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Stewardship of the Built Environment in a Changing World

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STEWARDSHIP OF THE BUILT ENVIRONMENT IN A CHANGING WORLD

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ABSTRACT

Stewardship of the built environment emerged in the mid-1990s (Young 1994) when preservationists and conservationists needed to broaden their qualitative emotion-based arguments and adopt quantitative environmental and economic evidence to counter proposals that threatened the viability of both the built and natural environments. Social, environmental, and economic (SEE) concerns at the turn of the twenty-first century formed the triptych of the metrics found within the philosophy which:

> "…recognizes that the preservation, rehabilitation, and reuse of existing older and historic buildings contributes to sustainable design; respects the past, present, and future users of the built environment; and balances the needs of contemporary society and its impact on the built environment with the ultimate effects on the natural environment" (Young 2008a, p. 3; Young 2012, p. 2).

This philosophy moves beyond the singularity of defining benefits in just financial economic terms and expands the now necessary holistic perspective to include social and environmental benefits. The wealth-borne origins of the preservation movement in the United States still cast a long shadow on appropriate efforts towards stewardship of SEE resources today. Despite numerous advances in the past 50 years, the public perception of historic preservation and building reuse limits preservation's effectiveness as a SEE planning tool. Many people view preservation and reuse as (1) being accessible and worthwhile only to wealthier citizens; (2) having little influence on more important issues like climate change; and (3) creating a hindrance to economic revitalization efforts focused on new construction only. Quite frankly, they are wrong.[1]

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[1] I entered the engineering profession with the goal of increasing the resource efficiency of the built environment. I quickly discovered that the built environment was at the fulcrum of a tenuous balancing act between social and economic interests. As my awareness of which factors informed decision making processes grew, my advocacy for preserving and reusing buildings grew along with it. After more than a dozen years in practice, I recognized the lack of a comprehensive SEE perspective within planning, design, and preservation professions. I returned to academia in 1993

STEWARDSHIP OF THE BUILT ENVIRONMENT

The genesis of stewardship of the built environment can be seen in the early historic preservation[2] and environmental conservation efforts of the nineteenth century. Historic preservation in the private sector in the United States emerged in the early to mid-nineteenth century with the restoration of Mount Vernon, Washington's home in Virginia led by the Mount Vernon Ladies Association (Murtagh 1993; Tomlan 2015; Tyler, Tyler, & Ligibel 2018). Throughout the remainder of that century and well into the twentieth century, preservation of the built environment complemented with conservation of the natural environment became a growing concern (Shabekoff 2000), especially for those with means to access the locations and sites in question (Sax 1980). By the 1960s, preservation practices primarily focused on the identification and documentation of places and people with strong historic social impacts (National Trust for Historic Preservation (NTHP) 1966), the verisimilitude of which has been recently questioned by such social movements as Black Lives Matter (Leggs 2020). Meanwhile, conservation practices of that era questioned the diminishing environmental qualities fomented by the industrialization and mass distribution of products and materials in the decades after World War II (Carson 1962) and throughout the rest of the twentieth century. Many of the arguments for preservation and conservation of the era were qualitatively based on a context appealing to an emotional response.

With growing concerns for cultural (Jacobs 1961; Page 2016) and environmental (Carson 1962) resource conservation in the 1960s, the tools to analyze the environmental impacts of preservation and conservation began to emerge and continue to expand in breadth and depth to this day. However, prior preconceptions on rehabilitating buildings and regulatory practices that actually fostered the demolition of buildings still limited the effective reuse of the built environment. In the 1960s, civic leadership and those who controlled the built environment characterized many existing and older buildings as slums and deemed entire neighborhoods blighted as the interstate highway system and urban renewal programs came into full fruition (Teaford 1990; Jakle & Wilson 1992). In the 1970s, metrics for energy use emerged, not only in terms of operational consumption but also for what is now known as embodied energy (Fitch 1990). Many existing buildings were considered energy hogs or too expensive to renovate, particularly, in light of any potential hazard abatements (e.g., asbestos, lead,

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to teach the future generations of architects, planners, community leaders, and preservation advocates how that balance can play out. I formalized my research agenda and adopted the philosophy of stewardship of the built environment to capture the more vital aspects of the SEE benefits from reusing existing and historic buildings and how the decisions affecting the built environment, in turn, affect the natural environment (Young 1994).

[2] The term historic preservation is otherwise known as heritage conservation around the world.

brownfield, etc.) that might have accompanied them. Meanwhile, conservationists were increasingly alarmed by the growing toxicity threats to public health (e.g., air and water pollution, loss of open space, loss of natural habitat) in both the built and natural environments (Shabekoff 2000). Few from either the preservation or conservation constituency were qualified to counter or support these characterizations with quantifiable evidence. Even fewer had the foresight and wherewithal to think and act in terms of the monetary benefits to the broader community. Again, their lack of expertise in the technical aspects of societal and environmental impact analysis and the scarcity of reliable environmental and economic analytical tools limited their ability to speak against or offer alternatives to proposed demolitions and environmental threats in quantifiable terms. In those days and sadly through today, those quantifiable terms primarily focused on financial benefit.

In the late-1960s and through the 1970s, civic leadership and those who controlled the built environment began to recognize the longer-term financial benefits from preservation and reuse of buildings and the conservation of natural resources. The National Historic Preservation Act of 1966 (which included the creation of the National Register of Historic Places that provides the primary access to the Federal Historic Preservation Tax Credit) and several environmental protection acts, such as the National Environmental Policy Act of 1969 (which introduced the requirements for Environmental Impact Statements) were enacted (Young 2012). Despite this, and more commonly at that time, a limited understanding of and lack of grounding in the economic arguments prevented many preservationists and conservationists from effectively countering the municipal and general industrywide leadership bias towards new construction. By the mid-1970s, federal and locally supported economic stimulation programs, such as the federal Historic Preservation Tax Credit, had incentivized developers to expand preservation and reuse activities. The ensuing ten years released a torrent of investment in reuse and preservation projects as private citizens could invest in a project and reap tax advantaged benefits. Preservation and reuse flourished. Then, in 1986, federal tax reforms throttled back the money flowing into historic preservation and building reuse projects and investment severely waned (Murtagh 1993). It took more than a decade to recover to pre-tax reform levels of investment (National Park Service 2018). However, by end of the twentieth-century, preservation and reuse of buildings, as part of the restorative economy emerging at that time, was described as the fastest growing economic sector and soon to be largest realm of development (Cunningham 2002).

Subsequently, state and local governments sought economic analysts to demonstrate the economic impacts of preservation in neighborhoods and central business districts. The economic results spurred on by the numerous financial

incentive programs, such as the Historic Preservation Tax Credit, Low Income Housing Tax Credit, and (the now defunct) New Market Tax Credit were palpable. The overwhelming financial evidence is that they created a multiplier effect (Federal Preservation Institute 2005; Rypkema, Cheong, & Mason 2013) for economic benefit for the greater good that goes far beyond the immediate loss of tax revenue credited towards the proposed rehabilitation of an existing building. As the money spent by the project developer moves through the social system, those dollars are reused to pay contractors and subcontractors who in turn spend them at local businesses whereupon those business owners pay their bills and their employees. This cycle repeats as operational and management personnel who later work at these revitalized places get paid and spend their wages (Young 2012). This provides access to the benefits of this informed stewardship to consumers who partake not only of the jobs and monetary flow that these SEE-based activities create but also enjoy the SEE outcomes from the restoration and stabilization of historic properties, revitalized communities, and recreational places that they foster (Federal Preservation Institute 2005).

Preservation and conservation practices further evolved as the new millennium emerged. The perspective expanded, deepened, and paid increasing attention to the ecologies found in a range of not only the individual materials and their creation processes but also to the overarching societal ecologies found in the built and natural environments (Young 2008b; Allison & Peters 2011; Kapp & Armstrong 2012; Merlino 2018; Adam 2019). Since 2000, computerized database development has sparked numerous tools and methods. The emergence of "big data" databases that can assist in the analysis of the built environment is a rapidly growing skill and content area. Preservationists and their allies must gain further expertise and facility in using this as a tool. These include life cycle analysis tools (Athena Sustainable Materials Institute 2009), documentation/recordation methods (e.g., LIDAR, BIM, etc.) (Church 2015), and Geographic Information Systems (GIS) analysis (Sams 2004; Knoerl 2004). These have already been used to demonstrate that stewardship of the built environment can have a positive benefit towards SEE resources. The life cycle analysis tools speak in terms of ecological impacts while LIDAR and BIM have significantly reduced the difficulty in documenting the physical nature of the built environment. GIS tools provide an entirely new spectrum of analysis that can speak towards the social conditions and impact of policy development (Young 2018). All have enhanced the accessibility and contribution of historic preservation and existing building reuse to the arguments on the SEE aspects of stewardship.

In the 2010s, the emerging availability of "big data" engendered a deepening analysis of impacts in specific SEE contexts. When used in conjunction with big data resources existing in many public and private GIS databases,

opportunities to analyze the SEE parameters of preservation and reuse regulations and incentives quickly emerge. For instance, *Economic Resilience of Property Values in Historic Districts* (Young, 2018) explored the impact of the Great Recession and the subsequent recovery rates of citywide property values of single-family, detached houses (SFDHs) in Salt Lake City. The analysis revealed that values of properties in federally or locally designated historic districts were more resistant to loss during the recession. It also showed that SFDHs in federally and locally designated districts respectively were $10,000 and $20,000 higher in property value when compared to similar SFDHs in undesignated neighborhoods citywide. Concurrently, a qualitative analysis of the physical parameters in both undesignated and historically designated neighborhoods revealed characteristics that could be quantified so that they could be incentivized in existing undesignated neighborhoods or potential new subdivisions to improve property values.

In general, the integration of the tools surrounding the use of big data remains in its infancy. As the technology and expertise to use it become more available, this process presents an exciting and challenging new tool for stewardship advocates.

WHAT ARE THE IMPLICATIONS?

Stewardship of the built environment gained traction and further support throughout the early twenty-first century. Numerous research reports and publications have documented the successful preservation and reuse of existing buildings and the impacts that such projects have had on the communities in which they are located (Rypkema 1994; Rypkema 2007; Mallach 2010; NTHP 2011; Gelfand & Duncan 2012; Listokin 2012; Temali 2012; Young 2012; Burayidi 2013; Merlino 2018). Over the past fifty years, the tools, processes, computer models, and built works have demonstrated that the benefits of preserving and reusing existing buildings: (1) are accessible to the greater good and not just the wealthiest citizens; (2) can help mitigate climate change; and (3) can meet or exceed the economic performance of projects based on new construction alone.

CHALLENGE FOR THE FUTURE

The social imperatives of 2021 harken a new perspective on the allied social and environmental metrics used for historic preservation and environmental conservation and their relationship with economic conditions. The outcomes that demonstrate the social benefits in terms of social equity, community prosperity, and the connectivity to place have all been progressively identified. Advanced sophisticated methods can identify and cultivate more comprehensive insights into how building preservation and reuse interfaces with the natural environment and, by extension, climate change. Lastly, the greater awareness of how reuse and

preservation is an economic planning and redevelopment tool can be accelerated as well.

The stewardship philosophy transcends the singularity of thinking in just qualitative terms or quantitative terms and, especially, in a single modality of a social, environmental, or economic metric. The holistic approach engenders and requires a more sophisticated capture of the broader perspective. A great unevenness in this sophistication still exists and needs to be overcome. Recognizing its importance, the American Institute of Architects adopted the stewardship philosophy in 2019 as a means to transform the profession to accommodate the development of "new resources and tools for the economy, energy, and [socially] equitable communities" (Flynn 2019). The holistic stewardship view of SEE measurement increasingly has taken hold in the mindset of those who design the built environment. Unfortunately, the biases of those steadfastly inclined to always look to new construction in their (re)development practices remain a critical impediment to its successful adoption by those engaged across the full spectrum of planning, design, construction, and operations. Similarly, the application of the philosophy is uneven across municipal leadership and legislative leadership. Much work is needed to overcome the inertia and reset the outlook of these constituencies.

Within a holistic stewardship perspective, we can take the opportunity to mitigate the forces contributing to climate change while more comprehensively dealing with social and economic realities. Together, these opportunities can solidify the overall acceptance of stewardship of the built environment and its importance to social, environmental, and economic health that define "place" at the local, state, regional, and national levels. The challenge for the preservation and conservation advocates as well as the civic and legislative leadership and planning, design, construction, and operations constituencies is to hasten the broader acceptance and implementation of the stewardship philosophy across the full spectrum of decision makers who control the built environment.

REFERENCES

Adam, R. (2019, September 2019). The Greenest Building is the One That Already Exists, *Architect's Journal* [Website posting]. Retrieved from https://www.architectsjournal.co.uk/news/opinion/the-greenest-building-is-the-one-that-already-exists.

Allison, E & Peters, L. (2011). Historic Preservation and the Livable City. Hoboken, NJ: Wiley.

Athena Sustainable Materials Institute (2009 July 14). A Life Cycle Assessment Study of Embodied Effects for Existing Historic Buildings. [Athena Sustainable Materials Institute Website posting]. Retrieved from http://www.athenasmi.org/wp-content/uploads/2012/01/Athena_LCA_for_ Existing_Historic_Buildings.pdf.

Burayidi, M. (2013). *Resilient downtowns: A new approach to revitalizing small and medium-city downtown*s. New York, NY: Routledge.

Carson, R. (1962). *Silent Spring*. Boston, MA: Houghton Mifflin

Chhaya, P. (2020, December 23). Looking Back on 2020: Where Do We Go From Here? [National Trust for Historic Preservation Website posting]. Retrieved from https://forum.savingplaces.org/blogs/priya-chhaya/2020/12/23/ looking-back-on-2020-where-do-we-go-from-here.

Church, J. (2015 January 31). LIDAR and Photogrammetry: Comprehensive Data Collection for Historical Preservation. [National Center for Preservation Technology and Training Website posting]. https://www.ncptt.nps.gov/blog/lidar-and-photogrammetry-comprehensive-data-collection-for-historical-preservation/.

Cunningham, S. (2002) *The restoration economy: The greatest new growth frontier*. San Francisco, CA: Berrett-Koehler Publishers.

Federal Preservation Institute. (2005 June). Measuring the economic impact of federal historic properties: An introduction to the impact of federal stewardship of historic properties on economic vitality. Retrieved from http://www.landmarks.org/wp-content/uploads/2016/08/FedProps_ Measuring-Econmic-Impact-Rpt-2005.pdf

Fitch, J. (1990). *Historic preservation: Curatorial management of the built world*. Charlottesville, VA: The University of Virginia Press.

Flynn, K. (2019). AIA Announces big move toward environmental stewardship [AIA Website posting]. Retrieved from https://www.aia.org/articles/ 6199206-aia-announces-big-move-toward-environmenta.

Gelfand, L. & Duncan, C. (2012). *Sustainable renovation: Strategies for commercial systems and envelope*. Hoboken, NJ: Wiley.

Jacobs, J. (1961). *The death and life of great American cities*. (Reprinted 1992). New York, NY: Vintage Books.

Jakle, J. & Wilson, D. (1992). *Derelict landscapes: The wasting of America's built environment*. Savage, MD: Brown and Littlefield Publishers.

Kapp, P & Armstrong, P. (Eds.) (2012). *Synergicity: Reinventing the postindustrial city*. Urbana-Champaign, IL: University of Illinois Press.

Knoerl, J. (2004 April 08). Mapping the Mapping the Revolutionary War and War of 1812. [National Park Service Website posting]. Retrieved from https://www.nps.gov/gis/mapbook/tech/67.html.

Leggs, B. (2020, June 11). Out of Crisis, an Opportunity [National Trust for Historic Preservation website posting]. Retrieved from https://savingplaces.org/stories/an-opportunity-in-crisis.

Listokin, D. (2012). *Landmarks preservation and the property tax: Assessing landmark buildings for real taxation purposes*. New Brunswick, NJ: Transaction Publishers.

Mallach, A. (2010). *Bringing building back: From abandoned properties to community assets*. (2nd ed.). Montclair, NJ: National Housing Institute.

Merlino, K. (2018). *Building reuse: Sustainability, preservation, and the value of design.* Seattle, WA: University of Washington Press.

Murtagh, W. (1993). *Keeping time: The history and theory of preservation in America*. New York, NY: Sterling.

National Park Service. (2018). Federal Tax Incentives for Rehabilitating Historic Buildings: Annual Report for Fiscal Year 2017. [Website Posting] Retrieved from https://www.nps.gov/tps/tax-incentives/taxdocs/tax-incentives-2017annual.pdf.

National Trust for Historic Preservation (NTHP). (1966). *With heritage so rich* (digital reprint of 1999 edition). [Preservation50.org website post]. Retrieved from http://preservation50.org/about/with-heritage-so-rich/.

National Trust for Historic Preservation (NTHP). (2011). The greenest building: Quantifying the environmental value of building reuse. Washington, DC: NTHP. Retrieved from https://forum.savingplaces.org/viewdocument/the-greenest-building-quantifying.

Page, M. (2016). *Why preservation matters*. New Haven, CT: Yale University Press.

Rypkema, D. (1994). *The economics of historic preservation: A community leader's guide*. Washington, DC: National Trust for Historic Preservation.

Rypkema, D. (2007). *Feasibility assessment manual for reusing historic buildings*. Washington, DC: NTHP.

Rypkema D., Cheong C., & Mason, R. (2013). Measuring economic impacts of historic preservation: A report to the Advisory Council on Historic Preservation by PlaceEconomics (2nd ed.). Retrieved from https://www.achp.gov/sites/default/files/guidance/2018-06/Economic%20Impacts%20v5-FINAL.pdf.

Sams, C. (2004 April 08). Linking Cultural Resource Databases through GIS. [National Park Service Website posting]. Retrieved from https://localpreservation.github.io/resources/timeline/https://www.nps.gov/gis/mapbook/tech/70.html.

Sax, J. (1980). *Mountains without handrails*. Ann Arbor, MI: The University of Michigan Press.

Shabekoff, P. (2000). *Earth rising: American environmentalism in the 21st century*. Washington, DC: Island Press.

Teaford, J. (1990). *The rough road to renaissance: Urban revitalization in America, 1940-1985*. Baltimore, MD: Johns Hopkins.

Temali, M. (2012). *The community economic development handbook: strategies and tools to revitalize your neighborhood*. Nashville, TN: Fieldstone Alliance.

Tomlan, M. (2015). *Historic preservation: Caring for our expanding legacy*. New York, NY: Springer.

Tyler, N., Tyler, I, & Ligibel, T. (2018). *Historic preservation: An introduction to its history, principles, and practice* (3rd ed.). New York, NY: W. W. Norton.

Young, R. (1994). Stewardship of the built environment: A strategy for learning. In R. Darosky et. al., (Eds.), *Environmental Quality • Programming • Design • Construction • Management ACSA West-Central Regional Conference Proceedings*.

Young, R. (2008a). *Historic preservation technology*. Hoboken, NJ: Wiley.

Young, R. (2008b). Stewardship of the built environment: The emerging synergies from sustainability and historic preservation. In D. Kellbaugh and K. McCullough (Eds.), *Writing Urbanism: A design reader*. New York, NY: Routledge.

Young, R. (2012). *Stewardship of the Built Environment.* Washington, DC: Island Press.

Young, R. (2018). *Economic Resilience of Property Values in Historic Districts* (Doctoral Dissertation). University of Utah: Salt Lake City (Proquest #10790871).