contrast to feature a modern reinterpretation of the civic portico, establishing a formal and functional dialogue with the Roman landmark. The new museum also creates a physical platform that allows users to traverse up and down through the museum on a monumental staircase, with landings and outdoor terraces that frame views and refer back to the ancient building.

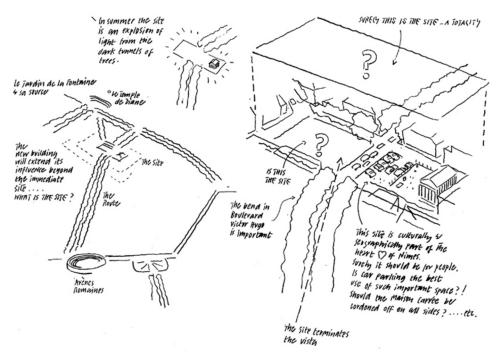


Fig. 7: Carre' D'Art, Nimes. Architect: Foster & Partners. Drawing courtesy of Foster & Partners

While the new museum does not physically touch the historic temple, the project and its program allowed for a complete reorganization of the surrounding urban spaces, removing parked cars and restoring the urban public spaces bordering the ancient building. In its respect and illumination of the ancient building, the new museum built on the power and poetry of the historic context, further providing a catalyst for the reinvigoration of the historic center of Nimes.

Synergism #3: Higgins Hall, Pratt Institute, Brooklyn, New York (Steven Holl Architects, 1997-2005)



Fig. 8: Higgins Hall, Pratt Institute, Brooklyn, New York. Architect: Steven Holl Architects., Photograph: ©David Sundberg/Esto.

Steven Holl's work has evolved from a base grounded in building typology and urban constructs to include the ongoing exploration of human interaction with architectural phenomena. Holl's work has often focused on a deep reading of the site and context, often using building remnants or site history to trigger architectural concepts that guide design decisions.

Pratt Institute is an architecture and fine arts school located in several buildings, including Higgins Hall, originally made up of three wings in a U-shaped configuration, dating from the 1860's. A 1996 fire destroyed the center wing. The remaining parallel buildings operated separately, with varying floor levels, but needed to be joined.¹⁷

Holl's intervention to join the two surviving (but separated) wings was based on the fact that the floor plates of the two wings were increasingly misaligned on upper floors: at the first floor the difference was only half an inch (the width of a finger) increasing to over six feet at the top floor (the height of a human). As with many of Holl's recent works, the human scale and human body became linked to the narrative and this "dissonance" zone between the old building wings became the primary design departure point. "Dissonance" is also present in a new element of the design: a skylight that includes two slots, mixing north and south light. Brick reclaimed from the fire is used to create a concrete and brick plinth for the new suture. Rising from this plinth, the new wing is made up of a concrete skeleton, clad with translucent insulated glass planks.

¹⁷ http://stevenholl.com/project-detail. php?id=43&search=higgins



Fig. 9: Higgins Hall, Pratt Institute, Brooklyn, New York. Architect: Steven Holl Architects., Photograph: ©David Sundberg/Esto

By recessing the new addition behind the projecting historic buildings, the rear corners of the nineteenth century building blocks are allowed to be read and remain as autonomous and dominant elements, a simple means of grafting new to old that conveys respect for the historic buildings.

During daylight hours, the new wing is infused with light from above, distinct from the red brick walls of the historic buildings. At night, the new architecture emits light through its translucent walls, further contrasting with the deep, opaque walls of the historic building.

The new wing creates a dynamic new set of spatial relationships with the historic wings as the participant moves through the newly-created exterior courtyard and through the translucent zone. With simple architectural means, the new wing repairs the damaged building and joins the separated wings, illuminates (literally and figuratively) the structural character of the historic building context and reinvigorates this historic architectural ensemble.

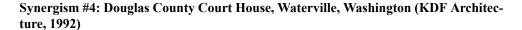




Fig. 10: Douglas County Courthouse, Waterville, Washington. Architect: KDF Architecture., Photograph showing recent expansion of the building. Photograph: ©Stephen Day.

In contrast to the high profile projects such as museums and new college buildings, this project is a good example of the type of intervention that architects and landmarks boards are most likely to review on a regular basis.

The historic town of Waterville is the county seat of Douglas County, located in the high desert country of north-central Washington State. Waterville had the good fortune of hosting a brick mill in the late nineteenth century, with the result that its main street is largely built of brick, well-constructed and detailed. The main commercial center is listed on the U.S. National Register of Historic Places, as is its remarkable brick, stone and timber court house, built in 1900. 18

The Douglas County Courthouse sits high on a hill, dominating the town of Waterville. Set on a plinth of rough cut local granite, the main body of the building rises above this base an additional three floors. These upper floors are clad with the town's signature red brick, now painted. The building is topped by an exuberant open air cupola, constructed with heavy timber and capped by an octagonal pointed roof.

The Courthouse includes two additions; one built in the 1920's, the other in 1992. While the 1920's addition is clearly distinct from the historic building, built in an austere variation of art deco, this addition involves no architectural dialogue. What we have are two structures sitting side by side, essentially going about their business as if the other did not exist (see Fig. 11).

¹⁸ http://www.nationalregisterofhistoricplaces.com/WA/Douglas/state.html



Fig.11: Douglas County Courthouse, Waterville, Washington. Architect: KDF Architecture., Photograph showing earlier expansion of the building, prior to the more recent addition. Photograph: ©KDF Architecture/Dawson Lapsley

In contrast, the addition designed by KDF Architecture (shown in Fig. 10) takes the 1992 addition to a different level. The challenge was to add handicap-accessible administrative space and access to a venerable historic building, while maintaining the primacy of that historic building, yet creating a building addition that represented its own time in history. With a few simple moves, working within a constrained budget, the architects accomplished that – but were also able to achieve more.

First, they chose the same local granite for the cladding of the new addition that was used on the prominent base for the historic building, effectively highlighting that material in both the old and new. However, rather than using the stone in the rough cut manner in the older structure, the architects detailed the new cladding with a more geometric, relatively flat cut – a subtle distinction, but legible. Second, by aligning the top of the addition with the main building base, the addition is simultaneously subservient to the historic landmark yet reinforces the visual support of the historic building plinth, extending that plinth horizontally into the site. Third, by detailing the new entry trellis with aluminum "stick" construction, the new addition echoes in a modern way the wood stick construction of the cupola topping the historic building. This entry also provides a third element between historic building and new addition, mediating the physical connection between old and new.

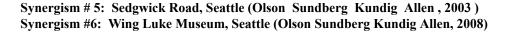




Fig. 12: Sedgwick Road, Seattle, Washington. Architect: Olson Sundberg Kundig Allen. ,Photograph: ©Hans Fonk

These two projects represent variations on related synergistic themes, designed by the same architectural firm in Seattle. Sedgwick Road involves a recurring project type: interior "tenant-improvement" changes to vernacular historic buildings. In this case, when the architects were brought onto an advertising agency's project for the interior renovations of a 1920's Seattle industrial building, they saw immediately that the major historic and architectural significance of the building was in its remarkable open interior spaces, and in its rich palette of industrial materials, with delicate scissor trusses capping a high (formerly machine shop) floor – all remnants of former uses.

In their first trip to the site, the architects encountered the machine shop floor piled with discarded industrial debris – elements that were physical, integral representations of the history of the site: parts of dismantled mobile cranes, steel doors, old window frames – all ready to be discarded. Convincing the clients that these industrial elements had intrinsic value and should be retained (and re-cast) as components in the new life of the space, the architects used these reconfigured elements as raw material in the new interventions in the space.



Fig. 13: Sedgwick Road, Seattle, Washington. Architect: Olson Sundberg Kundig Allen. , Photograph: ©Marco Prozzo.

The architectural concept became one of new insertions in the open industrial floor, with mobile walls made up of previously discarded industrial elements gleaned from the prior history of the space. A connection across time was made between the industrial open plan and a modern open plan with flexible partitioning – reinforcing the century-old industrial spatial configuration, making it legible, and reinforcing that legibility with remnants salvaged from the history of the building, now given a new life and function.

The Sedgwick Road project serves as a reminder that the architectural program does not need to be grand, or involve a major cultural facility such as a museum, in order for various historical strata in a building to be mined for meaning.



Fig. 14: Wing Luke Museum, Seattle, Washington. Architect: Olson Sundberg Kundig Allen, Photograph: ©Lara Swimmer

The Wing Luke Museum is located in Seattle's Chinatown International District, a historic assemblage of blocks adjacent to downtown and a center for Asian immigrant culture. The architectural departure point is simple but potent: a century-old hotel, originally built with the pooled funds of over 170 Chinese immigrants, creating a home for transient laborers. The building was empty for decades, until it was re-cast as a unique museum that uses the historic context to chronicle the lives and struggles of pan-Asian immigrants living in a new world.

The architects approached the building with a similar strategy as with their work in the Sedgwick Road project: the historic remnants that had accumulated for decades in the building, long-abandoned, became signifiers in this historical narrative.



Fig. 15: Wing Luke Museum, Seattle, Washington. Architect: Olson Sundberg Kundig Allen. ,Photograph: ©Lara Swimmer

A synergy of elements (and the illumination of the historic context) is realized here with subtle gestures: by carefully inserting contemporary elements into the restored, vernacular historic building volume; by making strategic cuts through the fabric to expose the bones of the old hotel and filling these cuts with stairways and bridges in order to allow movement through and interaction with the historic context; and by using modest but powerful displays that use the building spaces to help tell the immigrant stories and the history of the building (such as the "Letter Cloud" by artist Erin Shie Palmer, shown in Fig. 15).

Synergism #7: Transformation of an Old Salted Fish Factory into a Rural Tourism House (Alfonso Penela Fernandez Architects, Aldan- Cangas, Spain, 2003)

This project rises from remnants of a late nineteenth century Catalan salted fish factory, built of local stone and wood, bordering the sea. Embedded in these stones and in this place are traces of a tradition now gone but worth re-discovering, remembering and marking.



Fig. 16: Old Salt Fish Factory-Rural Tourism House, Aldan-Cangas, Spain. Architect: Alfonso Penela Fernandez., Photograph: ©Manuel Gonzalez Vicente

After extensive archaeological and historical research was completed, the designers used this research to develop a strategy for layering the site with new architectural elements. Their goal was to create not only a museum that would communicate the history of the site and the people who inhabited that site, but a didactic tool for explaining the region and various historical relationships within the landscape and site. ¹⁹



Fig. 17: Old Salt Fish Factory-Rural Tourism House, Aldan-Cangas, Spain. Architect: Alfonso Penela Fernandez., Photograph: ©Manuel Gonzalez Vicente.

The architectural palette is spare and timeless – stone, concrete, wood, glass – expressed in modern but austere means. Remaining remnants that explain the history of the building were left in various stages of decay, avoiding over-restoration, but stabilized and protected. Modern insertions are minimal but used to direct movement of visitors through the site and to highlight features that help explain both the architectural fundamentals and the historic program established in the historic salted fish factory.

¹⁹ The narrative regarding this project is based on materials submitted by the architects to the author for an AIA Seattle exhibit and on information contained within the article "Rural Tourism House" originally published in Architectural Record and republished online at: http://www.architecturalrecord.construction.com/projects/bts/archives/adaptiveReuse/04 ruralTourism/overview.asp.

The architect has stated that they use architectural interventions such as these to construct a meeting place between the "ghosts and spirits" of various ages, as a confluence of different moments in time.

Distillation: Searching for Synergy

In all these projects, specific synergies have developed – some planned, some hoped for, others unexpected. In considering potential architectural interventions into historic contexts, what analysis, what questions, what criteria can designers and reviewers look for in order to encourage and achieve synergistic phenomena?

The standards used in evaluating new work in protected historic contexts have evolved over the past forty years, based especially on the work of such organizations as UNESCO, ICOMOS and the U.S. National Park Service, discussed above.

What follows is an attempt to build on the standards – to add criteria, questions, considerations that could take projects further in order to encourage "synergistic reactions" between old and new.

The concepts and ideals underlying the various architectural case studies described above, from Castelvecchio to Wing Luke, from Higgins Hall to Waterville, all begin to point to a set of recurring elements in these "synergistic" projects. The following questions are aimed at achieving these architectural synergies in projects that are expressive of our time in history – yet illuminate the underlying principles, narratives and essences of the historic context.

Does the New Work Satisfy these basic Criteria in order to Achieve "Synergisms"?

- 1. First, does the new work demonstrate respect²⁰ for the historical/cultural/architectural context by avoiding unnecessary alterations to that context?
- 2. Does the new work provide "legibility" does each significant strata in time respect the other and remain distinct, avoiding pseudo historicism, and does each significant strata remain expressive of its time?
- 3. Is the significant historic fabric allowed to be primary (or at least co-equal) in the hierarchy and allowed to establish the "framework" for new development?
- 4. Does the new work employ an appropriate use of mass, scale, rhythm and appearance?
- 5. Does the intervention preserve historic character, significant materials and features?
- 6. Does the project establish uses that enhance the sustainability of the historic context?
- 7. Does the new work demonstrate an understanding of the history of the building/context?
- 8. Have the architect and reviewers conducted an on-site "reading" of the context (a process involving both subjective/intuitive elements and objective/analytical)?
- 9. Does the new work communicate/illuminate elements of the historic/cultural context of the larger site (larger scale)?
- 10. Does the new work communicate/illuminate elements of the historic building context (smaller scale)?

^{20 &}quot;Respect" is a general term and difficult to define in advance to fit all cases. But it is likely that respect for context will be achieved if the intervention avoids unnecessary alterations to the historic fabric and satisfies the other criteria listed here.

- 11. Does the new work demonstrate an understanding the spatial and architectural relationships of the historic context?
- 12. Does the new work establish new ways of engaging with, viewing, moving though/around and "reading" the historic context?
- 13. In the case of additions, does the project provide a thoughtful architectural means of mediating the connections/transitions between historic fabric and the new addition/layers?
- 14. Does the project take advantage of the opportunity presented by the historic intervention/rehabilitation to incorporate artifacts, remnants, narrative features, objects, didactic and interpretive materials to tell the stories behind the historic context?
- 15. Does the new work utilize materials and craft methods that are evocative of the local culture and region or of materials and methods that in some other way help to illuminate and explain the context?

Conclusion

The criteria set out in this article are intended as a distillation of considerations to help in analyzing projects that graft new to old, whether that analysis is performed by an architect, an owner, a landmarks review board, or all of these. Architecture can of course express its time while acknowledging its historic context. But it can do more: modern architecture can go beyond mere contrast with history to reveal the underlying principles in both historic and new architecture – to create new *synergisms*.

References

Architectural Record. *Rural Tourism House* published online at: http://www.architecturalrecord.construction.com/projects/bts/archives/adaptiveReuse/04 ruralTourism/overview.asp.

Bandarin, Francesco. World Heritage and contemporary architecture: Towards new conservation standards at: http://portal.unesco.org/en/ev.php-URL_ID=27359&URL_DO=DO_TOP-IC&URL_SECTION=201.html.

Boito, Camillo. Gite di un Artista, Milan: 1894.

Castelvecchio web site at http://www.comune.verona.it/Castelvecchio/cvsito/english/index1.htm. Stephen Day Architecture web site at www.StephenDayArchitecture.com.

Foster and Partners web site at http://www.fosterandpartners.com/Projects/0344/Default.aspx.

Steven Holl Architects web site at http://stevenholl.com/project-detail.php?id=43&search=higgins.

KDF Architecture web site at http://www.kdfarchitecture.com.

Olson Kundig web site at http://www.olsonkundigarchitects.com.

ICOMOS web site references at http://www.international.icomos.org/about.htm and http://www.icomos.org/docs/contemporary architecture.html.

National Register of Historic Places web site at http://www.nationalregisterofhistoricplaces.com/WA/Douglas/state.html.

National Park Service web site references at http://www.nps.gov/aboutus/index.htm;

 $http://www.nps.gov/history/preservation.htm\ and\ http://www.nps.gov/history/standards.htm.$

Penn Central Transportation Company et al v. City of New York et al, 438 US 104 (1978) (U.S. Supreme Court published decision).

Ruskin, John. The Seven Lamps of Architecture, New York: Dover, 1989.

Samona', Giuseppe. L'urbanistica e l'avvenire della citta' negli Stati europei, Bari: Laterza, 1959, 1963, 129 (translation by Giorgio Verrecchia in Manfredo Tafuri, *Theories and History of Architecture*, Harper and Row, New York, 1974).

DESIGN PRINCIPLES AND PRACTICES: AN INTERNATIONAL JOURNAL

Soroka, Ellen. *Restauro in Venezia* in The Journal of Architectural Education, May 1994.

Tafuri, Manfredo. *Theories and History of Architecture*, Harper and Row, New York, 1976.

Viollet le Duc, E.E. *The Foundations of Architecture: Selections from the Dictionnaire raisonne'*, 1854 (translation by Kenneth Whitehead, New York, Braziller, 1990).

Wright, Frank Lloyd. *An Organic Architecture, the Architecture of Democracy*, Lund Humphries, London 1939.

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Stephen Day is a Seattle-based architect working with a variety of clients and colleagues in realizing building projects. Mr. Day's work focuses on historic preservation and the modern adaptive re-use of historic properties. He is also the President of the Board of Directors for the Northwest Institute for Architecture and Urban Studies in Italy, a nonprofit organization founded in 1981 and based in Seattle, with facilities in Civita di Bagnoregio, Italy (web site at www.northwestinstitute.com). Stephen is the Chair of the Design Review committee for the Historic Landmarks Commission of King County (Washington) and the past Chair of the Historic Preservation Committee for the American Institute of Architects (Seattle Chapter). He studied architecture and urban design with Professor Astra Zarina at the University of Washington Rome Center, in Italy, and received his Master of Architecture degree from Columbia University in New York City. He has lectured and presented on historic preservation and architectural issues in conferences and publications sponsored by the American Bar Association, the American Planning Association and the American Institute of Architects.

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