

UNSEEN SYNERGIES: THE INTERSECTION OF HISTORIC PRESERVATION & CLIMATE
JUSTICE

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I. INTRODUCTION

According to Max Page, “Preservation cannot be a hobby or an aesthetic movement. It has to be a key factor in the effort to save the planet.”¹ In order to do so, one must begin to untangle the nexus between preservation, sustainability, and climate justice. As illustrated by the establishment of the Antiquities Act of 1906 and the National Park Service in 1916, the Historic Preservation Movement was very closely connected to the Conservation Movement in its inception.² Throughout the past century, these moments of synergy between preservation and environmental causes have continued. Historic preservationists frequently cite the field’s connection to the Conservation Movement as proof of a link to modern sustainability.³ However, Chusid argues that “despite the potential contributions, the fields of historic preservation and sustainable design have yet to form the easy, comfortable and familiar relationship of essential collaborators.”⁴ Sustainability professionals often disregard preservation as “archaic both in focus and technique” and ineffective at community preservation.⁵ At the same time, the impulse in sustainable design to create bespoke and novel solutions

¹ Page, Max. *Why Preservation Matters*. (New Haven: Yale University Press, 2016), 98.

² Miles Glendinning, 2013. *The Conservation Movement: A History of Architectural Preservation: Antiquity to Modernity* Routledge. doi:10.4324/9780203080399.

³ Richard Wagner, “Finding a Seat at the Table: Preservation and Sustainability” in *Sustainability & Historic Preservation: Toward a Holistic View*, ed. Richard Longstreth (Cranbury: The Rowman & Littlefield Publishing Group, 2011.)

⁴ Jeffrey Chusid, “Natural Allies: Preservation and Sustainability,” in *Pragmatic Sustainability: Dispositions for Critical Adaptation*, ed. Steven A. Moore (New York, NY : Routledge, 2016), 169.

⁵ Ibid, 173.

to climate change only furthers this divide between the fields.⁶ Sustainability and sustainable design are not without their critics on all ends of the political spectrum, with climate justice activists critiquing the absence of equity in many ‘designerly’ solutions.⁷ In this sense, the worst of preservation and the worst of green design are two sides of the same elitist coin.

Sustainability and climate justice are not interchangeable terms. Sustainability is understood as a balancing or negotiating of the three pillars: social, economic, and environmental.⁸ Climate justice, on the other hand, is more transformative in nature and has its roots in the Environmental Justice Movement of the 1980s.⁹ Unlike the exclusionary Conservation Movement, the Environmental Justice Movement fused environmental concerns with the Civil Rights ethos and organizing tactics.¹⁰ Although the connection between preservation and environmental justice is tenuous, historic preservation has recently been linked to climate justice through highly publicized events such as the Dakota Access and Keystone XL pipeline protests and less overtly through

⁶ Ibid.; Kate Wagner, “Opinion: No, ‘PR-chitecture’ Won’t Save Us From the Pandemic,” *The Architect’s Newspaper*, June 12, 2020.

⁷ Kate Wagner, “Opinion: No, ‘PR-chitecture’ Won’t Save Us From the Pandemic,”; Billy Fleming, “Design and the Green New Deal,” *Places Journal*, April 2019. Accessed 13 Apr 2021. <https://doi.org/10.22269/190416>

⁸ Bedřich Moldan, Svatava Janoušková, and Tomáš Hák. 2012. "How to Understand and Measure Environmental Sustainability: Indicators and Targets." *Ecological Indicators* 17: 4-13.

⁹ David Schlosberg & Collins, Lisette B. 2014. "From Environmental to Climate Justice: Climate Change and the Discourse of Environmental Justice." *Wiley Interdisciplinary Reviews. Climate Change* 5 (3): 359-374.

¹⁰ Ibid; Rachelle K. Gould, Indira Phukan, Mary E. Mendoza, Nicole M. Ardoín, and Bindu Panikkar. 2018. "Seizing Opportunities to Diversify Conservation." *Conservation Letters* 11 (4): e12431-n/a.; Robert D. Bullard and Beverly Wright. 2018. *Race, Place, and Environmental Justice After Hurricane Katrina: Struggles to Reclaim, Rebuild, and Revitalize New Orleans and the Gulf Coast*.

retrofitting and adaptive reuse projects .¹¹ These illustrations point to the ways in which formal and grassroots preservation efforts can be instrumentalized to decarbonize the economy while making strides to preserve land, precious resources, and intangible heritage.

Similarly, the retrofitting of existing buildings for energy efficiency has become an increasingly important aspect of climate action planning with experts such as Boswell, Greve, and Seale recognizing this type of work as essential.¹² The importance of mass retrofit and adaptive reuse plans is recognized by the Architecture Lobby's Green New Deal working group.¹³ Therefore, energy efficiency and housing quality retrofits, indigenous community preservation practice and fossil fuel extraction protest, and adaptive reuse are important focal points of work, not only because of their connection to objectives of the Green New Deal and the Climate Justice Movement, but because they illustrate areas where those who may not necessarily identify as preservationists are performing preservation work.

Historic preservation is well equipped to handle matters of local and national designation and its resulting physical protections because of a historical emphasis on

¹¹ Harvard Environmental & Energy Law Program, "Dakota Access Pipeline," *EELP*, 2021. <https://eelp.law.harvard.edu/2017/10/dakota-access-pipeline/> ; Lindsay Offutt, "Native Americans File Lawsuit Claiming Keystone XL Pipeline Violates Treaty Boundaries," *Jurist*, September 12, 2018. <https://www.jurist.org/news/2018/09/native-americans-file-lawsuit-claiming-keystone-xl-pipeline-violates-treaty-boundaries/>

¹² Greve, Adrienne I., Michael R. Boswell, and Ms Tammy L. Seale. 2019. *Climate Action Planning*, (Washington D.C.: Island Press, 2019.), 156.

¹³ The Architecture Lobby, "Statement on the Green New Deal," Projects, 25 June 2019. Accessed 20 April 2021. <http://architecture-lobby.org/project/t-a-l-statement-on-the-green-new-deal/>

technical preservation and architectural significance.¹⁴ Yet in its more progressive modes, preservation has pivoted to focus on social outcomes and processes.¹⁵ Although preservation has lacked the politically radical wing that characterizes offshoots of the Environmental Movement, such as environmental justice and climate justice, the field not only has the potential, but the responsibility to leverage its tools and join in the fight for climate justice during this time of social, political, environmental, and economic upheaval.¹⁶

Framing the Problem

In order to understand how historic preservation might better integrate into the Climate Justice Movement and help achieve a Green New Deal, this thesis explores the ways the field is already beginning to address climate justice issues. Specifically, this thesis analyzes three different types of climate-justice related preservation work: housing quality and energy efficiency retrofits; indigenous community preservation practice and protest of fossil fuel extraction; and adaptive reuse. Through the analysis of these seemingly disparate types of work, the author hopes to foreground the political underpinnings, as well as the connections and disconnections between historic preservation and climate justice, to expand current definitions of historic preservation, and provide recommendations for their synergy. This thesis seeks to break down

¹⁴ Chusid, 174.

¹⁵ Erica Avrami, "Preservation's Reckoning," in *Preservation and Social Inclusion*. ed. Erica Avrami. (NY:Columbia Books on Architecture and the City, 2020).

¹⁶ Avrami describes the preservation field as undergoing a period of reckoning. See *ibid*.

professional and disciplinary boundaries and call into question the practice of justifying historic preservation with outcomes of environmental and social justice, rather than advocating for environmental and social justice using preservation as a tool.¹⁸ Most importantly, this thesis is a call to action for the preservation field to find its role in addressing the most pressing issues of the times, such as anthropogenic climate change and mounting wealth inequality.¹⁹

Currently, synergies between historic preservation and climate justice are both realized and potential. This thesis seeks to illuminate the climate justice-oriented preservation work that is not always formally recognized by either field. The connections between these two separate fields must be revealed, acknowledged, and strengthened in order to benefit them both. Climate justice is a kind of tangible and intangible heritage preservation in the sense that it seeks to preserve communities and land through a commitment to access and housing affordability.²⁰ Likewise, preservation has the ability to abet climate justice by preserving land, culture,

¹⁸ Kaufman argues that preservation practice is ultimately centered on architectural significance and fabric preservation, leading to the neglect of “storyscapes.” The author uses case studies to model the intentional development as preservation as a political platform. Ned Kaufman. *Place, Race, and Story: Essays on the Past and Future of Historic Preservation*. London: Taylor and Francis; 2009, 1,303. ; Boccardi argues that disciplinary boundaries and professional demarcations limit the potency of preservation work. See Giovanni Boccardi, 2015. “From Mitigation to Adaptation: A New Heritage Paradigm for the Anthropocene.” In *Perceptions of sustainability in heritage studies*. ed. Marie-Theres Albert. Boston, MA: De Gruyter.

¹⁹ Both Page and Avrami note the need for preservation to approach these issues with an equity lens. Although the advancement of radical politics is not the focal point in the field, progressive political preservation is demonstrated by sites and projects such as Eastern State Penitentiary, International Sites of Conscience, Joseph McGill’s Slave Dwelling Project, and various New Mexico Pueblos.

²⁰ Daniel Aldana Cohen, “Climate Justice and the Right to the City,” Penn Institute for Urban Research, February, 2018. <https://pennur.upenn.edu/uploads/media/Cohen.pdf>

community, affordability, and architectural fabric. These connections are realized through retrofits and indigenous community preservation practice and protest of fossil fuel extraction. Adaptive reuse demonstrates an area for potential synergy.

Until now, historic preservation and climate justice have been vaguely linked through sustainability. However, a discussion of the intersection of preservation and climate justice, is largely missing from the literature. Although environmentalism is often considered a series of offshoots and separate yet interconnected movements, preservation is sometimes mistakenly conceptualized as a monolith.²¹ This thesis also seeks to complicate notions of the historic preservation field. To address these gaps, this thesis raises the following questions:

Sub Questions

1. What are the connections and disconnections between historic preservation and the Climate Justice Movement, in terms of philosophy, ethics, practice, and public policy? How are their goals in alignment? Is the work always recognized by either group? What policies, design interventions, or strategies are unique to each type of work?
2. What are the largest challenges that historic preservation and climate justice face separately?

²¹ Eileen Maura McGurty, 1997. "From NIMBY to Civil Rights: The Origins of the Environmental Justice Movement." *Environmental History* 2 (3): 301-323. ; Chad Montrie, 2011. *A People's History of Environmentalism in the United States*. London: Bloomsbury Publishing Plc. Jeffrey Chusid, "Natural Allies: Preservation and Sustainability," in *Pragmatic Sustainability: Dispositions for Critical Adaptation*, ed. Steven A. Moore (New York, NY : Routledge, 2016); Rogers et al notes that "Preservation has often been critiqued for a monolithic idea of what constitutes cultural and historic significance." See Rodgers, Diane M., Lucy Sosa, and Jessica Petersen. 2018. "Historic Preservation: A Multilayered Inclusive Approach Honoring Immigrants Past and Present." *Humanity & Society* 42 (2): 193-220.

3. What are the most important successes and failures of both fields over the last decade?
4. What specific tools, concepts, policies, project-types and tactics can be identified in both practices to bolster the other and what connections, cross-pollination, learning, and knowledge transfer should be encouraged to improve their synergy?

Methodology

This thesis uses a case-study methodology to analyze three different types of climate justice-related preservation work: energy efficiency & housing quality retrofits, indigenous community preservation practice and protest of fossil fuel extraction, and adaptive reuse. The author chose the word “work” instead of “field” or “practice” to describe each of the three sections. Work was chosen because the word “practice” is too limiting. Some of the subsets of work contain multiple practices. Furthermore, these subsets of work blur distinctions between the preservation and climate action fields. “Field” implies professional credentials while “work” instills a respect for labor and is more inclusive of grassroots efforts. The author positions the types of work as “climate justice-related preservation work.” However, these types of work could easily be framed as “preservation-related climate justice work.” The author makes this distinction because she argues that using her definition of historic preservation, these types of work that may be viewed as tangential or unrelated to the field, are in fact historic preservation.

For this reason, the author chose to interview a combination of self-identified historic preservationists, climate justice activists, and a fusion of the two in order to

understand perspectives from both inside and outside each of the separate fields. Keki Bolender, the cofounder of the Healthy Rowhouse Project, was chosen to illuminate the preservation perspective on retrofits. She provided technical expertise as a trained architect and preservationist as well as insights into the challenges of navigating city bureaucracy, and the importance of fusing tangible and intangible preservation work. Keith Kinch, General Manager of BlocPower provided insights regarding the challenges of funding retrofit projects and as the power of organizing tactics for building trust with communities. Jackie Montesdeoca, Associate Director of New Markets for Elevate Energy and Penn Preservation alum, was chosen for her status as a bridge-builder between the preservation and climate justice fields. Likewise, Billy Fleming, Wilks Family Director of the Ian L. McHarg Center in the Weitzman School of Design, serves as a bridge-builder between the worlds of academia, design, and climate justice organizing. Finally, Marianela D'Aprile, a speaker, organizer, and architectural critic was able to provide insights on adaptive reuse and labor organizing. Keefer Dunn, an architect and organizer, also serves as a bridge-builder between the technocratic design field and labor. Both D'Aprile and Dunn organize and speak on behalf of The Architecture Lobby.

Each type of climate justice-related preservation work demonstrates an apparent connection to climate justice and the potential for more synergy. Using qualitative data descriptively this thesis draws from an interdisciplinary selection of literature, as well interviews, news media, and planning documents. The same framework of critical questions was applied to each of subset of climate-justice related

preservation work, producing a set of its own conclusions which ultimately fed into a final set of conclusions and recommendations. These three subsets of work were chosen because they encompass a complex combination of formal and informal preservation processes, grapple with the preservation both tangible and intangible fabric, redress historic economic inequalities, and unfold through a variety of coalitions and partnerships made up of preservationists and those from outside of the defined field. The following framework was applied to each of the three subsets of climate justice-related preservation work in order to reveal areas of realized and potential synergies between the historic preservation and climate justice fields.

The framework of critical questions guiding this study is as follows:

1. What are the sectors involved? (E.g. public, private, NGO, labor, and/or grassroots organizations) Who is active within and across the sectors?
2. What partnerships and coalitions have been formed within and across sectors?
3. What tactics does the work use? E.g. preservation policy, environmental policy, design intervention, political organizing, market-based solutions etc.
4. What are the intentions of each type of work and how do they speak to environmental, social, cultural, and economic values? How do the intentions differ from the impact?
5. What are the external drivers affecting the work? What are the largest challenges?
6. Is the work positioned as a type of climate change mitigation or adaptation? Does the work address any components of the Green New Deal?
7. Does the work promote workforce development? Does it address economic inequalities?
8. How does the work preserve tangible and intangible heritage?

Delimitations

The author would not have written this thesis if she did not adamantly endorse the Green New Deal. However, this thesis is not formulated as a justification for the Green New Deal. This thesis does not seek to debate the validity of the Green New Deal.²² Rather, this study seeks to gain nuanced understanding of the historical and theoretical contexts that underpin all the climate justice-related preservation work to be explored, and how these subsets of work can indicate real or potential connections between historic preservation and climate justice. Therefore, this study is not a retrofitting feasibility study or a cost benefit analysis of adaptive reuse projects. In addition, this thesis does not seek to measure emissions or delve deeply into the technical issues of adaptive reuse. This thesis does not seek to give a comprehensive historiography of The New Deal, The Green New Deal, or the Environmental or Historic Preservation Movements.

Assumptions

This thesis proceeds from a series of assumptions, the first and most important being that historic preservation and climate justice are fundamentally aligned, according

²² For justifications and proposed strategies for reaching a Green New Deal see Aronoff, Kate, Alyssa Battistoni, Daniel Aldana Cohen, Thea N. Riofrancos, and Naomi Klein. 2019. *A Planet to Win: Why We Need a Green New Deal*.; Naomi Klein, 2019. *On Fire: the (burning) Case for a Green New Deal*.; Varshini Prakash and Guido Girgenti, eds. *Winning the Green New Deal: Why We Must, How We Can*. (New York: Simon and Schuster, 2020).; White, Damian. "Just Transitions/Design for Transitions: Preliminary Notes on a Design Politics for a Green New Deal," *Capitalism Nature Socialism* (2019): 1-20.

to the author's operating definitions of each.²³ In addition, this author assumes that "green" societies must also be economically and socially just societies.²⁴ Just as a buildings-first approach to preservation is lacking, an emissions-only approach to climate mitigation is similarly misguided.²⁵ Thus, definitions of "greening" and "sustainability" must be clarified.²⁶ The next assumption is that historic preservation is not and should not be regarded as a static field that unfolds in one particular way.²⁷ Preservation always has a politics and therefore agency in relation to social outcomes – it is not a science, nor an apolitical "craft" or "curatorial" practice.²⁸ As such, preservation tools can be dismantled, reshaped, and redeployed to work towards a Green New Deal. Another major assumption is that preserving "place" and community is much more complex than preserving a structure itself.²⁹ This idea is particularly relevant

²³ Both preservation and climate justice are obligated to rein in the excesses and failures of markets and protect the social interests of the less powerful, less visible, less remembered. See Literature Review for a discussion of definitions of historic preservation and climate justice.

²⁴ Varshini & Girgenti, *Winning the Green New Deal: Why We Must, How We Can*.

²⁵ Aronoff et al 2019 discusses the way in which emissions-centered approaches to climate action erase issues of justice, 17.

²⁶ Claire Poitras, "Designing Sustainability for Whom? Recent Housing Developments in Southwest Montréal." *Local environment*. 14, no. 6 (2009): 515–528.; ²⁶ Scoones, Ian. 2016. "The Politics of Sustainability and Development." *Annual Review of Environment and Resources* 41 (1): 293-319.; Robert, Kates W., Thomas M. Parris, and Anthony A. Leiserowitz. 2005. "What is Sustainable Development? Goals, Indicators, Values, and Practice." *Environment : Science and Policy for Sustainable Development* 47 (3): 8-21.; Farley, Heather M., and Zachary A Smith. *Sustainability: If It's Everything, Is it Nothing?*. Second edition.

²⁷ John H. Sprinkle contests this claim in his chapter "Historic Preservation Was Never Static," According to Sprinkle, change within the historic preservation movement has been both "generational and episodic" in response to the unique social conditions of its time. See John H. Sprinkle, "Historic Preservation Was Never Static," in *Giving Preservation a History: Histories of Historic Preservation in the United States* (2nd ed.). ed. Max Page & Randall Frambes Mason (Routledge:London, 2016). <https://doi-org.proxy.library.upenn.edu/10.4324/9780429398896>

²⁸ Randall F. Mason, [1963-]. 2003. "Fixing Historic Preservation: Constructive Critique of "Significance"." *Places (Cambridge, Mass.)* 16 (1): 64-71.

²⁹ Diane M. Rodgers, Lucy Sosa, and Jessica Petersen. 2018. "Historic Preservation: A Multilayered Inclusive Approach Honoring Immigrants Past and Present." *Humanity & Society* 42 (2): 193-220.

when considering the success of an adaptive reuse project.³⁰ Finally, the last and very technical assumption is that, by the prevention of demolition, adaptive reuse conserves embodied energy and in this simple way advances climate justice.³¹

Hypotheses

The author has formulated a series of non-mutually exclusive hypotheses. The first and most essential hypothesis is that there is a strong but unrealized potential synergy between historic preservation and climate justice. Connected to this idea, is the hypothesis that while there are already connections on the ground between climate justice and historic preservation, this work is not always recognized formally as “preservation” by preservationists or climate justice activists. The second hypothesis is that both historic preservation and climate justice operate in silos apart from each other, and even face factions within their own fields. The third hypothesis is that, as there is not one unified “green” movement, but a series of discrete sub-movements, historic preservation is not a monolithic as some may think. The next hypothesis is that both practices could benefit from recognizing the other and engaging in cross-pollination, learning, and knowledge transfer to improve their synergy. My final

³⁰ Liliane Wong, *Adaptive Reuse: Extending the Lives of Buildings* (Basel: Birkhäuser, 2017)

³¹ Conejos, Sheila & Langston, Craig & Smith, Jim. 2012. “Designing for Future Building: Adaptive Reuse as a Strategy for Carbon Neutral Cities”. *The International Journal of Climate Change Impacts and Responses*. 3(2):33-52.; Eleni Iacovidou, and Phil Purnell. 2016. “Mining the Physical Infrastructure: Opportunities, Barriers and Interventions in Promoting Structural Components Reuse.” *The Science of the Total Environment* 557-558: 791-807.; Tris Kee and KwongWing Chau. 2020. “Adaptive Reuse of Heritage Architecture and its External Effects on Sustainable Built environment—Hedonic Pricing Model and Case Studies in Hong Kong.” *Sustainable Development (Bradford, West Yorkshire, England)* 28 (6): 1597-1608.; National Trust for Historic Preservation, Preservation Green Lab, *The Greenest Building: Quantifying the Environmental Value of Building Reuse* (Washington, DC: National Trust for Historic Preservation, 2011).

hypothesis, is that historic preservation has not been fully embraced as a tool to achieve climate justice because most preservation policies fail to meaningfully engage with the issues of social and environmental justice by framing them as secondary but positive outcomes of preservation, rather than goals in themselves.³²

Overview

The next section, “II. Literature Review” will provide the reader with definitions of preservation, sustainability, and climate justice. This section will also address the literature gap between preservation and climate justice in order to demonstrate the need for preservation work that effects systemic change. The Literature Review is followed by “III. The Green New Deal,” a section that provides an overview of the Green New Deal, it’s literature, and it’s connection to preservation concerns. Next is “IV.RETROFITS: HANDS ON PRESERVATION AS CLIMATE AND ENVIRONMENTAL JUSTICE,” a section that positions energy efficiency and housing quality retrofits as a multi-scale climate justice issue. This section includes the barriers to retrofits as well as three successful retrofitting illustrations for synergy between preservation and climate justice. The next section, “V. INDIGENOUS PRESERVATION AS A BRIDGING PRACTICE?,” notes the potential for further synergy between preservation policy and law and climate justice through the illustrations of The Dakota Access and Keystone XL Pipeline protests. This section also argues that the transmission of Traditional Ecological Knowledge and

³² Ned Kaufman. *Place, Race, and Story: Essays on the Past and Future of Historic Preservation*. London: Taylor and Francis; 2009.

the protesting of fossil fuel extraction are both forms of historic preservation. Section “VI. ARCHITECTURAL REINCARNATION?: A PROCESS-BASED LOOK AT ADAPTIVE REUSE” argues for the reconciliation of tangible and intangible heritage preservation and a process-based approach to adaptive reuse project evaluation. These sections are followed by a final “VII. Conclusions and Recommendations” section.

II. LITERATURE REVIEW

Analysis of the literature across several fields and disciplines, reveals gaps between sustainability, climate Justice, and preservation. A proper unpacking of terms is necessary in order to understand the nexus of preservation, sustainability, and climate justice. Although the concept of sustainability has ancient origins from various traditional legal systems around the world, and the term sustainability is traced back to eighteenth century forest management, it was not until the 1987 Brundtland Commission that the concept of sustainability, or more specifically, “sustainable development” became ubiquitous.³³ During this seminal international environmental meeting, sustainable development was defined as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”³⁴ This same commission, along with Agenda 21, and the 2002 World Summit on Sustainable Development is often credited for the popularization of the three pillars of sustainability: social, environmental, and economic.³⁵ While the term sustainability is now applied broadly in discourse across disciplines as well as by various corporate entities, scholars such as Ian Scoones, note the difficulty of clearly defining what

³³John C. Dernbach, and Federico Cheever. “Sustainable Development and Its Discontents.” *Transnational Environmental Law* 4, no. 2 (2015): 247–87; William McDonough Architects and M. Braungart, *The Hannover Principles: Design for Sustainability* (William McDonough Architects 1992):50.; Ian Scoones, 2016. “The Politics of Sustainability and Development.” *Annual Review of Environment and Resources* 41 (1): 293-319.

³⁴ Our Common Future. Oxford University Press, 1987:24.

³⁵ Bedřich Moldan, Svatava Janoušková, and Tomáš Hák. 2012. “How to Understand and Measure Environmental Sustainability: Indicators and Targets.” *Ecological Indicators* 17: 4-13.

sustainability and development mean “technically, normatively, and politically.”³⁶

Geographers such as Robert Kates et al note the challenge of reconciling economic growth with sustainable resource use.³⁷ Furthermore, environmental policy professors Heather Farley and Zachary Smith lament the way in which economic development is often prioritized over the environmental pillar and argue that sustainability has been co-opted into the sustainable development

discourse where development is first and foremost about human survival and meeting human needs, but does not necessarily have much to do with genuine sustainability, which is reliant upon the continuation of the earth.³⁸

This bias towards the economic is unsurprising considering that sustainable development was coined by economists at the Brundtland Commission, as Holland points out.³⁹ Similarly, Klaus Bosselmann, a scholar of environmental law, argues that a sustainability attempting to equally balance all three pillars will be meaningless and advocates for clarity and prioritization.⁴⁰ Others, argue that the vagueness of sustainability has left room for corporate greenwashing and the dilution of meaning.⁴¹

³⁶Ian Scoones, 2016. "The Politics of Sustainability and Development." *Annual Review of Environment and Resources* 41 (1): 293-319.

³⁷ Kates W Robert, Thomas M. Parris, and Anthony A. Leiserowitz. 2005. "What is Sustainable Development? Goals, Indicators, Values, and Practice." *Environment : Science and Policy for Sustainable Development* 47 (3): 8-21.

³⁸ Heather M Farley and Zachary A Smith. *Sustainability: If It's Everything, Is it Nothing?*. Second edition, 150.

³⁹ Mark Holland, 2012. "The Need for Sustainability in City Planning and Preservation." *APT Bulletin*, 40(1), 3–6.

⁴⁰ Klaus Bosselmann, *The Principle of Sustainability: Transforming Law and Governance* (Ashgate Publishing 2008),11-12.

⁴¹ E. J. Yanarella & R. S. Levine, 'From Sustainability to Resilience: Advance or Retreat?' (2014), 4(7) *Sustainability*.; Richard Engelman, 'Beyond Sustainable' in E. Assadourian (ed.) *State of the World 2013: Is Sustainability Still Possible?* (Island Press, 2013).

This ambiguity of definition and application only serves to complicate sustainability's relationship with both climate justice and historic preservation.

The relationship between sustainable development and climate justice is somewhat of a Venn diagram in terms of equity. Some proponents of sustainable development argue that reaching its goals will ensure climate justice, while other scholars do not engage with climate justice at all. Likewise, some climate justice advocates address sustainable development while others who tend to work at the local urban level describe their work as if it exists completely separate from sustainable development.⁴² Others, still, argue that if sustainable development properly engages with class and climate, environmental justice can be reached.⁴³ Overall, the Climate Justice perspective is characterized by an emphasis on labor and grassroots organizing over top-down action.⁴⁴ As Bulkeley et al and Fraser argue, climate change

⁴²Harriet Bulkeley, Gareth A. S. Edwards, and Sara Fuller. 2014. "Contesting Climate Justice in the City: Examining Politics and Practice in Urban Climate Change Experiments." *Global Environmental Change* 25 (1): 31-40; Fuller, Sara and Darren McCauley. 2016. "Framing Energy Justice: Perspectives from Activism and Advocacy." *Energy Research & Social Science* 11: 1-8.; Evans, Geoff and Liam Phelan. 2016. "Transition to a Post-Carbon Society: Linking Environmental Justice and just Transition Discourses." *Energy Policy* 99: 329-339.; Scoones, Ian. 2016. "The Politics of Sustainability and Development." *Annual Review of Environment and Resources* 41 (1): 293-319.

⁴³ Pauline Deutz, 2014. "A Class-Based Analysis of Sustainable Development: Developing a Radical Perspective on Environmental Justice: A Class-Based Analysis of Sustainable Development." *Sustainable Development (Bradford, West Yorkshire, England)* 22 (4): 243-252.

⁴⁴ Harriet Bulkeley, Gareth A. S. Edwards, and Sara Fuller. 2014. "Contesting Climate Justice in the City: Examining Politics and Practice in Urban Climate Change Experiments." *Global Environmental Change* 25 (1): 31-40; Fuller, Sara and Darren McCauley. 2016. "Framing Energy Justice: Perspectives from Activism and Advocacy." *Energy Research & Social Science* 11: 1-8.; Evans, Geoff and Liam Phelan. 2016. "Transition to a Post-Carbon Society: Linking Environmental Justice and just Transition Discourses." *Energy Policy* 99: 329-339.

interventions must work to redress structural inequalities and be radical in nature.⁴⁵ As the word radical's etymology implies, such changes must get to the root of the problem. However, critics note that sustainable development is rooted in 'conservative' and 'technical' approaches that attempt to balance the three pillars.⁴⁶

The political divergence among different actors attempting to address climate change lays the groundwork for a fuzzy relationship between preservation and climate. While several of the climate justice authors note the issues of energy inefficiency and disinvestment in building fabric, these issues are never explicitly framed as preservation problems but matters of retrofitting.⁴⁷ This lack of explicit reference to the historic preservation field does not suggest that synergy is impossible or inexistent. However, this lack of overt connection between the field suggests a gap in communication and shared understanding.

BlackSpace defines heritage conservation as "the act of protecting and enlivening culturally significant markers, both nonphysical and physical, to understand a

⁴⁵ Ibid; Nancy Fraser, 2010;2012;. "Who Counts? Dilemmas of Justice in a Postwestphalian World." In , edited by Noel Castree, Paul Chatterton, Nik Heynen, Wendy Larner and Melissa W. Wright, 281-297. Chichester, UK: John Wiley & Sons, Ltd.

⁴⁶ Ian Scoones, "The Politics of Sustainability and Development."

⁴⁷ Harriet Bulkeley, Gareth A. S. Edwards, and Sara Fuller. 2014. "Contesting Climate Justice in the City: Examining Politics and Practice in Urban Climate Change Experiments." *Global Environmental Change* 25 (1): 31-40; Fuller, Sara and Darren McCauley. 2016. "Framing Energy Justice: Perspectives from Activism and Advocacy." *Energy Research & Social Science* 11: 1-8; WALKER, Gordon and Rosie DAY. 2012. "Fuel Poverty as Injustice: Integrating Distribution, Recognition and Procedure in the Struggle for Affordable Warmth : Fuel Poverty Comes of Age: Commemorating 21 Years of Research and Policy." *Energy Policy* 49: 69-75.

place and to value the past, present, and future of its people.”⁴⁸ Drawing from this articulation as well as Mason’s definition of heritage as “the past made useful,” this author defines historic preservation as the proactive safeguarding and strengthening of communities, places, stories, & memories for current generations and those to come.⁴⁹ Montgomery rejects narrow definitions of preservation and advocates for broad understandings of the field, “wherever it is happening, whether in its most precise form or its most informal; in its most modest or its catalytic.”⁵⁰ Furthermore, historic preservation is the protection of both tangible and intangible heritage.⁵¹ While there is ample scholarship engaging with the intersection of preservation and sustainable development, analysis of the literature reveals a gap between historic preservation and climate justice.⁵² Young and Elefante, Holland, Avrami, and Frey address preservation through the lens of sustainable development in their varied works.⁵³ Young and Elefante

⁴⁸ Emma Osore, “Blackspaces:Brownsville Codesigning Black Neighborhood Conservation,” in *Preservation and Social Inclusion*. ed. Erica Avrami. (NY:Columbia Books on Architecture and the City, 2020).

⁴⁹ Randall Mason, “Valuing Traumatic Heritage Places as Archives and Agents.” In *Values in Heritage Management: Emerging Approaches and Research Directions*, by Erica Avrami, Susan Macdonald, Randall Mason, and David Myers. Los Angeles: The Getty Conservation Institute, 2019. <http://www.getty.edu/publications/occasional-papers-3/part-two/11/>.

⁵⁰ Susan West Montgomery, 2015. “The Evolving Definition of “Historic Preservation”: More Complex, More Inclusive.” *Forum Journal (Washington, D.C.)* 30 (1): 37.

⁵¹ Ibid.

⁵² Although there is no academic literature explicitly linking preservation and climate justice, an hour-long virtual symposium was held on the topic on November 19, 2020, suggesting an increased interest in the intersection. Rhode Island Council for the Humanities, ““BITE-SIZED PRESERVATION: CLIMATE JUSTICE AND PRESERVATION” – PROVIDENCE SYMPOSIUM: WHOSE PLACES MATTER (AND WHY?)” 2020. Accessed 11 February 2020. <https://rihumanities.org/calendar/bite-sized-preservation-climate-justice-and-preservation-providence-symposium-whose-places-matter-and-why/>

⁵³ Robert A. Young and Carl Elefante, 2012. *Stewardship of the Built Environment: Sustainability, Preservation, and Reuse*. Washington, DC: Island Press. doi:10.5822/978-1-61091-236-5.; Holland, M. (2012). The need for sustainability in city planning and preservation. *APT Bulletin*, 40(1), 3–6. ; Erica Avrami, 2016. “Making Historic Preservation Sustainable.” *Journal of the American Planning Association* 82 (2): 104-112. ; Frey, P. (2007, October). Making the case: Historic preservation as sustainable

argue that the greenest building is the one that is already built by making the pragmatic case for adaptive reuse on the grounds of balancing economic, social, and environmental benefits. Yet, Avrami, like Bosselmann, Farley & Smith, notes the tensions of balancing the pillars. Unlike the other critics, Avrami argues that social concerns must trump environmental and economic concerns in some instances, raising the additional complex task of defining “social concerns” and extricating this amorphous pillar from the other two more-easily-definable spheres.

Along these lines, scholars such as Auclair, Fairclough, Longstreth, and Boccardi address the connection between climate and culture.⁵⁴ However, policies connecting the two are still lacking as Julie Ann Patricia Murphy aptly notes in her thesis,

There is excellent work being presented that identifies the role of culture in sustainability planning, but it has been slow to be implemented into the policymaking and planning of sustainability in the United States.⁵⁵

Avrami sheds additional light on this gap by noting the potential mismatch between policies, practice and the sustainability rhetoric often used by preservationists when it comes to matters of urban density, inclusion, diversity and participation, and intergenerational equity, as well as a lack of data to support claims, and historic

development (Draft White Paper, Sustainable Preservation Retreat). Washington, DC: National Trust for Historic Preservation.

⁵⁴Giovanni Boccardi, 2015. “From Mitigation to Adaptation: A New Heritage Paradigm for the Anthropocene. *Perceptions of Sustainability in Heritage Studies*. ed. Marie-Theres Albert. Boston, MA: De Gruyter.; Elizabeth Auclair & Graham Fairclough, “Living Between Past and Future: An Introduction to Heritage and Cultural Sustainability” in *Theory and Practice in Heritage and Sustainability*. eds. Elizabeth Auclair & Graham Fairclough. New York, NY: Routledge, 2015.

⁵⁵Julia Ann Patricia Murphy, 2013. *Beyond the Building: Exploring the Link between City Sustainability Policies and Historic Preservation Policies* ScholarlyCommons.

designation functioning as a gatekeeping mechanism for accessing preservation incentives.⁵⁶

In conclusion, both preservation and sustainability are broad multifaceted concepts. Sustainability can be understood as development that attempts to balance social, economic, and environmental concerns. Sustainability is often technical, incremental, and piecemeal in nature. Climate Justice, on the other hand, advocates for decarbonization through systemic change and acknowledges the disproportionate burdens of climate change on frontline communities. These tensions between incremental and transformative change in the varying approaches of sustainability and climate justice complicate their relationship with preservation. In order for preservation to truly intersect with climate justice, work must strive to promote equity and effect structural change.

⁵⁶ Erica Avrami, 2016. "Making Historic Preservation Sustainable." *Journal of the American Planning Association* 82 (2): 104-112.

III. THE GREEN NEW DEAL

Significance

Published in 2019, Congresswoman Alexandria Ocasio Cortez and Senator Edward Markey's 14-page resolution for the Green New Deal is an essential aspect of current American climate justice discourse. The Green New Deal is characterized by five main goals:

- Achieve net-zero greenhouse gas emissions through a fair and just transition for all communities and workers
- Create millions of good, high-wage jobs and ensure prosperity and economic security for all people of the United States
- Invest in the infrastructure and industry of the United States to sustainably meet the challenges of the 21st century
- Secure for all people of the United States for generations to come: clean air and water; climate and community resiliency; healthy food; access to nature; and a sustainable environment
- Promote justice and equity by stopping current, preventing future, and repairing historic oppression of indigenous peoples, communities of color, migrant communities, deindustrialized communities, depopulated rural communities, the poor, low-income workers, women, the elderly, the unhoused, people with disabilities, and youth⁵⁷

Prominent design and cultural groups such as the American Institute of Architects, The Architecture Lobby, The Landscape Architecture Foundation, The American Society of Landscape Architects, and The U.S. Department of Arts and Culture have publicly

⁵⁷ U.S. Congress. House. Recognizing the duty of the Federal Government to create a Green New Deal. HR 106. 116th Cong., 1st sess. Introduced in House February 17, 2019. <https://www.congress.gov/116/bills/hres109/BILLS-116hres109ih.pdf>

declared their support for the Green New Deal, indicating that scope of this resolution does fall within the purview of these fields.⁵⁸ However, no major historic preservation organizations have expressed their formal support, echoing the previously mentioned disconnect between historic preservation and climate justice. Yet, as Erica Avrami notes, “Historic preservation has the potential to serve as a constructive agent of change within the built environment and to contribute to goals of environmental, economic, and social sustainability.”⁵⁹ The following objectives of the Green New Deal are foregrounded in this thesis because of their direct connection to the preservation concerns of retrofits, indigenous community preservation practice and protest of fossil fuel extraction, and adaptive reuse:

- Upgrading all existing buildings in the United States and building new buildings to achieve maximum energy efficiency, water efficiency, safety, affordability, comfort, and durability, including through electrification
- Mitigating and managing the long-term adverse health, economic, and other effects of pollution and climate change, including by providing funding for community-defined projects and strategies

⁵⁸ American Institute of Architects, "AIA Supports Green New Deal Framework," 8 February 2019. Accessed 20 April 2021. <https://www.aia.org/press-releases/6105450-aia-supports-green-new-deal-framework->; The Architecture Lobby, "Statement on the Green New Deal," Projects, 25 June 2019. Accessed 20 April 2021. <http://architecture-lobby.org/project/t-a-l-statement-on-the-green-new-deal/>; Landscape Architecture Foundation, "Designing the Green New Deal," Accessed 20 April 2021. <https://www.lafoundation.org/take-action/green-new-deal>; American Society of Landscape Architects, "ASLA ANNOUNCES SUPPORT FOR THE GREEN NEW DEAL FOR PUBLIC HOUSING ACT," News, 18 November 2019. Accessed 20 April 2021. <https://www.asla.org/NewsReleaseDetails.aspx?id=56566>; USDAC, "Artists Unite for a Green New Deal," Accessed 20 April 2021. <https://usdac.us/gnd>

⁵⁹ Erica Avrami, 2016. "Making Historic Preservation Sustainable." *Journal of the American Planning Association* 82 (2): 104-112.

- Removing greenhouse gases from the atmosphere and reducing pollution by restoring natural ecosystems through proven low-tech solutions that increase soil carbon storage, such as land preservation and afforestation⁶⁰

Literature Review

In order to understand how preservation might become better incorporated into the Green New Deal, one must understand the way the Green New Deal has been informed by the successes and the shortcomings of the New Deal. Phoebe Cutler's book, *The Public Landscape of the New Deal*, provides grounding historical context for this thesis. Cutler notes the way in which the history of the New Deal fails to engage with architecture and landscape architecture. Particularly, she emphasizes the way in which Depression era architecture, in its ingenuity and charm, reflected a respect for working people of all classes. During the New Deal, design was often used as a vehicle for social reform and "self-help." From small scale design projects, such as playgrounds, to the large scale of national parks and major dust bowl remediation efforts, the New Deal is inextricably bound to the built environment and the landscape.⁶¹ Building on the work of Cutler, The Sunrise Movement's book, *Winning the Green New Deal*, addresses issues of inclusion and exclusion in the New Deal.⁶² The New Deal required a major paradigm

⁶⁰ U.S. Congress. House. Recognizing the duty of the Federal Government to create a Green New Deal. HR 106. 116th Cong., 1st sess. Introduced in House February 17, 2019.

<https://www.congress.gov/116/bills/hres109/BILLS-116hres109ih.pdf>

⁶¹ Phoebe Cutler, *The Public Landscape of the New Deal*. New Haven: Yale University Press, 1985.

⁶² Through the Social Security and National Labor Relations Act, farmworkers, domestic workers, and homecare workers, the majority of which were black and brown, were shut out from collective bargaining as a result of pandering to white southern legislators. Mary Kay Henry, "A Workers' Green New Deal," in *Winning the Green New Deal: Why We Must, How We Can*, eds. Varshini Prakash and Guido Girgenti. (New York: Simon and Schuster, 2020), 132.

shift in the collective American political consciousness. Through years of victories and accumulated buy-in, the New Deal successfully positioned government intervention and accountability as common sense. However, this paradigm was effectively unraveled during the Regan era. Guido Girgenti and Waleed Shahid argue that through coalition-building and a mass social movement, paradigms can be realigned, and the Green New Deal can be embraced as common sense.⁶³ This text also explains how the political and historical framework of the Green New Deal draws from the Environmental Justice Movement, Keynesian economics, and the histories World War II and the New Deal. Most importantly, the economics of the Green New Deal are theoretically informed by a rejection of neoliberal abdication of government responsibility called the “new consensus.”⁶⁴

A Planet to Win: Why We Need a Green New Deal provides key context in understanding the politics of the Green New Deal and its implications for the design field. Drawing on sociology and political theory, the authors make bold proposals for the ban of fossil fuel extraction, the elimination of subsidies, and the implementation of carbon free housing and free sustainable transit. Rejecting gradualism, the authors position the climate crisis as a “broader crisis of capitalism.”⁶⁵ Furthermore, the authors

⁶³Guido Girgenti and Waleed Shahid, “Policies and Principles of the Green New Deal,” in *Winning the Green New Deal: Why We Must, How We Can*, eds. Varshini Prakash and Guido Girgenti. (New York: Simon and Schuster, 2020), 212-240.

⁶⁴ Rhianna Gunn Wright, “The Next Era of American Politics,” in *Winning the Green New Deal: Why We Must, How We Can*, eds. Varshini Prakash and Guido Girgenti. (New York: Simon and Schuster, 2020), 78.

⁶⁵Kate Aronoff, Alyssa Battistoni, Daniel Aldana Cohen, Thea N. Riofrancos, and Naomi Klein. *A Planet to Win: Why We Need a Green New Deal* (New York: Verso, 2019), 6.

reject purely energy-focused approaches to decarbonization and an overreliance on carbon taxes and research and development. The authors dismiss technological solutions to the climate crisis and encourage an emphasis on organized labor and corporate responsibility.⁶⁶ Similarly, Naomi Klein argues that social movements will be essential in reaching a Green New Deal.⁶⁷ Klein also rejects incrementalism and argues for a “sweeping industrial and infrastructure overhaul.”⁶⁸ Quite aptly, the author points out that even amidst hostility in Washington and lack of federal support, green jobs are already outnumbering fossil fuel jobs.⁶⁹ Directly applicable to this thesis, Aronoff et al help to establish the importance of the indigenous protest of extraction sites. While historic preservation can help to mitigate the effects of climate change through retrofitting and adaptive reuse, the land preservation of fossil fuel sites gets to the root of the problem: oil extraction and the culture of exploitation.

Damian White advocates for anti-racist, feminist, anti-colonial, eco-socialist “design futuring” and a focus on labor. While the author expresses a healthy skepticism towards design in stating “Design is not to be trusted,” they emphasize that protest and policy shifts alone will not suffice. Billy Fleming sheds light on this skepticism and the broader role of the design field in fighting for a Green New Deal. He states,

We may yearn to impart systems-level change, but we are working on discrete sites, with incrementalist tools, within structures that produce injustice. Before we ask the world to view design as an urgent necessity,

⁶⁶ Kate Aronoff, Alyssa Battistoni, Daniel Aldana Cohen, Thea N. Riofrancos, and Naomi Klein. *A Planet to Win: Why We Need a Green New Deal* (New York: Verso, 2019).

⁶⁷ Naomi Klein, *On Fire: The (Burning) Case for a Green New Deal* (New York, Simon and Schuster, 2019).

⁶⁸ Klein, 281.

⁶⁹ Klein, 282.

we must look at those sites, tools, and structures and remake our disciplines to be more useful, in the moment, for the movements and ideals we aspire to serve.⁷⁰

Like Girgenti and Shahid, Fleming advocates for a realignment in the design field. By being complicit in the depoliticization of the field, design professionals have excluded themselves from policymaking, inadvertently reinforcing their own professional constraints. Rather, Fleming calls for designers to recognize their position as public servants while standing in solidarity with and engaging in community organizing.⁷¹

White argues that “Just transitions will have to be imagined and built, fabricated and realized, coded and created.”⁷² This sentiment raises the question of whether a radical idea and its physical manifestation must be created from scratch, to be realized. This question illustrates the tension between the delicate balance of old and new that preservationists must face. Furthermore, the fact that preservation is not included in the discussion of design politics and a Green New Deal is critical. This lack of connection to preservation not only points towards a gap in the literature, but an opportunity for larger coalition-building within the design fields.

⁷⁰ Billy Fleming, “Design and the Green New Deal,” *Places Journal*, April 2019.

⁷¹ Ibid.

⁷² Damian White, “Just Transitions/Design for Transitions: Preliminary Notes on a Design Politics for a Green New Deal,” *Capitalism Nature Socialism* (2019): 1-20.

IV. RETROFITS: HANDS ON PRESERVATION AS CLIMATE AND ENVIRONMENTAL JUSTICE

Defining the Problem: Retrofitting as Climate & Environmental Justice

Retrofitting, an objective of the Green New Deal, is the modification of an existing building to increase insulation and energy efficiency, reduce costs, increase safety, and improve quality of life.⁷³ According to the Rocky Mountain Institute, the United States will need to retrofit three million homes each year in order to meet the carbon mitigation goals of the Paris Agreement.⁷⁴ The heating of homes is one of the major contributors to greenhouse gas emissions in the United States.⁷⁵ Stephen Pacala and Robert Socolow note the importance of energy efficiency in the building sector in their 15 wedges approach to combating climate change.⁷⁶ In the United States, over 60% of homes depend on fossil fuels or gas for heating. This burning of gas or fossil fuels for heating homes, water, and cooking generates over 560 million tons of carbon

⁷³ "Retrofitting as Pathway to Affordable Housing," Buildings, Office of Energy Efficiency and Renewable Energy, last modified February 22, 2018. <https://www.energy.gov/eere/buildings/articles/retrofitting-pathway-affordable-housing> ; Willand, Nicola, Cecily Maller, and Ian Ridley. 2019. "Addressing Health and Equity in Residential Low Carbon Transitions – Insights from a Pragmatic Retrofit Evaluation in Australia." *Energy Research & Social Science* 53: 68-84. ; Willand, Nicola, Trivess Moore, Ralph Horne, and Sarah Robertson. 2020. "Retrofit Poverty: Socioeconomic Spatial Disparities in Retrofit Subsidies Uptake." *Buildings and Cities* 1 (1): 14-35.

⁷⁴ This statistic is pulled from quote from Martha Campbell of the Rocky Mountain Institute. Patrick, Sission, "New York's Real Climate Challenge: Fixing Its Aging Buildings," *New York Times*, December 29, 2020, <https://www.nytimes.com/2020/12/29/business/new-york-passive-house-retrofit.html#:~:text=The%20nation%20would%20need%20to,built%20in%20the%20United%20States>.

⁷⁵ Thomas L. Daniels and Katherine Daniels, *The Environmental Planning Handbook for Sustainable Communities and Regions*. Chicago, Ill.: Planners Press, American Planning Association, 2003; Mingle, Jonathan, "To Cut Carbon Emissions, a Movement Grows to 'Electrify Everything'," *Yale Environment* 360, 14 April 2020.

⁷⁶ Stephen Pacala and Richard Socolow. 2004. "Stabilization Wedges: Solving the Climate Problem for the Next 50 Years with Current Technologies." *Science (American Association for the Advancement of Science)* 305 (5686): 968-972.

dioxide per year and makes up 10% of total global greenhouse gas emissions.⁷⁷ Despite the electricity sector's decrease in carbon intensity over the past few years, the building sector has yet to significantly reduce fossil fuel emissions.⁷⁸ In the United States, poor housing quality and low energy efficiency are symptoms of larger systemic inequalities. Thus, two major barriers of retrofits are high upfront costs as well as the continuing issue of poverty. Another issue is the disconnect between historic preservation and retrofitting efforts. Three exemplary projects, BlocPower, The Healthy Rowhouse Project, and Elevate Energy illustrate the way in which the divide between historic preservation and climate justice can be addressed.

Poor housing quality and energy efficiency are two environmental and climate justice issues that can be remediated by retrofitting. Deteriorating housing and poor ventilation often leads to negative health outcomes such as increased asthma rates and exposure to lead.⁸¹ These concerns are coupled with the lack of energy efficiency that often afflicts old buildings that have been poorly maintained and/or employ low-quality materials and workmanship.⁸² Often the communities who are the least able to afford air conditioning are also the most likely to be living in deteriorating homes with poor

⁷⁷ Ibid.

⁷⁸ Thomas L. Daniels and Katherine Daniels, *The Environmental Planning Handbook for Sustainable Communities and Regions*. Chicago, Ill.: Planners Press, American Planning Association, 2003.

⁸¹ Prateek M. Shrestha, Jamie L. Humphrey, Kelsey E. Barton, Elizabeth J. Carlton, John L. Adgate, Elisabeth D. Root, and Shelly L. Miller. 2019. "Impact of Low-Income Home Energy-Efficiency Retrofits on Building Air Tightness and Healthy Home Indicators." *Sustainability (Basel, Switzerland)* 11 (9): 2667.; J. Sundell, H. Levin, W. W. Nazaroff, W. S. Cain, W. J. Fisk, D. T. Grimsrud, F. Gyntelberg, et al. 2011. "Ventilation Rates and Health: Multidisciplinary Review of the Scientific Literature." *Indoor Air* 21 (3): 191-204.

⁸² Retrofitting concerns all existing buildings, not just old ones. However, old buildings typically need to be prioritized because of their deteriorating condition and the vulnerable groups inhabiting them.

insulation and ventilation.⁸³ To make matters worse, these same communities are also the most likely to bear the brunt of extreme heat.⁸⁴ The impact of this lack of energy efficiency is only compounded by Urban Heat Island Effect, a phenomenon in which urban areas with large swaths of heat absorbing surfaces and little vegetation retain a higher temperature.⁸⁵ The elderly, the very young, and those of low socioeconomic status, are all more vulnerable to these cumulative effects.⁸⁶ Through practices of redlining, institutionalized discriminatory lending policies during the New Deal era lead to segregation, mass racialized disinvestment, and major barriers to wealth accrual for Black communities⁸⁷ These harmful place-based policies have led to racialized class stratification that is both perpetuated and reproduced by governments and institutions that urban planners, designers, and preservationists work for today.⁸⁸ Accumulation of

⁸³ Greve, Adrienne I., Michael R. Boswell, and Ms Tammy L. Seale. 2019. *Climate Action Planning*, (Washington D.C.: Island Press, 2019.), 213. ; Willand, Nicola, Trivess Moore, Ralph Horne, and Sarah Robertson, 2020. "Retrofit Poverty: Socioeconomic Spatial Disparities in Retrofit Subsidies Uptake." *Buildings and Cities* 1 (1): 14-35.

⁸⁴ Greve et al, 213.

⁸⁵ Aleksi Räsänen, Kimmo Heikkinen, Noora Piila, and Sirkku Juhola, 2019. "Zoning and Weighting in Urban Heat Island Vulnerability and Risk Mapping in Helsinki, Finland." *Regional Environmental Change* 19 (5): 1481-1493.; Leal Filho, Walter, Leyre Echevarria Icaza, Alice Neht, Maris Klavins, and Edward A. Morgan. 2018. "Coping with the Impacts of Urban Heat Islands. A Literature Based Study on Understanding Urban Heat Vulnerability and the Need for Resilience in Cities in a Global Climate Change Context." *Journal of Cleaner Production* 171: 1140-1149.

⁸⁶ Greve et al, 213. Johnson, Daniel P. and Jeffrey S. Wilson. 2009. "The Socio-Spatial Dynamics of Extreme Urban Heat Events: The Case of Heat-Related Deaths in Philadelphia." *Applied Geography (Sevenoaks)* 29 (3): 419-434.; Julia Kravchenko, MD, PhD, Amy P. Abernethy MD, Maria Fawzy MHA, and H. Kim Lyerly MD. 2013. "Minimization of Heatwave Morbidity and Mortality." *American Journal of Preventive Medicine* 44 (3): 274-282; Samain Sabrin, Maryam Karimi, Md Golam Rabbani Fahad, and Rouzbeh Nazari. 2020. "Quantifying Environmental and Social Vulnerability: Role of Urban Heat Island and Air Quality, a Case Study of Camden, NJ." *Urban Climate* 34.

⁸⁷ Wenfei. Xu, "Legacies of Institutionalized Redlining: A Comparison Between Speculative and Implemented Mortgage Risk Maps in Chicago, Illinois." *Housing policy debate* (2021): 1–26.

⁸⁸ Emma Osore, "Blackspaces: Brownsville Codesigning Black Neighborhood Conservation," in *Preservation and Social Inclusion*. ed. Erica Avrami. (NY: Columbia Books on Architecture and the City, 2020).

wealth not only impacts one's ability to maintain a home, but redlining's barriers to wealth also make one more likely to be living in aging and deteriorating housing stock in the first place.⁸⁹

Through the overlapping of "multiple structural inequalities," low income individuals are vulnerable to energy inefficient housing in need of retrofitting, energy injustice, and energy insecurity.⁹⁰ Diana Hernández defines energy insecurity as "a multi-dimensional construct that describes the interplay between physical conditions of housing, household energy expenditures and energy-related coping strategies."⁹¹ Mazar argues that low-income communities of color are disproportionately burdened with the effects of climate change, both physically and economically. For example, the same households who are often displaced by superstorms, endure extended power outages because of extreme weather, and experience climate-related health impacts, often pay large chunks of their income on energy. LatinX households typically pay one third more of their income on energy than white households while black households pay two thirds more.⁹² Thus, the need for energy efficiency and housing quality retrofits is deeply rooted in larger systemic issues and much be approached as such with vulnerability in

⁸⁹ Harry L. Margulis, 1998. "Predicting the Growth and Filtering of at-Risk Housing: Structure Ageing, Poverty and Redlining." *Urban Studies (Edinburgh, Scotland)* 35 (8): 1231-1259.

⁹⁰ Ross Gillard, Carolyn Snell, and Mark Bevan. 2017. "Advancing an Energy Justice Perspective of Fuel Poverty: Household Vulnerability and Domestic Retrofit Policy in the United Kingdom." *Energy Research & Social Science* 29: 53-61.

⁹¹ Diana Hernández, 2016. "Understanding 'Energy Insecurity' and Why it Matters to Health." *Social Science & Medicine* (1982) 167: 1.

⁹² Laurie Mazar, "The Fairest, Greenest Cities of Them All," *Medium*, August 8, 2019.
<https://urbanresilience.medium.com/the-fairest-greenest-cities-of-them-all-dd3837f15923>

mind. Retrofitting existing residential buildings not only contributes to resilience but reduces energy costs and makes housing more affordable.⁹³

Barriers to Retrofits

Despite the growing recognition of retrofits as an essential climate resilience strategy, challenges remain. Twenty-two cities have acknowledged the importance of retrofits in their Climate Action Plans. Cities such as Columbus, New York, Oakland, and Portland, frame retrofits as an opportunity for green workforce development.⁹⁴ Los Angeles' CAP is actually called "LA Green New Deal" and links retrofits to green jobs and housing affordability.⁹⁵ Miami's plan notes the importance of retrofitting government building stock, a practice supported by Greve et al.⁹⁶ Detroit offers weatherization and retrofitting workshops.⁹⁷ Kansas City, Missouri, Oakland, Columbus, and Portland address the importance of assessing and prioritizing vulnerable groups.⁹⁸ While many of

⁹³ Greve et al, 156.

⁹⁴ City of Columbus, "Sustainable Columbus Climate Action Plan Draft Plan," *Sustainable Columbus*, September 9, 2020.

<file:///C:/Users/12675/Downloads/Columbus%20Draft%20Climate%20Action%20Plan.pdf>; City of New York, "1.5° Celsius: Aligning New York City with the Paris Climate Agreement," *New York City Mayor's Office of Sustainability*, September 2017.

https://www1.nyc.gov/assets/sustainability/downloads/pdf/publications/1point5-AligningNYCwithParisAgrmt-02282018_web.pdf; City of Oakland, "Oakland 2030: Equitable Climate Action Plan," *City of Oakland*, July 24, 2020. <https://cao-94612.s3.amazonaws.com/documents/Oakland-ECAP-07-24.pdf>; City of Portland, "Climate Action Plan: Local Strategies to Address Climate Change," June, 30, 2015. https://www.portland.gov/sites/default/files/2019-07/cap-2015_june30-2015_web_0.pdf

⁹⁵ LA's Green New Deal:Sustainability City PLAN," City of Los Angeles, 2019.

https://plan.lamayor.org/sites/default/files/pLAn_2019_final.pdf

⁹⁶ City of Miami, "MiPlan: City of Miami Climate Action Plan," *City of Miami*, June 2008.

<http://egov.ci.miami.fl.us/Legistarweb/Attachments/87211.pdf>; Greve et al, 283.

⁹⁷ City of Detroit, "Detroit: Climate Action Plan," *Detroiters Working for Environmental Justice*, 2019.

https://detroitenvironmentaljustice.org/wp-content/uploads/2017/11/CAP_WEB.pdf

⁹⁸ Slow growth communities with older housing stock should be prioritized for retrofits, as opposed to rapidly growing areas with significant development. See Greve et al, 138.; Mid-America Regional Council & Climate Action KC, "KC Regional Climate Action Plan," *Mid-America Regional Council & Climate Action*

these climate action plans mention the need for retrofits, very few have set specific targets and performed vulnerability assessments.⁹⁹ The quantification and setting of clear benchmarks is necessary in order to determine the level of participation, or performance indicator, needed to achieve intended emissions reductions.¹⁰⁰

Quantifications should not only state how many houses will need to be retrofitted, but the assumptions and methods used in determining the reductions.¹⁰¹ Furthermore, the plans do not address the issue of cost. High upfront costs is one of the largest challenges of energy efficiency retrofits.¹⁰² For example, The National Trust describes a common scenario in which landlords opt for cosmetic retrofits over energy-efficiency improvement.¹⁰³ Through a split incentive, landlords are reluctant to pay for upgrades that will financially benefit their tenants, while the tenants are reluctant to make improvements to a building that they do not own.¹⁰⁴ Finally, Sacramento and San Antonio are the only cities whose CAPS frame retrofitting as a historic preservation issue, indicating that many cities do not consider retrofitting to be a historic preservation concern.¹⁰⁵

KC, 2021. http://kcmetroclimateplan.org/wp-content/uploads/2021/02/Climate-Action-Plan-final_2_1_21.pdf ; City of Oakland, City of Columbus, City of Portland.

⁹⁹ Greve et al, 125.

¹⁰⁰ Ibid.

¹⁰¹ Ibid.

¹⁰² Ibid, 142.

¹⁰³ National Trust for Historic Preservation, Preservation Green Lab, *The Greenest Building: Quantifying the Environmental Value of Building Reuse* (Washington, DC: National Trust for Historic Preservation, 2011, 89.

¹⁰⁴ Ibid.

¹⁰⁵ City of Sacramento, "The Sacramento Climate Action Plan," *City of Sacramento*, 2015.

<https://www.cityofsacramento.org/Community-Development/Resources/Online-Library/Sustainability>; The City of San Antonio, "SA Ready: A Path for Climate Action and Adaptation," *San Antonio City Council*,

Retrofitting as Preservation?

Traditional historic preservation programs that intersect with sustainability often frame green outcomes as additional benefits, rather than intentional goals.

Furthermore, these programs rarely engage with climate or environmental justice.

Washington DC provides a Sustainability Guide for Existing and Historic Properties that describes “green retrofit strategies.”¹¹⁸ Similarly, the Texas Historical Commission encourages

...the continued use of historic buildings and structures, and the incorporation of appropriate modifications that achieve enhanced energy efficiencies through sustainable building practices when those practices also recognize the inherent efficiency existing in historic buildings and respect their historical integrity.¹¹⁹

October 2019.

<https://www.sanantonio.gov/Portals/0/Files/Sustainability/SAClimateReady/SACRRReportOctober2019.pdf>

¹¹⁰ Livio Mazzarella, 2015. "Energy Retrofit of Historic and Existing Buildings. the Legislative and Regulatory Point of View." *Energy and Buildings* 95: 23-31.

¹¹¹ Larissa Ide, Michael Gutland, Scott Bucking, and Mario Santana Quintero. 2020. "Balancing Trade-Offs between Deep Energy Retrofits and Heritage Conservation: A Methodology and Case Study." *International Journal of Architectural Heritage*: 1-20.

¹¹² Natasha Ginks and Birgit Painter. 2017. "Energy Retrofit Interventions in Historic Buildings: Exploring Guidance and Attitudes of Conservation Professionals to Slim Double Glazing in the UK." *Energy and Buildings* 149: 391-399.

¹¹³ Susan West Montgomery, 2015. "The Evolving Definition of “Historic Preservation”: More Complex, More Inclusive." *Forum Journal (Washington, D.C.)* 30 (1): 34-38.

¹¹⁴ Max Page, *Why Preservation Matters*. (New Haven: Yale University Press, 2016), 11. García, Ivis. 2018. "Community Participation as a Tool for Conservation Planning and Historic Preservation: The Case of “Community as A Campus” (CAAC)." *Journal of Housing and the Built Environment* 33 (3): 519-537.

¹¹⁶ Amanda L. Webb, 2017. "Energy Retrofits in Historic and Traditional Buildings: A Review of Problems and Methods." *Renewable & Sustainable Energy Reviews* 77: 748-759.

¹¹⁷ Ibid.

¹¹⁸ DC Historic Preservation Board, “Sustainability Guide for Existing and Historic Buildings,” District of Columbia Office of Planning – Historic Preservation Office, 2019. Accessed 20 February 2021.

<https://planning.dc.gov/sites/default/files/dc/sites/op/publication/attachments/Sustainability%20Guide%20for%20Existing%20and%20Historic%20Properties.pdf>

¹¹⁹ The commission refers to “Energy Efficiency, Renewable Energy and Historic Preservation: A Guide for Historic District Commissions” produced by Clean Air Cool Planet in 2009. Clean Air Cool Planet, “Energy Efficiency, Renewable Energy and Historic Preservation: A Guide for Historic District Commissions”, 2009. Accessed 20 February 2021 https://www.thc.texas.gov/public/upload/cacp_engyefcnygd_0.pdf.

In addition, the Kansas Historical Society advocates for hands on preservation at home through their series of window repair videos. Although the KHS notes the environmentally-friendly and long term economical qualities of repaired wood windows, the rationale ultimately comes down to value of wood windows as “one of the most important character-defining features of a historic home.”¹²⁰ Along these lines, “The main motivation behind the project was to preserve the historic building, and reduce energy costs.” for Thetford Vermont’s Historic Structure Weatherization Retrofit – Thetford program.¹²¹ While this support of energy efficiency is a step in the right direction, historical commissions need to do more than encourage sustainable building practices. The majority of programs miss the mark by failing to connect energy efficiency to larger systemic issues. Furthermore, they neglect to evaluate environmental benefits in their own right and prioritize integrity over efficiency.

Preservationists must recognize the way in which the field is sometimes at odds with climate change mitigation efforts. For instance, Greve et al advises that windows be replaced, a practice considered sacrosanct by many preservationists.¹²² Similarly, Casa Pasiva, a retrofit project funded by RetrofitNY, will cover facades with white sculptural surfaces to make them meet passive house standards and cut energy costs by

¹²⁰ Kansas Historical Society, “Wood Repair Videos,” 2021. Accessed 20 February 2021. <https://www.kshs.org/p/window-repair-videos/14680>

¹²¹ Vermont Natural Resources Council, “Historic Structure Weatherization Retrofit – Thetford,” Community Planning Toolbox, 2021. Accessed 20 February 2021. <https://vnrc.org/community-planning-toolbox/case-studies/historic-structure-weatherization-retrofit-thetford/>

¹²² Greve et al, 156.

80%.¹²³ Furthermore, street trees, green roofs, and energy star appliance rebates are other common practices that are often combined with retrofitting efforts.¹²⁴ These additional interventions raise the question of where the line between preservation, environmental planning, and urban design is drawn in these instances. Or more directly, what is the scope of historic preservation? However, a more productive way to frame this idea is through the lens of cross-departmental collaboration within the City.

Illustrations

The following illustrations are exemplary projects that are integrating historic preservation and climate justice work. These illustrations demonstrate the potential of eliminating barriers and incentivizing work across the historic preservation and climate justice silos towards meeting Green New Deal targets.

BlocPower

Established in 2014 by former organizer, Darnell Baird, BlocPower is a tech startup that seeks to make American cities greener, smarter, healthier, and more equitable. During his time with the Obama administration, Baird worked on the American Recovery and Reinvestment Act project, a green workforce development program. However, throughout the experience, Baird came to realize the overwhelming cost of retrofits tend to counteract energy cost savings for homeowners. In response to

¹²³ Patrick, Sission, "New York's Real Climate Challenge: Fixing Its Aging Buildings," *New York Times*, December 29, 2020, <https://www.nytimes.com/2020/12/29/business/new-york-passive-house-retrofit.html#:~:text=The%20nation%20would%20need%20to,built%20in%20the%20United%20States>.

¹²⁴ Greve et al, 156.

these challenges, Baird created BlocPower as a way to leverage tech for energy efficiency while building trust and wealth in low-income communities of color.¹²⁵ Through proprietary software for analysis, leasing, project management, and monitoring of clean energy projects, this company saves customers between 20-70% on annual energy costs. Their community-centric leasing program allows the team at BlocPower to handhold building owners through the process.¹²⁶

BlocPower is largely informed by the organizing tactics learned by its founder during his time on the ground in communities. Ultimately, BlocPower seeks to build trust in communities that have experienced the negative impacts of redlining, blockbusting, and predatory lending. General Manager Keith Kinch notes that while the recent uptick in regulation of carbon emissions at the city level is a positive, government entities must remember how they have failed low-income communities. This historically strained relationship results in lack of trust and a fearfulness of participating in city programs, such as heat pump rebates.¹²⁷ BlocPower seeks to heal these relationships and build trust in each community by tapping into preexisting networks and partnering strategically with them. Furthermore, BlocPower shapes their engagement strategies to the specific groups they are working with. For instance, a knocking door to door

¹²⁵ Dan Charles, "Fighting Climate Change, One Building At A Time," NPR 18 October 2020. Accessed 21 March 2021. <https://www.npr.org/2020/10/18/916586592/fighting-climate-change-one-building-at-a-time>

¹²⁶ Keith Kinch, Interview by Julia Marchetti. March 8, 2021.

¹²⁷ Ibid.

approach might work in one community while attending a church service would be the best method for outreach in another community.

Although tech startups are often considered white and elitist, BlocPower utilizes the power of tech and machine learning to democratize energy. Their software platform was developed intentionally so that the average building owner would be able to use it. As BlocPower founder Donnel Baird explains, "By combining emerging technologies, our software platform and our new innovative green financing solution, we can now provide sustainability upgrades to millions of buildings in underserved communities...BlocPower is creating new green jobs by turning buildings into Teslas, making them smarter, healthier, and more profitable by getting them off of fossil fuels."¹²⁸ Because every building poses unique challenges, the custom-built software formulates a prescription for each building. This quick and easy shortcut has allowed BlocPower to finance projects more easily, while pulling residents and landlords on board.¹²⁹ This app allows individuals to save money on their properties, while also serving as a tool for cities and governments to implement and expand particular policies and programs for housing quality. For example, if twenty buildings have issues with windows, a city could

¹²⁸ BlocPower, "BlocPower Raises \$63 Million Series A to Green Urban Buildings and Creates Innovative Financing Solution Alongside the Goldman Sachs Urban Investment Group," PRnewswire, 22 February 2021. <https://www.prnewswire.com/news-releases/blocpower-raises-63-million-series-a-to-green-urban-buildings-and-creates-innovative-financing-solution-alongside-the-goldman-sachs-urban-investment-group-301232145.html>

¹²⁹ Dan Charles, "Fighting Climate Change, One Building At A Time."

potentially interpret this data and shape it into a supporting program for building owners.¹³⁰

In addition, BlocPower tackles poverty and housing quality at its root through workforce development. Through BlocPower Community Corporation, the company trains local entry level workers in installing, maintaining, and operating clean energy measures. Through this workforce development training, along with local hiring throughout all steps of the process, BlocPower hopes to aggressively tackle retrofitting the homes of frontline communities while encouraging career development, entrepreneurship, and wealth building.¹³¹ Wealth not only builds through an increase in skilled workers, but through the increased value of retrofitted housing stock.

BlocPower is strategic in terms of the scale of the buildings within their scope and the scalability of the work across the country. Rather than work with class A homes, BlocPower primarily deals with midsize buildings, churches, small apartment building, and community centers.¹³² These types of buildings are often barred from energy efficiency by money and time. However, this company has retrofitted over 1000 buildings in low-income communities.¹³³ Although based in Brooklyn, BlocPower's scope has reached over 24 cities across the country and is growing. This is due to the fact the

¹³⁰ Keith Kinch, Interview with Julia Marchetti. March 8, 2021.

¹³¹ Ibid.

¹³² Dan Charles, "Fighting Climate Change, One Building At A Time," NPR 18 October 2020. Accessed 21 March 2021. <https://www.npr.org/2020/10/18/916586592/fighting-climate-change-one-building-at-a-time>

¹³³ Keith Kinch, Interview with Julia Marchetti. March 8, 2021.

team's strategy is not inherent to a specific place; the strategy shifts based on the place and buildings.

BlocPower is structured as a Public Benefit Corporation, partnering with an array of public agencies, utilities nonprofits, and property owners. Additionally, the company is backed by some of the most prestigious investors in the world such as The Goldman Sachs Urban Investment Group, Kapor Capital, Andreessen Horowitz, the American Family Insurance Institute for Corporate and Social Impact, AccelR8, Salesforce Ventures, and New York Ventures of the Empire State Development Corporation. This capital along with the cost savings of their algorithms allows the company to finance the entire investment upfront. With this setup, owners can pay back BlocPower's investment through their utility bills.¹³⁴

Healthy Rowhouse Project

Philadelphia's Healthy Rowhouse Project seeks to preserve the City's iconic housing stock, while improving health, preventing displacement, and creating jobs.¹³⁵ This program not only speaks to environmental concerns through the reuse of existing buildings, but practical financial and cultural concerns as well. By allowing residents to stay in their current homes, individuals can avoid steep relocation fees and additional debt and preserve a sense of continuity and place at the same time.¹³⁶ Co-founder of

¹³⁴ Dan Charles, "Fighting Climate Change, One Building At A Time,"

¹³⁵ Center for Architecture, "Healthy Rowhouse Project," *Healthy Rowhouse Project*, 2016. <https://healthyrowhouse.wpengine.com/wp-content/uploads/2016/07/HealthyRowhouse-Fact-Sheet07.2016-1.pdf>

¹³⁶ Ibid.

the Healthy Rowhouse Project Kiki Bolender, principal of Bolender Architects, started the Healthy Rowhouse Project with Karen Black of May 8 Consulting in 2014.¹³⁷ The project fuses together the preservation of tangible and intangible heritage, with affordability and environmental concerns. When asked to describe the nature of her work at the Healthy Rowhouse Project, Bolender answered “I will defend preservation as a type of sustainability. The whole healthy rowhouse project is about sustainability of affordable housing. The best way to do that was to keep people in their homes.”¹³⁸ While environmental sustainability per say was not an intended goal, this project still speaks to the conservation of embodied energy through prevention of demolition and environmental health concerns such as lead remediation. To Bolender, her work is “justice of a kind” but she would not classify it as environmental justice specifically.¹³⁹ The Healthy Rowhouse Project is designed to benefit individual residents as well as society as a whole. Too often, “best practices” or “policy innovation” target one or another of these scales, not both.

Bolender describes an instance in which a woman asked if The Healthy Rowhouse Project was “about the buildings or the people”. Quickly and somewhat caught off guard, Bolender responded, “It’s about the buildings.”¹⁴⁰ To this day, she regrets that comment and believes the woman was correct in challenging her. She went

¹³⁷ Kiki Bolender, Interview with Julia Marchetti. February 18, 2021.

¹³⁸ Ibid

¹³⁹ Ibid.

¹⁴⁰ Ibid.

on to say, “This notion of the importance of people in their neighborhood and that whole intangible web is so important.”¹⁴¹ Bolender applauds tactical preservation projects that are aimed at keeping these communities intact, not just their buildings.

The challenges faced by the Healthy Rowhouse Project are multiscale in nature. To begin, the Healthy Rowhouse Project exists in the first place because of the current housing landscape in Philadelphia. At this same time, poverty is the cause of the City’s low tax base and crumbling housing stock. Bolender notes the potential of Naturally Occurring Affordable Housing (NOAH) to meet the affordability gap in saying, “These houses need to exist. No developer will build these new.”¹⁴² According to Bolender, this program could never operate on a market basis, even a municipal market basis. Furthermore, she advocates for a holistic approach including support for homeowners, credit counseling, grants, and additional gap funding. Yet, the cost of the program has posed a major problem to scaling up to the level its founders hoped it would reach. As a city program, The Healthy Rowhouse Project must compete for funds. This lack of funds is tied back to the issue of poverty and the City’s low tax base. Despite the poverty problem in Philadelphia, Bolender notes that the “political will is not lacking” and argues that the problem of aging housing stock is not specific to Philadelphia.¹⁴³

¹⁴¹ Ibid.

¹⁴² Ibid.

¹⁴³ Ibid.

Elevate Energy

Based in Chicago, Illinois, Elevate Energy strives to address climate change by “focusing on people.”¹⁴⁴ Through the design and implementation of programs as well as national scale policy work, Elevate seeks to increase funding for utilities in lower to moderate income communities while making properties more energy efficient, and preserving affordability. A major part of Elevate Energy’s strategy is to build upon and strengthen what is existing in communities. Tapping into the existing housing stock, Elevate frequently supports Naturally Occurring Affordable Housing (NOAH) by working to connect landlords with financial incentives for utilities. For example, some landlords can have up to 50% of boiler upgrades covered. Through the preservation of affordable housing and entire communities, Elevate preserves intangible heritage. Similar to BlocPower, Elevate Energy relies on community organizing techniques and acknowledges the need to build trust. The community engagement team often employs a house party model, building trust in in church and school networks before approaching individual homeowners. Because many of these communities are regularly targeted for predatory lending, securing trust is of the utmost importance.¹⁴⁵

Jackie Montesdeoca, Associate Director of New Markets and Penn Preservation alum, provides insights on the disconnect between climate justice and the preservation world. Zooming out, advocates for historic preservation and climate justice both

¹⁴⁴ Jackie Montesdeoca, Interview with Julia Marchetti. March 12, 2021.

¹⁴⁵ Ibid.

struggle with limited organizational capacity and funding within their own spheres. For example, Montesdeoca frequently works with environmental justice groups in the midst of decades-long showdowns between the oil and gas industry.¹⁴⁶ Likewise, historic preservationists in rapidly developing cities often need to work in frenzied states, “saving” one building from demolition before quickly shifting their attention to the next under threat.¹⁴⁷ In both cases, groups are working with what they deem to be dire timelines and against irrevocable damages. Montesdeoca argues for perspective, flexibility, and the acknowledgement of agency.¹⁴⁸ A common thread between preservation and the green nonprofit world is the practice of telling communities what is best for them. Montesdeoca describes a common scenario in which energy efficiency professionals are constantly striving for perfection, missing the opportunity to cover more ground incrementally. Similarly, Montesdeoca notes similar patterns in the preservation field. She states,

Preservationists need to be flexible with the line they are holding and where they choose to commit. You can connect to an era or the people. Just be an ally for what they need. It’s hard to get away from preservationists telling people what is best for them.¹⁴⁹

Ultimately, these issues come down to priorities and compromise.

¹⁴⁶ Ibid.

¹⁴⁷ For example, in the City of Philadelphia only 2% of buildings are historically designated and protected from demolition. This statistic creates a situation in which historic preservationists are operating in a near constant state of crisis. Malcom Brunley, “Oscar Beisert’s Quest to Save Philadelphia History,” *PhillyMag*, August 13, 2016.

<https://www.phillymag.com/news/2016/08/13/oscar-beisert-philadelphia-preservation/>

¹⁴⁸ Jackie Montesdeoca, Interview with Julia Marchetti. March 12, 2021.

¹⁴⁹ Ibid.

In terms of challenges, Montesdeoca emphasizes the importance of larger interconnected issues and the systems within which Elevate Energy must operate. By depending on outside funding and the capitalist model, Elevate Energy is forced to use the tools and protocols of a classist and white supremacist system. In order to begin to untangle these complex issues, Elevate has changed its messaging and strategies in order to implement diversity and inclusion. Montesdeoca highlights the need to question who is not at the table and the mindset to “Include them not serve them.”¹⁵⁰

Findings

The need for implementing mass retrofitting projects is rooted in larger historic inequalities and negative housing policies. Due to high upfront costs, funding is a major challenge when it comes to retrofits. Retrofitting tends to be a two-part problem: meeting initial costs as well as addressing the systemic issues that lead to this disinvestment in the first place. Furthermore, the topic of retrofits raises the disconnect between preservation policy and values. Preservation policy seeks to preserve cultural and historical significance but is blind to the social values of preservation. All three illustrations address the preservation of both tangible and intangible heritage by giving individuals the tools to make their homes safe, healthy, and more affordable. Both BlocPower and Elevate Energy overcome the major challenge of historical governmental and institutional distrust by employing the stakeholder engagement techniques used by community organizers. As demonstrated by BlocPower, green workforce development is

¹⁵⁰ Ibid.

one way to address the need for retrofits while focusing on the wealth gap. The accumulation of wealth through green workforce development is so essential because it not only addresses the crux of most housing quality issues but eliminates the need for repeat retrofits in the decades to come, by eliminating poverty-related housing quality issues. While existing buildings can be retrofitted without addressing the plight of urban poverty, such attempts will not get to the root of the problem. This point raises the question of scope and responsibility for preservationists. This idea will continue to be discussed throughout the Adaptive Reuse section.

V. INDIGENOUS PRESERVATION AS A BRIDGING PRACTICE?

Introduction

Conceptualizations of landownership in the United States are tied to histories of physical and political settler-colonial violence, cultural assimilation, and genocide of Native Americans.¹⁵² This history is not only tied to indigenous rights today, but the intersecting issue of oil extraction. The extraction of oil from sacred lands is not only an affront to the environment, but to culture and religious freedom as well. As such, this topic clarifies the connection between culture and climate. Through the information-sharing processes of Traditional Ecological Knowledge, indigenous groups not only preserve their own cultures, but sacred land along with its finite resources. Historic preservation policy and law not only has the potential to be improved to better protect the land, but to realign its criteria towards collaboration and mending broken relationships with indigenous groups. The charismatic illustrations of NODAPL, Keystone XL, and Atlantic Sunrise protests serve as examples of tangible and intangible heritage preservation as well as models for coalition-building.

Preserving Intangible and Tangible Heritage Through Traditional Ecological Knowledge

Traditional Ecological Knowledge preserves both the tangible and intangible heritage of indigenous groups while contributing to resiliency. The idea of culture and worldviews shaping response to climate change is a connection that is often neglected

¹⁵² David Treuer, "Return the National Parks to the Tribes," *The Atlantic*, April 12, 2021. ; Amanda M. Marincic, 2018. "The National Historic Preservation Act: An Inadequate Attempt to Protect the Cultural and Religious Sites of Native Nations." *Iowa Law Review* 103 (4): 1777-1809.

by both policy makers and scholars of the environment.¹⁵³ Worldviews not only shape causal understandings of climate change, but relative acceptability of adaptation efforts based on the values and perceived feasibility associated with each adaptation strategy.¹⁵⁴ Traditional Ecological Knowledge, or TEK, is a dynamic and cumulative process of understanding the environment that stems from both personal and collective experiences and traditions. Able to change over time, TEK builds on the past while adjusting to shifting conditions. The ownership of Traditional ecological knowledge is complex, with the whole belonging to the collective, and certain pieces of knowledge only known by elders or other specific members of the group. Groups who pass along TEK distinguish themselves by a historical continuity of resource use and a deep connection with the land.¹⁵⁵ Traditional Ecological Knowledge is a powerful tool in combatting the detrimental effects of Climate Change. While Climate Change has negatively impacted indigenous people, Hosen et al acknowledge their agency and the ways in which these groups sustainably manage their customary land to ensure food

¹⁵³ Sonia Leonard, Meg Parsons, Knut Olawsky, and Frances Kofod. 2013. "The Role of Culture and Traditional Knowledge in Climate Change Adaptation: Insights from East Kimberley, Australia." *Global Environmental Change* 23 (3): 623-632; K.L. O'Brien, S. Eriksen, A. Schjolden, L. Nygaard, 2009. "What's in a Word? Conflicting Interpretations of Vulnerability in Climate Change Research". Center for International Climate and Environmental Research Working Paper 2004:04; W.Neil Adger, J. Barnett, H. Ellemor "Unique and Valued Places at Risk" in *Climate Change Science Policy*, eds. Stephen Schneider, Armin Rosencranz, Michael Mastrandrea, Washington, DC : Island Press, 2009.

¹⁵⁴ Colleen Jacob, Tim McDaniels, and Scott Hinch. 2010. "Indigenous Culture and Adaptation to Climate Change: Sockeye Salmon and the St'át'imc People." *Mitigation and Adaptation Strategies for Global Change* 15 (8): 859-876; K.L O'Brien, S. Eriksen, A. Schjolden, L. Nygaard, 2009. "What's in a word? Conflicting interpretations of vulnerability in climate change research."; W.Neil Adger, J. Barnett, H. Ellemor *Unique and valued places at risk*, 131-138.

¹⁵⁵ Ibid; Berkes, Fikret, Johan Colding, and Carl Folke. 2000. "Rediscovery of Traditional Ecological Knowledge as Adaptive Management." *Ecological Applications* 10 (5): 1251-1262.; Close

and resource security. TEK is passed down orally and intergenerationally through festivals and traditions. Through such actions, TEK functions as a type of climate change adaptation that promotes socio-ecological resilience and empowerment.¹⁵⁶ In this way, TEK not only functions as a tool for land preservation, but intangible heritage preservation. Although understandings of cultural heritage and historic preservation have often emphasized the physical fabric of the built environment, the field has recently shifted towards the inclusion of “oral traditions, performing arts, social practices, rituals, festive events, knowledge and practices concerning nature and the universe or the knowledge and skills to produce traditional crafts.”¹⁵⁷ In this definition, UNESCO not only illustrates the importance of the heritage manifestation itself, but the intergenerational transmission of skills and knowledge. In addition, this definition notes ways in which intangible heritage is simultaneously ever evolving and bound to particular social ecosystems. Finally, intangible heritage is constructed, maintained, recognized, and transmitted by and for particular groups.¹⁵⁸ This idea of agency is of particular import in the following discussion of how historic preservation law pertains to sacred indigenous sites.

¹⁵⁶ Hosen, Nadzirah, Hitoshi Nakamura, and Amran Hamzah. 2020. "Adaptation to Climate Change: Does Traditional Ecological Knowledge Hold the Key?" *Sustainability (Basel, Switzerland)* 12 (2): 676.

¹⁵⁷ UNESCO, “What is Intangible Cultural Heritage?,” UNESCO, 2021. Accessed 17 March 2021. <https://ich.unesco.org/en/what-is-intangible-heritage-00003>

¹⁵⁸ Nicholas Houde, 2007 “The Six Faces of Traditional Ecological Knowledge: Challenges and Opportunities for Canadian Co-Management Arrangements.” *Ecology and Society* 12 (2):34.

Historic Preservation Practice & Law: The Potential for Healing

In the wake of Urban Renewal, The National Historic Preservation Act, or NHPA, was signed into law by President Lyndon B. Johnson in October of 1966.¹⁵⁹ More comprehensive and aggressive in nature than the Antiquities Act of 1906 and the Historic Sites Act of 1935, The National Historic Preservation Act established the President's Advisory Council on Historic Preservation and the National Register of Historic Places, a list which includes both individual buildings and districts of cultural and architectural importance. This law compels states to review all federally funded projects through the Section 106 process and determine whether a potential project would negatively impact designated sites.¹⁶⁰ In 1990 Traditional Cultural Properties (TCPs) were included for eligibility for the National Register of Historic Places through Bulletin 38. TCPs are subject to the Section 106 process and are eligible for inclusion on the Nation Register through associations with "cultural practices, traditions, beliefs, lifeways, arts, crafts, or social institutions of a living community." These sites are rooted in a traditional community's history and are important in maintaining the continuing cultural identity of the community.¹⁶¹

¹⁵⁹ Elisabeth Walton Potter, 2016. "The National Historic Preservation Act at Fifty: How a Wide-Ranging Federal-State Partnership made its Mark in Oregon." *Oregon Historical Quarterly* 117 (3): 378-401.

¹⁶⁰ NPS, "National Historic Preservation Act," NPS, 2018. Accessed 25 March 2021.

<https://www.nps.gov/subjects/historicpreservation/national-historic-preservation-act.htm>

¹⁶¹ U.S Department of the Interior National Park Service American Indian Liaison Office, "National Register of Historic Places - Traditional Cultural Properties (TCPs) A Quick Guide for Preserving Native American Cultural Resources," *National Register of Historic Places-Traditional Cultural Properties*, 2021.

<https://www.nps.gov/history/tribes/documents/tcp.pdf>; U.S. Department of the Interior National Park Service Interagency Resources Division, "National Register Bulletin 38, Guidelines for Evaluating and Documenting Traditional Cultural Properties," National Register of Historic Places, revised 1998. <https://www.nps.gov/subjects/nationalregister/upload/NRB38-Compleeteweb.pdf>

In 1992, NHPA was amended to include the culturally and religiously significant sites of Native Americans. Today, the National Historic Preservation Act mandates that Federal agencies assess the degree to which historic sites, both above and below ground, may be adversely affected by federally funded projects or projects located on federal lands through the Section 106 process.¹⁶² According to Section 106, Federal agencies must consult the State Historic Preservation Office (SHPO), Tribal Historic Preservation Office (THPO), Indian Tribes (including Alaska Natives), and Native Hawaiian Organizations (NHO).¹⁶³

Historic preservation law has the potential to address social and environmental justice issues. Both Banks and Stanfill argue that NHPA can be used as a tool to address indigenous concerns about development and construction.¹⁶⁴ Along these lines, Scobie argues that historic preservation law can be used as a tool to combat the fossil fuel industry.¹⁶⁵ Both efforts to block the Keystone XL and the Dakota Access pipelines have cited NHPA as well as the National Environmental Protection Act, or NEPA.¹⁶⁶ Despite the potential for culture climate synergy, neither NHPA nor NEPA were able to prevent

¹⁶² Ibid.

¹⁶³ National Park Service American Indian Liaison Office, "National Historic Preservation Act, Section 106," U.S. Department of Interior, 2012. Accessed 25 March 2021.
<https://www.nps.gov/history/tribes/Documents/106.pdf>

¹⁶⁴ Kimball M Banks, 1999. "Indians, Reclamation, and Historic Preservation." *Plains Anthropologist* 44 (170): 5-12.

¹⁶⁵ Courtney Scobie, "Dakota Access Pipeline Fight Shines Light on Historic Preservation and Energy Projects." *Environmental & Energy Litigation*, Fall 2016, 15+.

¹⁶⁶ Harvard Environmental & Energy Law Program, "Dakota Access Pipeline," *EELP*, 2021.
<https://eelp.law.harvard.edu/2017/10/dakota-access-pipeline/> ; Lindsay Offutt, "Native Americans File Lawsuit Claiming Keystone XL Pipeline Violates Treaty Boundaries," *Jurist*, September 12, 2018.
<https://www.jurist.org/news/2018/09/native-americans-file-lawsuit-claiming-keystone-xl-pipeline-violates-treaty-boundaries/>

these projects from moving forward. Ultimately, President Biden's revoking of the permit was the reason for the successful blocking of the Keystone XL Pipeline. In the case of DAPL, the Standing Rock Sioux argued that this proposed project would devastate ancient burial sites and contaminate The Missouri River, their sole water source.¹⁶⁷ The tribe argued that the by constructing the pipeline, the Army Corps of Engineers, the Federal agency managing the project, did not fulfill Section 106 consultation requirements. After a temporary victory with the pipeline "Shutdown Order" due to lack of an Environmental Impact Statement or EIS, the DAPL still operates illegally today, while the environmental review process continues.¹⁶⁸ These two cases reveal the potential to strengthen the NHPA and build back trust with indigenous communities in the process.

Authors such as Marincic acknowledge that while this 1992 amendment was an advancement in the relationship between the federal government and Native Nations people, these changes were not nearly far-reaching and transformative enough.¹⁶⁹ Sangita Chari, program manager of the National Park Service (NPS) Office of Relevancy, Diversity, and Inclusion, provides insight into this disconnect in stating, "The inclusion of marginalized communities may be in the spirit of legislation, of laws, of acts. But that

¹⁶⁷ Amanda M. Marincic, 2018. "The National Historic Preservation Act: An Inadequate Attempt to Protect the Cultural and Religious Sites of Native Nations." *Iowa Law Review* 103 (4): 1777-1809.

¹⁶⁸ William Clark, "Illinois Indigenous and environmental groups call Biden administration to shut down Dakota Access Pipeline expansion," *The Daily Northwestern*, 3 March 2021. Accessed 29 March 2021. <https://dailynorthwestern.com/2021/03/02/city/illinois-indigenous-and-environmental-groups-call-biden-administration-to-shut-down-dakota-access-pipeline-expansion/>

¹⁶⁹ Amanda M. Marincic, 2018. "The National Historic Preservation Act: An Inadequate Attempt to Protect the Cultural and Religious Sites of Native Nations." *Iowa Law Review* 103 (4): 1777-1809.

does not mean it is reflected in the written documents or in the processes those documents produce.”¹⁷⁰ Limitations to NHPA include a gulf in cultural understanding between the Federal government and Native Nations people as well as an unfair deference to Federal agencies and lax consultation requirements. For instance, federal agencies meet Section 106 requirements by “considering” comments, rather than eliminating or adjusting elements of the plan deemed to cause adverse effects. Moreover, the NHPA process compels tribes to disclose the locations of sacred places in the name of historic preservation, an act antithetical to indigenous religious practices and Traditional Ecological Knowledge. As Marincic states, “This concern goes beyond preserving a site for its aesthetic, economic, or even historic value; it ties directly into preserving Native American's culture, history, and religion.” Marincic argues that these issues could be remedied by Congress amending the National Historic Preservation Act so that a project cannot progress if there are any adverse effects on a cultural or religious site, until all involved parties agree to move forward with it. Similarly, Kelly notes the colonialist undertones of current consultation practices and urges for collaboration in the public sector. Despite the required consultation of NHPA and NEPA, this condition “is based on a colonial process and has definitive legal and bureaucratic boundaries”¹⁷¹ According to Section 2 of the statute, the Federal government must work

¹⁷⁰ “Serving All Americans: The Case for Relevancy, Diversity, and Inclusion in the Nation Park Service: An interview with Sangita Chari,” in *Preservation and Social Inclusion*. ed. Erica Avrami. (NY:Columbia Books on Architecture and the City, 2020).

¹⁷¹ Kelly M. Britt, 2019. "Collaborating on the Federal Level: Moving Beyond Mandated Consultation in the Section 106 Process." *Archaeologies* 15 (3): 496-513.

in partnership with States, local governments, Indian tribes, and private organizations and individuals to...use measures, including financial and technical assistance, to foster conditions under which our modern society and our prehistoric and historic resources can exist in productive harmony and fulfill the social, economic, and other requirements of present and future generations (Section 2 (1)).¹⁷²

The language of this statute is relevant for two reasons. First, through the use of the word “partnership”, Section 2 alludes to collaboration between involved parties, rather than consultation. Second, this statute borrows from the language of sustainable development in referencing “present and future generations.” This connection between historic preservation and environmental conservation can and should be made more explicit. The modification of The National Historic Preservation Act to reflect true partnerships would not only aid in healing the historically strained relationship between indigenous people and the federal government but would help to bolster the critical relationship between culture, climate, and justice in the United States. These ideas will be explored more directly in the following section on indigenous coalitions and pipeline protests.

In/On the Ground: Protest & Coalition-forming as Community & Land Preservation

Indigenous protest of fossil fuel extraction is a powerful example of the amalgamation of climate justice with tangible and intangible heritage preservation. The prevention of oil extraction in such instances not only prevents sacred structures and

¹⁷² National Historic Preservation Act, 54 U.S.C. §§ 300101-307108 (1966).; NPS, “National Historic Preservation Act of 1966 as amended through 1992,” Local Law, 2021. <https://www.nps.gov/history/local-law/nhpa1966.htm>

geographies from desecration but protects water supplies. On a broad scale, the blocking of pipelines stops major emitters in their tracks, saving over a billion tons of greenhouse gas emissions in the process.¹⁷³ This estimation is particularly of note considering that indigenous peoples around the world disproportionately bear the burdens of environmental injustice and climate change.¹⁷⁴ Similarly, Arsenault notes the global scale of mounting industrial infrastructure expansion and its distinctly negative impact on indigenous groups.¹⁷⁵ Through the treadmill of production, business, labor, and government are incentivized to produce economic growth. Yet, in doing so, these three sectors promote waste additions and resource withdrawal. The impact of the treadmill of production harms entire communities, with certain vulnerable groups, such as indigenous peoples, paying the highest price because of institutionalized racism and class inequality.¹⁷⁶

Since colonization, indigenous peoples have been organizing and fighting for their rights “whether environmental, cultural, religious, or self-determination, against the United States government.”¹⁷⁷ Ternes et al notes an additional driver of recent civic

¹⁷³ According to the EPA, the proposed Keystone XL tar sands pipeline would produce 800,000 barrels, roughly 1.3 billion more tons of GHG’s over its 50 year lifespan, than crude oil. Bobby Magill, “EPA: Keystone XL to Emit 1 Billion Extra Tons of GHGs,” Climate Central, 2015. Accessed 29 March 2021. <https://www.climatecentral.org/news/epa-keystone-xl-to-emit-1-billion-extra-tons-of-ghgs-18631>

¹⁷⁴ Leah Temper, 2019. “Blocking Pipelines, Unsettling Environmental Justice: From Rights of Nature to Responsibility to Territory.” *Local Environment* 24 (2): 94-112.

¹⁷⁵ Arsenault, R. , *et al.*, 2019. Including Indigenous Knowledge Systems in Environmental Assessments: Restructuring the Process. *Global Environmental Politics* , 19 (3), 120–132. doi:10.1162/glep_a_00519.

¹⁷⁶ Gregory Hooks and Chad L. Smith. 2004. “The Treadmill of Destruction: National Sacrifice Areas and Native Americans.” *American Sociological Review* 69 (4): 558–75.

¹⁷⁷ Johnson, Hayley. 2017. “NoDAPL: Social Media, Empowerment, and Civic Participation at Standing Rock.” *Library Trends* 66 (2): 155-175.

demonstrations, arguing that neoliberalism, deregulation, and the privatization of social institutions has “hollowed out the state” and spurred emerging forms of civil society and broad-based mobilizations against detrimental energy projects.¹⁷⁸ The three following charismatic examples of the indigenous protest of fossil fuel extraction sites illustrate acts of tangible and intangible heritage preservation. Scobie and Marincic analyze the potency of preservation law as a tool for promoting climate justice and indigenous rights.¹⁷⁹ However, the authors do not frame indigenous pipeline protest as a form of community preservation in itself. NODAPL, Keystone XL, and Atlantic Sunrise pipeline protests sought to preserve both tangible and intangible heritage through organizing tactics and coalition-building.

The forming of networks is an essential strategy of indigenous engagement with industry, the state, and NGOs.¹⁸⁰ Although indigenous rights movements are often rooted in local issues, these movements often become worldwide networks, garnering the attention of global governance institutions such as the United Nations.¹⁸¹ In the case

¹⁷⁸ Ternes, Brock, James Ordner, and David Heath Cooper. 2020. "Grassroots Resistance to Energy Project Encroachment: Analyzing Environmental Mobilization Against the Keystone XL Pipeline." *Journal of Civil Society* 16 (1): 44-60. ; J. McCarthy, J., & Prudham, S.2004. "Neoliberal Nature and the Nature of Neoliberalism." *Geoforum; Journal of Physical, Human, and Regional Geosciences*, 35(3), 275–283.

¹⁷⁹ Amanda M. Marincic, 2018. "The National Historic Preservation Act: An Inadequate Attempt to Protect the Cultural and Religious Sites of Native Nations." *Iowa Law Review* 103 (4): 1777-1809.; Courtney Scobie, "Dakota Access Pipeline Fight Shines Light on Historic Preservation and Energy Projects." *Environmental & Energy Litigation*, Fall 2016, 15+.

¹⁸⁰ Maria Tsyachnyouk, L. S. Horowitz, Varvara V. Korkina, and Aney N. Petrov. 2020. "Indigenous-Led Grassroots Engagements with Oil Pipelines in the U.S. and Russia: The NoDAPL and Komi Movements." *Environmental Politics*: 1-23.

¹⁸¹ Christopher Rootes, 2013. "From Local Conflict to National Issue: When and How Environmental Campaigns Succeed in Transcending the Local." *Environmental Politics* , 22 (1), 95–114. ; Margaret E. Keck and Kathryn Sikkink, *Activists beyond borders: advocacy networks in international politics*. (Ithaca: Cornell University Press, 2014).; Gabe Ignatow, 2008. "Transnational Environmentalism at Europe's Boundaries:

of the Standing Rock Sioux, organizers were able to amplify their agenda with NODAPL and reach other places and issues with their strategic alliances. Steinman states,

With grassroots participation by members of other American Indian tribal nations, formal encouragement by many tribal governments, support from Indigenous people from elsewhere in the Americas and allies of all kinds from American society, the historic effort was the most broad-base grassroots social movement campaign that featured or centrally included American Indians.¹⁸²

Furthermore, social ties and bridge-builders across networks and movements are an essential part of coalition building.¹⁸³ For example, in the case of the Atlantic Sunrise pipeline protests in Lancaster PA, activists involved ranged from Catholic nuns, to those from the Northern Arawak Tribal Nation of Pennsylvania, to non-indigenous activists from across the country.¹⁸⁴ Both the Northern Arawok Tribal Nation of Pennsylvania and the Adorers of the Blood of Christ, framed their resistance as spiritual duties to protect the land.¹⁸⁵ Protests against the Keystone XL Pipeline demonstrate a similarly broad

Identity Movements in Lithuania and Turkey. *Current Sociology*, 56(6), 845–864. ; Simone Pierk and Maria Tysiachniouk, 2016. "Structures of Mobilization and Resistance: Confronting the Oil and Gas Industries in Russia." *The Extractive Industries and Society*, 3 (4), 997–1009.

¹⁸² Erich Steinman, 2019. "Why was Standing Rock and the #NoDAPL Campaign so Historic? Factors Affecting American Indian Participation in Social Movement Collaborations and Coalitions." *Ethnic and Racial Studies* 42 (7): 1070-1090.

¹⁸³ Fred Rose, *Coalitions Across the Class Divide: Lessons from the Labor, Peace, and Environmental Movements*. (Ithaca, NY: Cornell University Press, 2000); Corrigall-Brown, Catherine, and David Meyer. 2010. "The Prehistory of a Coalition: The Role of Social Ties in Win Without War." In *Strategic Alliances: Coalition Building and Social Movements*, ed. Nella Van Dyke and Holly McCammon, (Minneapolis, MN: University of Minnesota Press, 3–21. ; Erich Steinman, 2019. "Why was Standing Rock and the #NoDAPL Campaign so Historic? Factors Affecting American Indian Participation in Social Movement Collaborations and Coalitions." *Ethnic and Racial Studies* 42 (7): 1070-1090.

¹⁸⁴ Eliza Grizwold, "The Renegade Nuns Who Took on the Pipeline," *The New Yorker*, April 12, 2019.

¹⁸⁵ The nuns directly addressed climate justice in stating, "Pray for those most affected by climate change—those living in poverty." They wrote, "Abstain from a spirit of defeatism that despairs of fighting climate change." Echoing concerns of the Architecture Lobby Green New Deal working group, the sisters noted the importance of fair-trade labor practices. Grizwold, "The Renegade Nuns Who Took on the Pipeline."

coalition of farmers and ranchers from Holt County, Nebraska, and the Rosebud Lakota (Sioux) Tribe¹⁸⁶ Known as the “Cowboy Indian Alliance,” this partnership between two communities who were previously disconnected from and distrustful of the other, was forged to block the pipeline and protect their resources. For those from Holt County, what began as an issue over property rights quickly turned into a matter of protecting the Ogallala aquifer and biodiversity of the Sandhills.¹⁸⁷ Ternes et al use the example of Keystone XL pipeline protests to argue that grassroots groups fighting against the oil and gas industry serve as models for “inclusive community engagement based on resource protection.”¹⁸⁸ Steinman argues that intersecting ideologies, frameworks, and preexisting social ties between indigenous and environmental movements helps to fuel strong coalitional mobilization.¹⁸⁹ This point raises the question of what ideologies and frameworks historic preservationists uphold. Who are preservationists’ natural allies and is the field currently partnering with them? The example of the “Cowboy Indian Alliance” illustrates how a common goal can bring together groups with differing ideologies and frameworks. All three protests serve as potent examples of broad-based coalition building in the interest of culture and climate.

¹⁸⁶ Kate Schneider, 2018. “Invited Essay we, the Heartland: Land(Scapes), Community, and the Keystone XL Pipeline.” *Great Plains Research* 28 (1): 1-13.

¹⁸⁷ Ibid.

¹⁸⁸ Brock Ternes, James Ordner, and David Heath Cooper. 2020. “Grassroots Resistance to Energy Project Encroachment: Analyzing Environmental Mobilization Against the Keystone XL Pipeline.” *Journal of Civil Society* 16 (1): 44-60.

¹⁸⁹ Erich Steinman, 2019. “Why was Standing Rock and the #NoDAPL Campaign so Historic? Factors Affecting American Indian Participation in Social Movement Collaborations and Coalitions.” *Ethnic and Racial Studies* 42 (7): 1070-1090.

Getting to the root of Britt and Marincic's critiques of government processes, Barret positions NODAPL as a "harbinger of a decolonial future" and argues that this protest presages a potential restructuring of social and political order in the United States.¹⁹⁰ In confronting DAPL, this protest confronted police brutality, white supremacy, and predatory banking in the process.¹⁹¹ Yet, decarbonizing the economy is not a black and white matter. After analyzing 649 cases of place-based energy resistance movements, Temper et al conclude that both fossil fuel and low-carbon energy projects have the potential to negatively impact marginalized rural communities and indigenous people.¹⁹² Thus, they discourage the conflation of the decarbonization of the economy with social inclusion and decolonization. While decarbonization will be necessary to achieve climate justice, localization, participation, anti-racism, climate justice-focused governance, and indigenous leadership will be essential in achieving a green and just America.¹⁹³ The just transition to renewables will require a mass movement of community members fighting for change at the local, national, and global levels.¹⁹⁴ According to Aronoff et al, "Tackling the climate crisis will require action from

¹⁹⁰ Dawson Barrett, 2020. "STANDING WITH STANDING ROCK: Voices from the #NoDAPL Movement." *American Studies (Lawrence)* 59 (2): 59-60.

¹⁹¹ Ibid.

¹⁹² Leah Temper, Sofia Avila, Daniela Del Bene, Jennifer Gobby, Nicolas Kosoy, Philippe Le Billon, Joan Martinez-Alier, et al. 2020. "Movements Shaping Climate Futures: A Systematic Mapping of Protests Against Fossil Fuel and Low-Carbon Energy Projects." *Environmental Research Letters* 15 (12).

¹⁹³ Leah Temper, Sofia Avila, Daniela Del Bene, Jennifer Gobby, Nicolas Kosoy, Philippe Le Billon, Joan Martinez-Alier, et al. 2020. "Movements Shaping Climate Futures: A Systematic Mapping of Protests Against Fossil Fuel and Low-Carbon Energy Projects." *Environmental Research Letters* 15 (12).

¹⁹⁴ Naomi Klein, *On Fire: The (Burning) Case for a Green New Deal*, (New York, Simon and Schuster, 2019).

unions, social movements, Indigenous peoples, racial justice groups, and others to take back power from the elites who've presided over the climate emergency."¹⁹⁵

Findings

Indigenous rights is one of the rare examples of explicit climate justice work that is positioned as cultural heritage preservation. Through the intergenerational transference of Traditional Ecological Knowledge, indigenous groups preserve both intangible heritage and the land. Historic preservation law has the potential to be used as a tool to address indigenous concerns about development and construction, particularly environmental and climate justice issues. As Barcalow argues, "These lessons learned have implications for political ecology discourse on how sociopolitical actors influence land management decisions in contexts of power."¹⁹⁶ Formal acts of preservation through policy and law, should be bolstered to directly address climate justice issues and require processes of true collaboration. Such changes will entail significant reflection on practice and intentional decolonization efforts. In order to build trust, heal the land, and these relationships, federal efforts must not be perfunctory moving forward. The charismatic illustrations of the NODAPL, Keystone XL, and Atlantic Sunrise pipeline protests demonstrate the intersection of climate justice with intangible

¹⁹⁵ Aronoff et al, 7.

¹⁹⁶ Kate Monti Barcalow and Jeremy Spoon. 2018. "Traditional Cultural Properties Or Places, Consultation, and the Restoration of Native American Relationships with Aboriginal Lands in the Western United States." *Human Organization* 77 (4): 291-301.

and tangible heritage preservation. Moreover, each of these illustrations serve as models for multiracial multiclass coalition building.

VI. ARCHITECTURAL REINCARNATION?: A PROCESS-BASED LOOK AT ADAPTIVE REUSE

Introduction

While the broad concept of adaptive reuse has existed across cultures and geographies since the existence of the built environment itself, the intentional adaptation of preexisting buildings for new uses and the careful consideration of its many different effects, is an inherently modern phenomenon.¹⁹⁷ Douglas defines adaptive reuse as “a significant change to an existing building function when the former function has become obsolete.”¹⁹⁸ Brooker and Stone, on the other hand, conflate adaptive reuse with retrofits, remodeling, conversion, and rehabilitation.¹⁹⁹ Liliane Wong, however, notes a connotational difference in adaptive reuse from rehab and remodeling by distinguishing it as a poetic act with the example of Carlo Scarpa.²⁰⁰ Similar to Douglas, Pleveots and Sowińska-Heim highlight the transformational nature of

¹⁹⁷ Liliane Wong, *Adaptive Reuse: Extending the Lives of Buildings* (Basel: Birkhäuser, 2017); Sahand Lotfi and Mahsa Sholeh, 2020. "Adaptive Reuse Gradient from 'Autocratic' to 'Creative': A Context-Based Anthology of Adaptive Reuse Experience in Tehran (1970-2020)." *International Journal of Architectural Heritage*: 1-23.

¹⁹⁸ John Douglas, *Building Adaptation*, 2nd ed., (Elsevier Ltd.: UK, 2006).; Sheila Conejos, Craig Langston, & JimSmith, 2012. Designing for Future Building: Adaptive Reuse as a Strategy for Carbon Neutral Cities. *The International Journal of Climate Change Impacts and Responses*. 3(2):33-52.

¹⁹⁹ Graeme Brooker and Sally Stone, *Re-readings. Interior Architecture and the Design Principles of Remodeling Existing buildings*. (RIBA Enterprises: London, 2004).

²⁰⁰ Liliane Wong, *Adaptive Reuse: Extending the Lives of Buildings* (Basel: Birkhäuser, 2017).

adaptive reuse projects.²⁰¹ Along these lines, Lofti & Sholah note that new uses of buildings tend to be radically different from their original functions.²⁰²

Since the 1970s, adaptive reuse has been discussed within the context of environmental concerns.²⁰³ Although many authors argue that adaptive reuse can aid in reaching sustainable development goals, adaptive reuse projects often fail to balance the pillars of sustainability and over-emphasize the technical aspects of the environmental and economic pillars.²⁰⁴ Despite a significant portion of the literature engaging with sustainable development, adaptive reuse is never discussed within the context of climate justice. Ultimately, this siloed analysis of adaptive reuse prevents meaningful measurement of success. Adaptive reuse projects do not happen within a vacuum. As such, their evaluation must encompass outcomes both tangible and intangible as well as the labor, political, and economic processes that inform them. Rather than understand adaptive reuse as a project made up of disparate components, this author argues for a process-based approach to evaluation that takes into account a combination technical and intangible considerations, along with past harms and current vulnerabilities.

²⁰¹ Bie Plevoets and Julia Sowińska-Heim, 2018. "Community Initiatives as a Catalyst for Regeneration of Heritage Dites: Vernacular Transformation and its Influence on the Formal Adaptive Reuse Practice." *Cities* 78:128–39. doi:10.1016/j.cities.2018.02.007.

²⁰² Sahand Lotfi and Mahsa Sholeh, 2020. "Adaptive Reuse Gradient from 'Autocratic' to 'Creative': A Context-Based Anthology of Adaptive Reuse Experience in Tehran (1970-2020)." *International Journal of Architectural Heritage*: 1-23.

²⁰³ Sophie Francesca Cantell, 2005. "The Adaptive Reuse of Historic Industrial Buildings: Regulation Barriers, Best Practices and Case Studies". Blacksburg: Virginia Polytechnic Institute and State University

²⁰⁴ Rayman Mohamed, Robin Boyle, Allan Yilun Yang, and Joseph Tangari. 2017. "Adaptive Reuse: A Review and Analysis of its Relationship to the 3 Es of Sustainability." *Facilities (Bradford, West Yorkshire, England)* 35 (3/4): 138-154.

Tangible and Intangible Preservation: Unpacking the Pillars of Sustainability

Adaptive reuse is a complex concept that is interpreted in many different ways and deployed to reach several different ends, such as economic development and environmental sustainability. Authors such as Conejos, Langston, & Smith, Elefante & Young, Holland, and Fry argue that adaptive reuse can aid in reaching sustainable development goals by addressing the four pillars of sustainability: social, environmental, and economic.²⁰⁵ Other scholars such as, Tam and Hao, note that adaptive reuse is rooted in economic revitalization and the extension of a building's lifecycle.²⁰⁶ While Kee and Chau advocate for the lens of sustainable development, the authors argue that this practice is lagging in conservation.²⁰⁷ However, as Mohamed et al point out, there has yet to be a critical examination of the way in which adaptive reuse incorporates all three pillars. As the authors argue, adaptive reuse is successful in terms of the environmental and economic benefits of sustainability, but "there are minimal attempts to address concerns along the equity–environment and equity–economic development

²⁰⁵Sheila Conejos, Craig Langston,& Jim Smith, 2012. "Designing for Future Building: Adaptive Reuse as a Strategy for Carbon Neutral Cities". *The International Journal of Climate Change Impacts and Responses*. 3(2):33-52.; Robert A. Young and Carl Elefante. 2012. *Stewardship of the Built Environment: Sustainability, Preservation, and Reuse*. Washington, DC: Island Press. doi:10.5822/978-1-61091-236-5.; Mark Holland, 2012. "The Need for Sustainability in City Planning and Preservation. *APT Bulletin*, 40(1), 3–6. ; Patrice Frey, 2007, "Making the Case: Historic preservation as sustainable development (Draft White Paper, Sustainable Preservation Retreat). Washington, DC: National Trust for Historic Preservation.

²⁰⁶Vivian Tam and Jane Hao, 2018. Adaptive Reuse in Sustainable Development. *International Journal of Construction Management* 1–13. doi:10.1080/15623599.2018.1459154.

²⁰⁷Tris Kee and KwongWing Chau, 2020. "Adaptive Reuse of Heritage Architecture and its External Effects on Sustainable Built environment—Hedonic Pricing Model and Case Studies in Hong Kong." *Sustainable Development (Bradford, West Yorkshire, England)*28 (6): 1597-1608.

edges of the triangle.”²⁰⁸ For example, the National Trust’s seminal report, “The Greenest Building: Quantifying the Environmental Value of Building Reuse,” focuses on energy consumption and lowering levels of carbon emissions in the building sector.²⁰⁹ The report also notes the issues of climate change’s impact on human health and the potential creation of jobs through adaptive reuse and retrofits. Yet, the report fails to connect these ideas together through the lens of equity and analyses the social, environmental, and economic pillars as if they are separate from each other, instead of deeply interconnected. Along these same lines, Conejos, Langston, & Smith advocate for evaluation of adaptive reuse projects based on structural integrity, material durability, workmanship, maintainability, design complexity, prevailing climate, and foundation.²¹⁰ They fail to bring in an evaluation of how the intangible fabric will be affected. As addressed in the literature review, definitions of sustainability are notoriously difficult to pin down and the pillars are rarely balanced.²¹¹ Furthermore, the social pillar is the least easily definable sphere.²¹² The lack of clarity surrounding sustainability provides

²⁰⁸ Rayman Mohamed, Robin Boyle, Allan Yilun Yang, and Joseph Tangari. 2017. "Adaptive Reuse: A Review and Analysis of its Relationship to the 3 Es of Sustainability." *Facilities (Bradford, West Yorkshire, England)* 35 (3/4): 138-154.

²⁰⁹ National Trust for Historic Preservation, Preservation Green Lab, The Greenest Building: Quantifying the Environmental Value of Building Reuse (Washington, DC: National Trust for Historic Preservation, 2011).

²¹⁰ Sheila Conejos, Craig Langston, & Jim Smith, 2012. “Designing for Future Building: Adaptive Reuse as a Strategy for Carbon Neutral Cities”. The International Journal of Climate Change Impacts and Responses. 3(2):33-52.

²¹¹ Heather M. Farley and Zachary A Smith. *Sustainability: If It's Everything, Is it Nothing?*. Second edition, 150.; Klaus Bosselmann, *The Principle of Sustainability: Transforming Law and Governance* (Ashgate Publishing 2008), 11-12.

²¹² Erica Avrami, 2016. "Making Historic Preservation Sustainable." *Journal of the American Planning Association* 82 (2): 104-112.

insights into its uneven application. An additional point of contention with sustainable development is the absence of a cultural pillar. Erica Avrami advocates for a cultural pillar being added to definitions of sustainability. Likewise, Auclair & Fairclough advocate for people-centered approaches to heritage buildings and cultural sustainability. The authors believe that cultural sustainability is a key part of sustainable development and that heritage preservation must be leveraged to achieve the goals of sustainable development.²¹³

As Wong aptly notes, the reuse of a building does not necessitate the “continuation of cultural phenomenon.”²¹⁴ Often, schools and churches are transformed into luxury apartments. Former prisons are rebranded as luxury hotels. On this topic, Wong raises the question of measuring success.²¹⁵ Quite curiously, most scholars writing about this mismatch between tangible and intangible heritage preservation do not tend to be preservationists, but sociologists, geographers, and urban planners. For instance, Nicholas Lynch describes the way in which former churches are “appropriated and transformed into private domestic spaces of commodified religion and heritage.” While retaining the ‘unique’ architectural character of churches, these projects often spur “a process that increasingly remakes the city as a place of capital reinvestment, middle-

²¹³ Elizabeth Auclair & Graham Fairclough, “Living Between Past and Future: An Introduction to Heritage and Cultural Sustainability” in *Theory and Practice in Heritage and Sustainability*. eds. Elizabeth Auclair & Graham Fairclough. New York, NY: Routledge, 2015.

²¹⁴ Wong, 130.

²¹⁵ Ibid.

class colonization and socio-secular upgrading.”²¹⁶ Similarly, Claire Poitras notes the tension between the preservation of industrial heritage and affordability through the example of a waterfront sugar factory converted into luxury apartments. This same project drove protests from community groups concerned with gentrification and displacement while being praised for its “architectural value” and winning awards for historic preservation.²¹⁷ Prior to today’s understandings of adaptive reuse, modification of preexisting structures signified regime shifts. For example, the Parthenon has been adapted over the years, transitioning from a Greek temple, to a treasury, to church, to a mosque, and finally to a tourist attraction.²¹⁸ Although changes in building uses and inhabitants are inevitable, adaptive reuse still signals power exchanges. According to Rogers et al, “Preservation contains significant power dynamics, shaping meanings behind collective identity and sense of place.”²¹⁹ As Poitras points out, adaptive reuse and gentrification are often tied together through histories of disinvestment.²²⁰ Yet this

²¹⁶Nicholas Lynch, 2016. "Domesticating the Church: The Reuse of Urban Churches as Loft Living in the Post-Secular City." *Social & Cultural Geography* 17 (7): 849-870.

²¹⁷ Claire Poitras, “Designing Sustainability for Whom? Recent Housing Developments in Southwest Montréal.” *Local environment*. 14, no. 6 (2009): 515–528.

²¹⁸ Rayman Mohamed, Robin Boyle, Allan Yilun Yang, and Joseph Tangari. 2017. "Adaptive Reuse: A Review and Analysis of its Relationship to the 3 Es of Sustainability." *Facilities (Bradford, West Yorkshire, England)* 35 (3/4): 138-154.

²¹⁹ Diane M. Rodgers, Lucy Sosa, and Jessica Petersen. 2018. "Historic Preservation: A Multilayered Inclusive Approach Honoring Immigrants Past and Present." *Humanity & Society* 42 (2): 193-220. ; Paul C. Adams, Steven Hoelscher, Karen E. Till eds. *Textures of Place: Exploring Humanist Geographies*. (Minneapolis: University of Minnesota Press, 2001).; G.J. Ashworth, Brian Graham, J.E. Tunbridge, *Pluralising Pasts: Heritage, Identity and Place in Multicultural Societies*. (London, UK: Pluto Press, 2007.); Diane Barthel, *Historic Preservation: Collective Memory and Historical Identity*. (New Brunswick, NJ: Rutgers, 1996.); Dolores Hayden, *The Power of Place: Urban Landscapes as Public History*. (Cambridge, MA: MIT Press, 1995.); Laurajane Smith, *Uses of Heritage*. (London: Routledge, 2006).

²²⁰ Claire Poitras, “Designing Sustainability for Whom? Recent Housing Developments in Southwest Montréal.” *Local environment*. 14, no. 6 (2009): 515–528.

power dynamic has the potential to be twofold. Lauren Hood positions preservation as a type of reparation.²²¹ Brent Leggs, executive director of the African American Cultural Heritage Action Fund, argues that preservation and adaptive reuse have the potential to serve as a new sustainable model for community building and culture-based business development.²²² Through such repositioning, this disconnect between community and intangible heritage preservation and the physical preservation of fabric can be rectified. As Evans argues, culture is an integral aspect of the built environment and its “physical regeneration.”²²³ Lofti & Sholah acknowledge that adaptive reuse can address both tangible and intangible cultural continuity.²²⁴ Through the preservation of tangible and intangible heritage, adaptive reuse can help cities balance the concerns of economic and population growth.²²⁵

Despite these critiques, adaptive reuse does have the potential to reverse the typical consumption logic and carbon intensive nature of the building sector. Thaisa Way notes the politically radical nature of adaptively reusing formerly toxic sites for public

²²¹ Lauren Hood, “What’s Next in Urban Development?” Meyerson Hall, September 16, 2019.

²²² Brent Leggs, Jenna Dublin, and Michael Powe, “Telling the Full American Story: Lessons from the African American Cultural Heritage Action Fund,” in *Preservation and Social Inclusion*. ed. Erica Avrami. (NY:Columbia Books on Architecture and the City, 2020). ;Carlo Urmy, “Perspectives on Preservation,” *Loeb Fellowship*, 2016. <https://loebfellowship.gsd.harvard.edu/stories/perspectives-on-preservation/>

²²³ Evans. Graeme. & Shaw, Phyllida. 2004 , “The Contribution of Culture to Regeneration in the UK: A Review of Evidence” . London: Department for Culture Media and Sport.

²²⁴ Sahand Lotfi and Mahsa Sholeh. 2020. "Adaptive Reuse Gradient from ‘Autocratic’ to ‘Creative’: A Context-Based Anthology of Adaptive Reuse Experience in Tehran (1970-2020)." *International Journal of Architectural Heritage*: 1-23.

²²⁵ William Riggs and Forrest Chamberlain, 2018. "The TOD and Smart Growth Implications of the LA Adaptive Reuse Ordinance." *Sustainable Cities and Society* 38: 594-606.

use.²²⁶ Similarly, Daniel Bluestone argues that preserving the history of contaminated sites and landscapes while remediating them facilitates critical reflection on past and current practices of extraction and consumption.²²⁷ Thus, the adaptive reuse of former brownfield sites, such as Austin's Seaholm Power Plant, along with its conservation of embodied energy, represents a powerful shift away from environmental harm towards resilience.²²⁸ For this reason, adaptive reuse has been redefined through climate change and is important for structures with and without heritage value today.²²⁹ This idea is supported by the many environmental benefits of reuse such as reducing construction waste and lowering carbon emissions.²³⁰ However, this point raises the issue of scope. To what extent are preservationists responsible for leading the charge for mass building recycling and reuse? What buildings should be "saved"? And what does "saving" mean exactly? Boccardi provides context by noting the way in which conservation antagonizes modernity and must exist in opposition to something. The author describes the use of charged language such as "safeguarding", "protection", "bufferzone", "integrity", and "danger." Boccardi also problematizes the binary tendencies of heritage and uses of

²²⁶ Thaïsa Way, 2013. "Landscapes of Industrial Excess: A Thick Sections Approach to Gas Works Park." *Journal of Landscape Architecture (Wageningen, Netherlands)* 8 (1): 28-39.

²²⁷ Daniel Bluestone, *Toxic Sites as Places of Culture and Memory. Reclaiming the Land*, 2007.

²²⁸ EcoDistricts, "Neighborhood-Scale Sustainable Development Case Study," *Neighborhood Overview*, 2019. <https://ecodistricts.org/district-profile/seaholm-ecodistrict/>

²²⁹ Liliane Wong, *Adaptive Reuse: Extending the Lives of Buildings* (Basel: Birkhäuser, 2017),

²³⁰ Eleni Iacovidou and Phil Purnell. 2016. "Mining the Physical Infrastructure: Opportunities, Barriers and Interventions in Promoting Structural Components Reuse." *The Science of the Total Environment* 557-558: 791-807.; Tris Kee and KwongWing Chau. 2020. "Adaptive Reuse of Heritage Architecture and its External Effects on Sustainable Built environment—Hedonic Pricing Model and Case Studies in Hong Kong." *Sustainable Development (Bradford, West Yorkshire, England)* 28 (6): 1597-1608.

language that imply heritage as a static entity, rather than a dynamic process.²³¹

Essentially, these heritage boundaries limit the issues that are within the purview of heritage professionals, such as larger environmental and land use concerns. In this way, definitions of historic preservation produce very real impacts on the work professionals can and cannot do.²³²

A Holistic Approach to Adaptive Reuse: Design, Process, Labor, & Politics

According to Plevoets and Van Cleempoel, scholars typically address adaptive reuse typologically, technically, and in terms of architectural strategies.²³³ Although most scholars acknowledge the importance of an interdisciplinary approach to adaptive reuse, studies are typically drawn from one specific perspective.²³⁴ Likewise, Kee and Chau argue that understandings of adaptive reuse tend to be Eurocentric and limited.²³⁵ These shortcomings lead to a lack of meaningful success measurement and process-oriented analysis. A typical albeit reductive understanding of the preservationist's role is that the work is complete once a 'historic' building is 'saved' from threat of demolition by way of designation, easement, or adaptive reuse through Historic Rehabilitation Tax Credit. However, this simplistic understanding of process erases the physical and

²³¹ Max Page complicates notions of such language by arguing that Jane Jacobs unintentionally made lower Manhattan "safe for \$3.5 million townhouses.", 77.

²³² Giovanni Boccardi, 2015. "From Mitigation to Adaptation: A New Heritage Paradigm for the Anthropocene. *Perceptions of Sustainability in Heritage Studies*. ed. Marie-Theres Albert. Boston, MA: De Gruyter.

²³³ Bie Plevoets and Koenraad Van Cleempoel, "Adaptive Reuse as a Strategy Towards Conservation of Cultural Heritage: a Literature Review," WIT Transactions on The Built Environment, Vol. 118 (2011): 156.

²³⁴ Ibid.

²³⁵ Tris Kee and KwongWing Chau. 2020. "Adaptive Reuse of Heritage Architecture and its External Effects on Sustainable Built environment—Hedonic Pricing Model and Case Studies in Hong Kong." *Sustainable Development (Bradford, West Yorkshire, England)* 28 (6): 1597-1608.

intellectual labor of designers and construction workers necessary to preserve a structure, the environmental impact of building materials needed to reuse a structure, and the cultural impact of future use. Patrice Frey makes a nuanced argument for the rehabilitation of historic buildings. While rehabilitation conserves embodied energy that would be lost during demolition, rehabilitation has the potential for its own negative environmental impacts. Thus, the author advocates for the use of environmental impact assessments and evaluation based on social, economic, and environmental factors.²³⁶ Similarly, the National Trust emphasizes the careful selection of materials used in reuse and design plans. In some instances, materials intensive reuse projects can end up eliminating the environmental benefits of adaptive reuse.²³⁷

While the design field may have the tendency to feign apoliticality, culture is both produced and reproduced by political, architectural, and planning interventions.²³⁸ Peggy Deamer, the founder of Architecture Lobby, notes the deeply interconnected nature of labor, design, construction, and politics. Deamer argues that the effects of architecture must be evaluated on a case-to-case basis. She states,

From the standpoint of architecture, the economy shows its effects in a number of ways. Money has implications for those who own the property, who develop the property, who design the building, who actually build the building, who experience the architecture visually,

²³⁶ Patrice Frey, 2008. *Building Reuse: Finding a Place on American Climate Policy Agendas*. Washington, DC: National Trust for Historic Preservation.

²³⁷ National Trust for Historic Preservation, Preservation Green Lab, *The Greenest Building: Quantifying the Environmental Value of Building Reuse* (Washington, DC: National Trust for Historic Preservation, 2011).

²³⁸ Daniel M. Abramson, Arindam Dutta, Timothy Hyde and Jonathan Massey, (Aggregate), *Governing by Design: Architecture, Economy, and Politics in the Twentieth Century*. (University of Pittsburgh Press, 2012.)

who occupy the building, and who control its dissemination through media.²³⁹

According to Max Page, “Preservation and real estate development have become inseparable. Little preservation work seems to take place outside the market, and the most important determinant of whether a building will be saved is whether there is a profit to be made.”²⁴⁰ Proponents of preservation as a form of economic development tend to buy into trickle-down economics and turn a blind eye to the very real issues of growing inequality and displacement.²⁴¹ Thus, the preservation field must recognize two concepts: adaptive reuse projects exist within a non-neutral capitalist system and individual buildings are a part of larger cultural ecosystem.

As this chain of thought indicates, buildings are not static entities, but rather, dynamic spaces that are constantly undergoing various social, political, economic, environmental, and design processes. Providing additional insights, Brooklyn’s Interboro Partners seeks to expand the timeframe of architecture as well as the role of the architect. The team believes it is their responsibility to consider all steps and stakeholders that make a project possible, including the contractors, policy makers, and planners. Furthermore, they advocate for a process-oriented design method and lament the way architecture texts typically photograph a building at its completion prior to interacting with its inhabitants. They believe that if architecture is viewed as an ongoing

²³⁹ Peggy Deamer. *Architecture and Capitalism : 1845 to the Present*. (New York :: Routledge, 2013.)

²⁴⁰ Page, 70.

²⁴¹ Ibid.

process, the architect has the agency to intervene before and after their traditional period of influence.²⁴² This notion gets to the root of the question, “What is the preservationist’s ‘period of influence’ and what exactly is within said purview of influence?” If the preservation field continues to position itself as an agent of positive environmental change, practitioners must seriously consider their role within the larger social problems of the time, such as anthropogenic climate change and mounting wealth inequality.

The Architecture Lobby’s Green New Deal Working Group sheds light on the larger implications of climate change for the field and how design professionals can organize around climate justice. The group’s strategy breaks down into four components: reforming practice, redefining resilience, reassessing technology, and re-empowering labor. In terms practice, architects must work to eliminate the financial and cultural barriers to entering the profession. Furthermore, architects must identify as workers, recognize the value of their labor, and organize with allied groups and across industries. In addition, design professionals should participate in civic processes to bridge the gap between communities and government agencies. TAL also advocates for designers to adopt a code of ethics supporting the social, economic, and environmental objectives of the Green New Deal. Moreover, designers must be aware of their positions, critical of market-driven development, and urge public infrastructure and just

²⁴² Tobias Armbrorst, Daniel D'Oca, and Georgeen Theodore. 2016. "Architecture Takes Time." *Architectural Design* 86 (1): 108-113.

land-use practices. The Architecture Lobby encourages designers to develop models for large-scale adaptive reuse and retrofitting programs that shift the burden away from renters and owners. In addition, TAL encourages designers and planners to learn from history and past mistakes so that future infrastructure and housing projects do not result in community harm. Additionally, TAL employs a process-oriented approach by recognizing that technology is not neutral. Because climate change is a global crisis, technological advancements should be open source and accessible. Technology should not be used for climate change mitigation in one location while exacerbating labor exploitation and ecological issues in another. Quite simply, “There can be no sustainable world without sustainable labor practices.”²⁴³

Findings

Adaptive reuse is fueled by many logics. For some, the motivation is profit, while for others, the impetus is cultural or aesthetic. This author would like to highlight the potential of adaptive reuse as a pro-labor, anti-waste, climate justice-contributing process. However, this potential for synergy has not been realized at a large scale yet. Because the pillars of sustainability are loosely defined, the three criteria of equity, economy, and ecology are rarely evaluated in a meaningful way. Although equity may not be implied in the social pillar, this aspect of sustainability is often left out of the equation. Therefore, a climate justice framework that takes both technical and

²⁴³The Architecture Lobby, “T-A-L Statement on the Green New Deal,” The Architecture Lobby 2019. Accessed 1 April 2021. <http://architecture-lobby.org/project/t-a-l-statement-on-the-green-new-deal/>

intangible considerations into account, along with past harms and current vulnerabilities, is the best way to assess the success of an adaptive reuse project. Both Fry and Webb have already argued for such a comprehensive evaluation of design projects.²⁴⁴ Such an approach necessitates looking at projects holistically as a process and evaluating labor practices as well. This evaluation will require professionals to look inward and question the typical protocols and ways in which oppressive systems are upheld through professional complacency. The Architecture Lobby has thrown down the gauntlet for designers to take on the challenges of wealth inequality and climate change. Likewise, preservationists must consider their own position, the tools they are equipped with, and what actionable steps they are going to take to address climate justice. As Rogers et al argue, “The complex ideology and practice of preserving historical sites and buildings from destruction and deterioration offer ...a unique window into social inequalities as well as opportunities for obtaining social justice for marginalized groups.”²⁴⁵

²⁴⁴ Patrice Frey, 2008. *Building Reuse: Finding a Place on American Climate Policy Agendas*. Washington, DC: National Trust for Historic Preservation.; Amanda L. Webb, 2017. "Energy Retrofits in Historic and Traditional Buildings: A Review of Problems and Methods." *Renewable & Sustainable Energy Reviews* 77: 748-759.

²⁴⁵ Diane M. Rodgers, Lucy Sosa, and Jessica Petersen. 2018. "Historic Preservation: A Multilayered Inclusive Approach Honoring Immigrants Past and Present." *Humanity & Society* 42 (2): 193-220.

VI. CONCLUSIONS & RECOMMENDATIONS

Historic preservation and climate justice have the potential to preserve both tangible and intangible heritage. Climate justice activists often seek to preserve land and affordability. In the case of climate justice, the preservation of culture is both implicit and explicit depending on the specific type of work. Historic preservation, in its formal and grassroots manifestations, has the potential to preserve land, culture, architectural fabric, and communities. However, most preservation laws and policies do not articulate the importance of promoting these social values and do nothing to protect them. Furthermore, some laws such as NHPA, have the potential to strengthen the connection between culture and climate, but are not currently reaching it. In addition, both preservationists and climate justice activists are forced face the pressures of the capitalist system. This means operating on tight budgets and being in a constant state of rejecting or negotiating with realities of the real estate market and property rights. These same financial constraints often lead to adaptive reuse projects that preserve fabric, while erasing intangible heritage. The following section contains a set of thematic findings and recommendations. These conclusions were derived from the literature, planning documents, media, and interviews. The findings feed into a set of thematic recommendations for the further synergy of preservation and climate justice. Some recommendations are specific and immediately actionable. Other recommendations are more philosophical and connected to larger political and professional changes. The

breadth of these thematic recommendations speaks to the complexity of the problem and need for multiscale approaches.

Conclusions

Building Trust & Forming Coalitions

Each of the subsets of climate justice-related preservation work illustrates the importance of building trust and forming strong partnerships and coalitions. BlocPower and Elevate Energy demonstrate that on a pragmatic level, additional public and private partnerships provide the opportunity for additional funding. Yet, as Jackie Montesdeoca notes, partnerships must be navigated strategically and thoughtfully.²⁴⁶ Certain partnerships force organizations to reconcile the benefits of funding from unjust systems, and complicate processes of trust building.

The issue of trust is at the center of both retrofits, indigenous preservation, and adaptive reuse. Through leveraging community organizing techniques, BlocPower and Elevate Energy seek to heal wounds and strengthen relationships with frontline communities. Kelly Britt advocates for federal collaboration with indigenous groups, as opposed to consultation, and notes the inherently neocolonial power imbalances of these interactions.²⁴⁷ This concept not only applies to government interactions with indigenous peoples, but to the way in which design professionals engage with any marginalized community. Sangita Chari argues that preservationists must recognize

²⁴⁶ Jackie Montesdeoca, Interview with Julia Marchetti. March 12, 2021.

²⁴⁷ Kelly M. Britt, 2019. "Collaborating on the Federal Level: Moving Beyond Mandated Consultation in the Section 106 Process." *Archaeologies* 15 (3): 496-513.

themselves as the community's equal, rather than paternalistic saviors, or adversaries.

She states,

As long as the field is dominated by a way of thinking that outsiders find to be stifling, people will not engage. If the preservation community itself is, frankly, not fun, is not interesting, is not curious, is not willing to try something different, is not willing to let go of stuff that actually only they care about, it doesn't matter what they do.²⁴⁸

Roberts and Kelly advocate for preservation that amplifies local knowledge and breakdowns hierarchies between grassroots and expert practices. By centering citizen-agency, preservationists can create sustained stakeholder involvement.²⁴⁹ Such trust building and community-centered processes would help to avoid some of the socially negative consequences of adaptive reuse, such as displacement and cultural erasure.

Both the indigenous preservation and adaptive reuse sections demonstrate the importance of organizing efforts and coalition building. Through clear sets of demands and cross-sector organizing, builders, designers, planners, and preservationists can advocate for socially and environmentally sustainable labor practices.²⁵⁰ The examples of NODAPL, Keystone XL, and Atlantic Sunrise pipeline protests demonstrate the power of interconnected struggles to form broad coalitions across various races, classes, and belief systems. Particularly, the "Cowboy Indian Alliance," that was formed in opposition

²⁴⁸ "Serving All Americans: The Case for Relevancy, Diversity, and Inclusion in the Nation Park Service: An interview with Sangita Chari," in *Preservation and Social Inclusion*. ed. Erica Avrami. (NY:Columbia Books on Architecture and the City, 2020).

²⁴⁹ Andrea Roberts and Grace Kelly, 2019. "Remixing as Praxis: Arnstein's Ladder through the Grassroots Preservationist's Lens." *Journal of the American Planning Association* 85 (3): 301-320.

²⁵⁰ Marianella D'Aprile and Keefer Dunne, Interview with Julia Marchetti. March 18,2021.

to Keystone XL illustrates the way in which coalitions can and should be formed between groups who are in some ways at odds. This topic raises the question of what frameworks and ideologies inform the preservation field and how these ideologies might serve as an aid or hindrance to coalition building.

Historic Preservation is Not a Monolith

Historic preservation is a complex practice, eliciting reactions ranging anywhere from admiration and joy, to rage, confusion, and indifference. Preservation means many different things to different people. As Montgomery notes, individuals are drawn to preservation for a variety of reasons such as a passion for craft, architecture, history, sustainability, or community. In fact, many preservationists have found their way to the field by accident.²⁵¹ Another important takeaway from this research is that not all those who engage in preservation work are recognized or recognize themselves as preservationists.²⁵² Thus, definitions of preservation are often very personal and wide-ranging. Yet, as Boccardi argues, the scope of the field is often limited by definitions of preservation.²⁵³ Fleming echoes these concerns with a broader critique of the design

²⁵¹ Susan West Montgomery, 37.

²⁵² For example, each of the climate justice activists interviewed agreed that their work was intangible preservation of a kind when prompted. However, Marianella D'Aprille noted that she would not have identified her work as a type of intangible heritage preservation had I not given her my specific definition.

²⁵³ Giovanni Boccardi, 2015. "From Mitigation to Adaptation: A New Heritage Paradigm for the Anthropocene. *Perceptions of Sustainability in Heritage Studies*. ed. Marie-Theres Albert. Boston, MA: De Gruyter.

field. Preconceived notions of the how the field works and the system professionals must operate within, dictate the role of the design professional.²⁵⁴

Multiscale Problems Need Multiscale Solutions

Analysis of the three areas of work, reveals the interrelation of climate change problems and the need to address them on various scales. Climate change exacerbates the intersecting issues of poverty, housing quality, human health, indigenous rights, and gentrification.²⁵⁵ Ironically, both the cause of climate change and the problems it amplifies are rooted in a culture of extraction, exploitation, and consumption.²⁵⁶ This is the same impulse that fueled indigenous genocide and perpetuates current indigenous injustices.²⁵⁷ Similarly, the desire to hoard resources and siphon off communities of color through redlining, has led to issues such as intergenerational poverty, disproportionate exposure to urban heat island effect, and poor housing quality.²⁵⁸ And

²⁵⁴ Billy Fleming, "Design and the Green New Deal," *Places Journal*, April 2019. Accessed 13 Apr 2021. <https://doi.org/10.22269/190416>

²⁵⁵ Niaz Ahmed Khan, 2020. "People and Climate Change: Vulnerability, Adaptation, and Social Justice." *Community Development Journal*.

²⁵⁶ Loretta Pyles, 2017; 2016;. "Decolonising Disaster Social Work: Environmental Justice and Community Participation." *The British Journal of Social Work* 47 (3): 630-647.

²⁵⁷ Amanda M. Marincic, 2018. "The National Historic Preservation Act: An Inadequate Attempt to Protect the Cultural and Religious Sites of Native Nations." *Iowa Law Review* 103 (4): 1777-1809.; Leah Temper, Sofia Avila, Daniela Del Bene, Jennifer Gobby, Nicolas Kosoy, Philippe Le Billon, Joan Martinez-Alier, et al. 2020. "Movements Shaping Climate Futures: A Systematic Mapping of Protests Against Fossil Fuel and Low-Carbon Energy Projects." *Environmental Research Letters* 15 (12).

²⁵⁸ Samain Sabrin, Maryam Karimi, Md Golam Rabbani Fahad, and Rouzbeh Nazari. 2020. "Quantifying Environmental and Social Vulnerability: Role of Urban Heat Island and Air Quality, a Case Study of Camden, NJ." *Urban Climate* 34.

²⁵⁸ Wenfei Xu, "Legacies of Institutionalized Redlining: A Comparison Between Speculative and Implemented Mortgage Risk Maps in Chicago, Illinois." *Housing policy debate* (2021): 1–26.

²⁵⁸ Emma Osore, "Blackspaces: Brownsville Codesigning Black Neighborhood Conservation," in *Preservation and Social Inclusion*. ed. Erica Avrami. (NY: Columbia Books on Architecture and the City, 2020).

as Amanda Boston illuminates, gentrification is the product of racialized neglect followed by racialized reinvestment.²⁵⁹ Furthermore, the backdrop of continued state subsidies for fossil fuel extraction is a problem that cannot be ignored or mitigated with retrofits or adaptive reuse.²⁶⁰ For these reasons, responses to climate change must approach the problem from multiple angles by stopping greenhouse gas emissions at the source and addressing issues of wealth inequality.²⁶¹ All these problems are connected through the ideas of property, ownership, and wealth. Yet, the relationship between historic preservation and these three concepts is often overlooked.²⁶²

Erica Avrami articulates the connection between market dependence and inequality, “By defaulting to the ways that market forces affect *buildings*, with limited focus on *people*, preservation evades important sociospatial dynamics and forgoes opportunities to systematically instrumentalize its work to achieve economic equity and

²⁵⁸ Harry L. Margulis, 1998. “Predicting the Growth and Filtering of at-Risk Housing: Structure Ageing, Poverty and Redlining.” *Urban Studies (Edinburgh, Scotland)* 35 (8): 1231-1259.

²⁵⁸ Ross Gillard, Carolyn Snell, and Mark Bevan. 2017. “Advancing an Energy Justice Perspective of Fuel Poverty: Household Vulnerability and Domestic Retrofit Policy in the United Kingdom.” *Energy Research & Social Science* 29: 53-61.

²⁵⁹ Amanda Boston, “Gentrifying the City: From Racialized Neglect to Racialized Reinvestment,” *Social Science Research Council*, September 1, 2020. <https://items.ssrc.org/layered-metropolis/gentrifying-the-city-from-racialized-neglect-to-racialized-reinvestment/>

²⁶⁰ According to Klein, states should redirect fossil fuel subsidies to renewables. See Klein, 248.

²⁶¹ Kate Aronoff, Alyssa Battistoni, Daniel Aldana Cohen, Thea N. Riofrancos, and Naomi Klein, 2019. *A Planet to Win: Why We Need a Green New Deal* (New York: Verso, 2019).; Naomi Klein, 2019. *On Fire: the (burning) Case for a Green New Deal* (New York, Simon and Schuster, 2019).; Varshini Prakash and Guido Girgenti, *Winning the Green New Deal: Why We Must, How We Can* (New York: Simon and Schuster, 2020).

²⁶² Erica Avrami, “Preservation’s Reckoning,” in *Preservation and Social Inclusion*. ed. Erica Avrami. (NY:Columbia Books on Architecture and the City, 2020).

²⁶² Page, 93.

inclusion.”²⁶³ According to Page, tax-credit focused preservation efforts, have caused the field to bend over backwards and prove a building’s significance and economic potential to developers. This process often blocks marginalized groups from participating in the formal preservation process.²⁶⁴ Therefore, the historic preservation field must reckon with its position in the midst of these complex and interconnected dynamics. Although historic preservation alone cannot solve the issues of the climate crisis or gentrification, this practice can function as a “radical act” that promotes agency.²⁶⁵

The Importance of Intangible Heritage

Although all three subsets of work have the potential to preserve both tangible and intangible heritage, intangible heritage preservation has the most direct applicability to matters of climate justice. Through cost-lowering retrofitting work like The Healthy Rowhouse Project and BlocPower, residents are able to keep their social and cultural networks intact by remaining in their homes. Furthermore, the indigenous protests of NODAPL, Keystone XL, and the Atlantic Sunrise pipeline demonstrate that the tangible connection to land is completely intermingled with an intangible cultural connection. This point is emphasized by Traditional Ecological Knowledge, deeply

²⁶³ Erica Avrami, “Preservation’s Reckoning,” in *Preservation and Social Inclusion*. ed. Erica Avrami. (NY:Columbia Books on Architecture and the City, 2020).

²⁶⁴ Page, 93.

²⁶⁵ Emma Osore, “Blackspaces:Brownsville Codesigning Black Neighborhood Conservation,” in *Preservation and Social Inclusion*. ed. Erica Avrami. (NY:Columbia Books on Architecture and the City, 2020).

cultural land management strategies. As Marincic addresses, NEPA and NHPA do not adequately protect the land, because they do not adequately comprehend culture.²⁶⁶ Similarly, adaptive reuse projects are not always characterized as climate justice because of their disconnect from intangible heritage and social values, rather than ecological values.

The preservation of intangible heritage is difficult to promote through policy.²⁶⁷ Prevalent definitions of intangible heritage are broad, but do not address the idea of community specifically.²⁶⁸ However, forging a deeper connection between preservation and community and economic development strategies that center equity could help to mitigate this issue.²⁶⁹

Recommendations

Collaborate & Form Coalitions

There are opportunities for collaboration and coalition building between and within the design, planning, preservation fields, and beyond. Professionals must not only collaborate at the interdepartmental level, but with community members and

²⁶⁶ Amanda M. Marincic, 2018. "The National Historic Preservation Act: An Inadequate Attempt to Protect the Cultural and Religious Sites of Native Nations." *Iowa Law Review* 103 (4): 1777-1809.

²⁶⁷ Littler, Jo. 2014. "Intangible Roles: Theory, Policy, Practice and Intangible Cultural Heritage." *Ethnologies (Québec)* 36 (1-2): 93-105.

²⁶⁸ Waterton and Smith argue that the heritage field's understanding of community is a hindrance to social justice. See Emma Waterton and Laurajane Smith, 2010. "The Recognition and Misrecognition of Community Heritage." *International Journal of Heritage Studies* 16:4–15. ; UNESCO, "What is Intangible Cultural Heritage?," UNESCO, 2021. Accessed 17 March 2021. <https://ich.unesco.org/en/what-is-intangible-heritage-00003>

²⁶⁹ Page astutely distinguishes economic development from economic equity, 93.

organizers as well. Echoing the insights of Steinman, public speaker, architectural critic, and organizer, Marianella D'Aprille raised the need for organizing around the intersection of preservation and climate justice.²⁷⁰ She stated, "Preservationists and climate activists need an organization that holds all of those ideas together, even if they are doing different things. This is a problem of organization."²⁷¹ D'Aprille then went on to emphasize the need for bridge-builders across sectors and disciplines.²⁷²

Furthermore, preservationists must work alongside climate action planners to contribute their unique skillset while learning from those at the center of the fight. San Antonio has already demonstrated collaborative climate leadership. San Antonio is one of the few cities who clearly connects climate change to heritage. Their climate action plan proposed to produce a Climate Heritage Strategic Plan. This strategic plan would determine the appropriate management of cultural sites and objects around climate change adaptation by building an inventory of resources, developing methods for building adaptive capacity, and joining the Climate Heritage Network.²⁷³ While the Climate Heritage Strategic Plan has yet to be developed, a Climate Heritage Peer Learning Report was published in 2019. San Antonio's work concerning the intersection

²⁷⁰ Erich Steinman, 2019. "Why was Standing Rock and the #NoDAPL Campaign so Historic? Factors Affecting American Indian Participation in Social Movement Collaborations and Coalitions." *Ethnic and Racial Studies* 42 (7): 1070-1090.

²⁷¹ Marianella D'Aprille and Keefer Dunne, Interview with Julia Marchetti. March 18, 2021.

²⁷² Ibid.

²⁷³ Ibid, 44.

of climate and heritage is beginning to address the gap between historic preservation and sustainability through interdisciplinary cross-pollination.

The decentralized process of codesign has community engagement implications beyond design itself. One exemplary illustration of collaboration and the co-design process is BlackSpace's Brownsville Conservation project. Founded in 2015 in response to New York's gentrification and erasure of Black heritage, BlackSpace, is a collective of interdisciplinary Black design professionals who seek to thoughtfully leverage their expertise to work with communities and promote agency in Black neighborhoods.²⁷⁴ BlackSpace demands "a present and a future in which Black people, Black spaces, and Black culture matter and thrive."²⁷⁵ From 2018 to 2019, the collective engaged in a multidisciplinary heritage conservation project in Brownsville. The groups process was intentionally nonlinear and reflective with respect for the community and its knowledge incorporated into every step. Their strategy recognized agency and acknowledged that community-led conservation efforts had been taking root in this neighborhood for years. Ultimately, the conservation process required listening, learning, reflecting, synthesizing, and codesigning. Giving adequate time to debrief as a group and reiterate the process was essential. To build trust, the group leveraged their existing formal connections with the community. Rather than creating their own stakeholder events,

²⁷⁴ Emma Osore, "Blackspaces:Brownsville Codesigning Black Neighborhood Conservation," in *Preservation and Social Inclusion*. ed. Erica Avrami. (NY:Columbia Books on Architecture and the City, 2020).

²⁷⁵ Ibid.

Blackspace embedded into the neighborhood by attending preexisting events such as a parade and a writer's workshop. In addition, they sought out opinions that are often neglected on neighborhood issues, such as youth and artists. This project illustrates the way in which one does not need to be trained in heritage conservation to successfully engage in it. In fact, in some instances, professional training is the exact obstacle preventing professionals from succeeding in their intended work.²⁷⁶ However, preservation professionals can learn from these methods and apply them to work, be it climate justice-focused or otherwise.

Preserve Tangible and Intangible Fabric

The connection between tangible and intangible heritage preservation can be strengthened through the implementation of projects that leverage tangible heritage preservation *for* intangible heritage preservation. One way to approach this concept is through mass publicly funded retrofit and adaptive reuse projects. Such projects could focus on municipal buildings, public schools, and housing.²⁷⁷ The retrofitting of public schools coupled with increased funding for education could help to reverse the troubling pattern of defunded schools being adaptively reused for luxury housing.²⁷⁸ Housing retrofits not only decrease emissions but increase affordability by lowering

²⁷⁶ Laurajane Smith, *Uses of Heritage*. (London: Routledge, 2006).

²⁷⁷ Marianella D'Aprile, Interview with Julia Marchetti. March 18, 2021.; Billy Fleming, Interview with Julia Marchetti. March 22, 2021.

²⁷⁸ Wong notes this pattern. See Liliane Wong, *Adaptive Reuse: Extending the Lives of Buildings* (Basel: Birkhäuser, 2017).

energy costs. Furthermore, mass retrofitting efforts could contribute to green job creation.

In addition, historic preservationists should take more of a lead in retrofitting efforts. Although the current legal policies and frameworks within historic preservation do not easily facilitate this kind of work, synergies between formal historic preservation and climate justice through retrofits already exist. For example, Philadelphia's Strawberry Mansion Historic Home Repair Program allows North Philadelphia residents to remain in their homes while building wealth and retaining the historic character of the neighborhood. This program allows homeowners to make no cost repairs and helps to build wealth through workshops covering topics such as tangled title, estate planning, historic home repair, and financial literacy.²⁷⁹

Furthermore, a process-oriented approach to preservation and design could help to bridge this gap between historic preservation, climate, the tangible, and intangible. In terms of adaptive reuse, a hybrid of a vulnerability study, cultural resource inventory, and environmental assessment would paint a much more nuanced picture of the true social, environmental, and economics costs of a project. In terms of existing evaluations, The Living Building Challenge is a dynamic program that recognizes the interconnected nature of the built environment by evaluating buildings on seven performance areas:

²⁷⁹ Strawberry Mansion CDC, "The Strawberry Mansion Historic Home Repair Program," *Programs*, 2021. <https://www.strawberrymansioncdc.org/strawberry-mansion-historic-home-re>

place, water, energy, health and happiness, materials, equity, and beauty.²⁸⁰ In addition, reuse should be recognized and reframed as part of a larger climate mitigation process, rather than as single projects in isolation. This reframing could be accomplished through flexible economic incentives for reuse that value these projects for their minimization of construction waste, rather than their preservation of architectural significance. However, many adaptive reuse incentives, such as Historic Rehabilitation Tax Credits, require historic designation.²⁸¹ Cities such as Chicago and Baltimore have valued reuse for reuse's sake through construction debris diversion initiatives and deconstruction programs like the Waste to Wealth.²⁸² Finally, the application of EcoDistricts' principles onto conservation districts is another potential way to lessen the divide between culture and climate at a neighborhood scale.²⁸³

These concepts raise the larger philosophical question of prioritizing tangible and intangible heritage. Tangible heritage preservation is an intrinsically symbolic act.²⁸⁴

²⁸⁰ International Living Building Institute, "Living Building Challenge," *Petals*, 2021. <https://living-future.org/lbc/>

²⁸¹ Violette Harrington Levy. 2018. *Great Adaptations: Shaping the Future of Historic Preservation in Philadelphia through an Adaptive Reuse Ordinance* ScholarlyCommons. ; Erica Avrami notes the tension between historic designation gatekeeping and sustainability. See Erica Avrami, 2016. "Making Historic Preservation Sustainable." *Journal of the American Planning Association* 82 (2): 104-112.

²⁸² City of Chicago, "Construction and Demolition Debris Recycling," *Streets and Sanitation*, 2021. https://www.chicago.gov/city/en/depts/streets/supp_info/construction_anddemolitionsites.html ; Baltimore Office of Sustainability, "Waste To Wealth," *Projects*, 2021. <https://www.baltimoresustainability.org/projects/waste-to-wealth/>; Starr Herr-Cardillo and Dana Fedeli, "Philly's Plan to Fight Climate Change Has a Glaring Absence on Demolitions and Cultural Heritage," *Inquirer*, February 15, 2021. <https://www.inquirer.com/opinion/commentary/philadelphia-climate-change-plan-historic-preservation-building-demolition-20210215.html>

²⁸³ Molly Miller, "Is Green Design Ready to Take Root in Neighborhoods?," *EcoDistricts*, May 30, 2014. <https://ecodistricts.org/2014/05/30/is-green-design-ready-to-take-root-in-neighborhoods/>

²⁸⁴ Erica Avrami, "Preservation's Reckoning," in *Preservation and Social Inclusion*. ed. Erica Avrami. (NY:Columbia Books on Architecture and the City, 2020).

Preservationists must begin to recognize that these two facets are bound together.²⁸⁵

Rather than see these concepts as a series of balancing acts or trade-offs, preservationists should prioritize intangible heritage and view the preservation of physical fabric as one way to protect intangible culture. Such a framing does not disregard the importance of physical fabric. Instead, this approach recontextualizes fabric's importance with a framework that recognizes a site's inherent connection to community and place. Furthermore, such a view acknowledges the way in which many groups have been robbed of the opportunity to preserve physical fabric. Many marginalized groups are unable to preserve their sites because they have been demolished. At this same time, these same groups are often unable to designate their sites as historic because they do not meet the criteria for architectural significance. In a cyclical fashion, both issues are rooted in their marginality. Thus, applying the same broken framework, only perpetuates these power imbalances.

Promote and Support Sustainable Labor

Another way to further the connection between preservation and climate justice is to promote and support sustainable labor practices. Wilks Family Director of the Ian L. McHarg Center in the Weitzman School of Design, Billy Fleming argues that in order to truly design for a Green New Deal, professionals must change the field by changing

²⁸⁵ Ayesha Pamela Rogers. "Values and Relationships between Tangible and Intangible Dimensions of Heritage Places." In *Values in Heritage Management: Emerging Approaches and Research Directions*, by Erica Avrami, Susan Macdonald, Randall Mason, and David Myers. Los Angeles: The Getty Conservation Institute, 2019. <http://www.getty.edu/publications/occasional-papers-3/part-two/12/>.

academic institutions.²⁸⁶ Fleming suggests repositioning design as a type of public service and incentivizing leadership through scholarships for public-interest work and internship credit for community organizing work.²⁸⁷ Sustainable labor begins at a basic level with equitable hiring and recruitment processes. Universities must support their statements on climate, equity, and inclusion through the active recruitment of students and faculty of color.²⁸⁸ Furthermore, academic programs requiring internships should prohibit unpaid or underpaid work.²⁸⁹ In addition, elite institutions should divest from fossil fuels.²⁹⁰ These types of changes are reflective of the federal and institutional decolonization that Britt calls for.²⁹¹ As Architecture Lobby organizer Keefer Dunne notes, dismantling unsustainable labor practices in design school is essential because “these institutions condition you for a lifetime of exploited labor instrumentalizing white supremacy...” and widening inequality, a dynamic that is antithetical to climate justice.²⁹²

Finally, retrofitting and weatherization projects are an opportunity for preservationists to promote climate justice, wealth-building, skill building, and tangible

²⁸⁶ Billy Fleming, “Design and the Green New Deal,” *Places Journal*, April 2019. Accessed 13 Apr 2021. <https://doi.org/10.22269/190416>

²⁸⁷ Ibid.

²⁸⁸ Columbia GSAPP Black Faculty, “Unlearning Whiteness,” Unlearning Whiteness, 2020. <https://unlearningwhiteness.cargo.site/>

²⁸⁹ The Architecture Lobby, “Manifesto,” *About*, 2017. <http://architecture-lobby.org/about/>

²⁹⁰ Benjamin Franta, “The Pernicious Influence of Big Oil on America’s Universities,” *New Republic*, June 8, 2020. <https://newrepublic.com/article/158086/pernicious-influence-big-oil-americas-universities>

²⁹¹ Kelly M. Britt, 2019. “Collaborating on the Federal Level: Moving Beyond Mandated Consultation in the Section 106 Process.” *Archaeologies* 15 (3): 496-513.

²⁹² Marianella D’Aprile and Keefer Dunne, Interview with Julia Marchetti. March 18, 2021.

²⁹² Susan West Montgomery, 37.

heritage preservation. Two potential models for such work are HOPE Crew and the Cully Weatherization Project. The National Trust for Historic Preservation's HOPE (Hands-On Preservation Experience) Crew, a component of a larger summer program called Preservation in Practice, links young professionals from Historically Black Colleges and Universities across the nation to preservation projects by offering training and facilitating preservation-trades work.²⁹³ Portland's Cully Weatherization Project is a home repair project centered on equity, anti-displacement, improving health incomes, and addressing workforce development.²⁹⁴ As noted in the retrofits section, workforce development and wealth building through retrofits is so powerful because it addresses the issue of energy inefficiency and housing quality at two scales at once.

Redefine Sustainability

Finally, historic preservationists must take initiative and redefine sustainability and their relationship to it as a field. The definition of sustainability must be reworked so that it encompasses equity and accountability. For example, The Architecture Lobby argues that architects must “redefine sustainability to acknowledge the economic, social, racial, and class-based dimensions of the climate crisis” and advocate for carbon

²⁹³ Preservation in practice is partnership between the National Trust for Historic Preservation, the National Park Service, and the Advisory Council on Historic Preservation. Julia Marchetti and Hadley Peterson, “Six Students' Legacies: Learning To Do By Doing, And Telling Stories Through Preservation At Tuskegee,” *APA Urban Design and Planning Division*, 2020. <https://urbandesign.planning.org/community-outreach/fellowship/fellows/julia-marchetti/six-students-legacies-learning-do-doing-and-telling-stories-through-preservation-tuskegee/>

²⁹⁴ City of Portland, “Climate Action Plan: Local Strategies to Address Climate Change,” June, 30, 2015. https://www.portland.gov/sites/default/files/2019-07/cap-2015_june30-2015_web_0.pdf, 6.

neutral affordable housing for all.²⁹⁵ Likewise, historic preservationists must reflect and articulate their role in addressing social, environmental, economic, and racial equity as a field. What existing tools and frameworks give preservation the potential for leadership in redefining an equitable sustainability for the design fields? What strategies and ideologies need to be dismantled? The three subsets of climate-justice related preservation work addressed in this thesis, have only started the discussion on the nexus of preservation, sustainability, and climate justice. Researchers, practitioners, community members and organizers in the years to come must continue the conversation and redefine a more equitable and productive sustainability.

²⁹⁵ The Architecture Lobby, "T-A-L Statement on the Green New Deal," The Architecture Lobby 2019. Accessed 1 April 2021. <http://architecture-lobby.org/project/t-a-l-statement-on-the-green-new-deal/>

VII. FIGURES & ILLUSTRATIONS

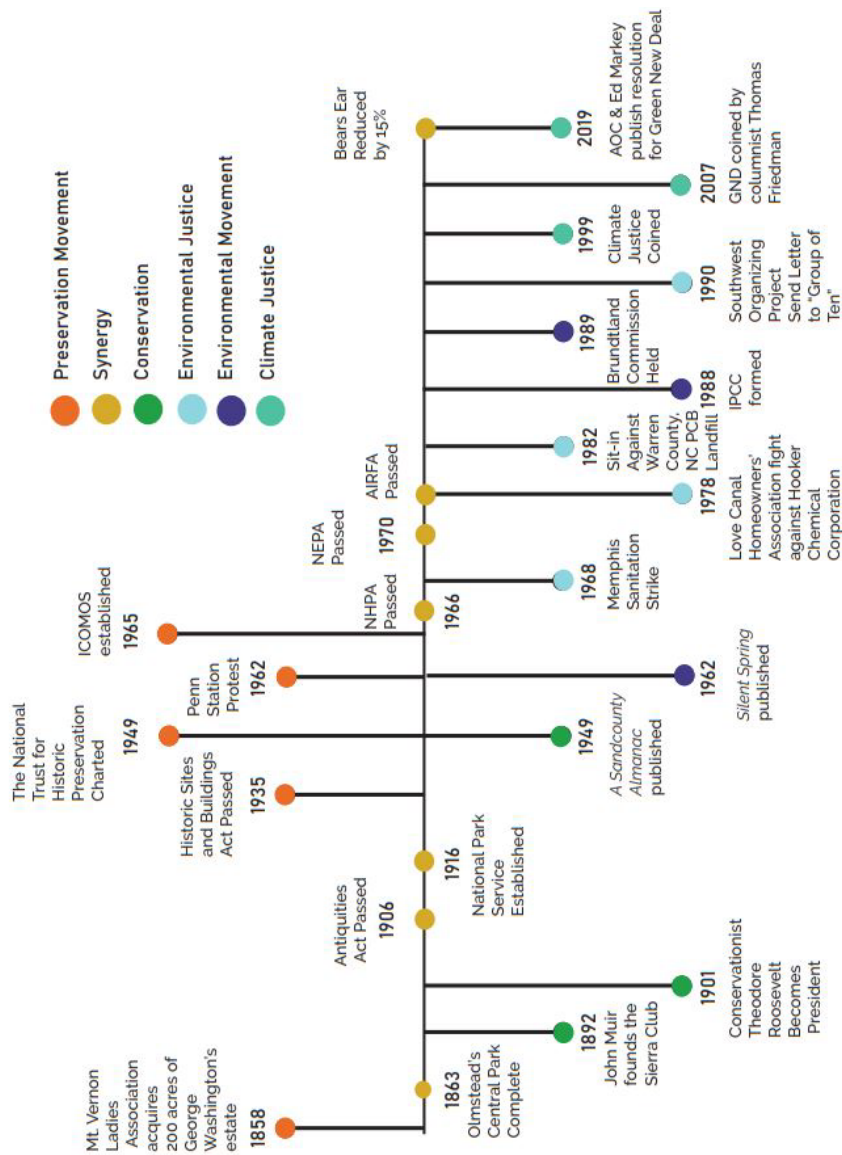


Figure 1. This timeline of major events in the Historic Preservation, Conservation, Environmental, Environmental Justice, and Climate Justice Movements reveals areas of connection and disconnection between historic preservation and environmental causes.

DIAGRAMMING THE UNSEEN SYNERGIES

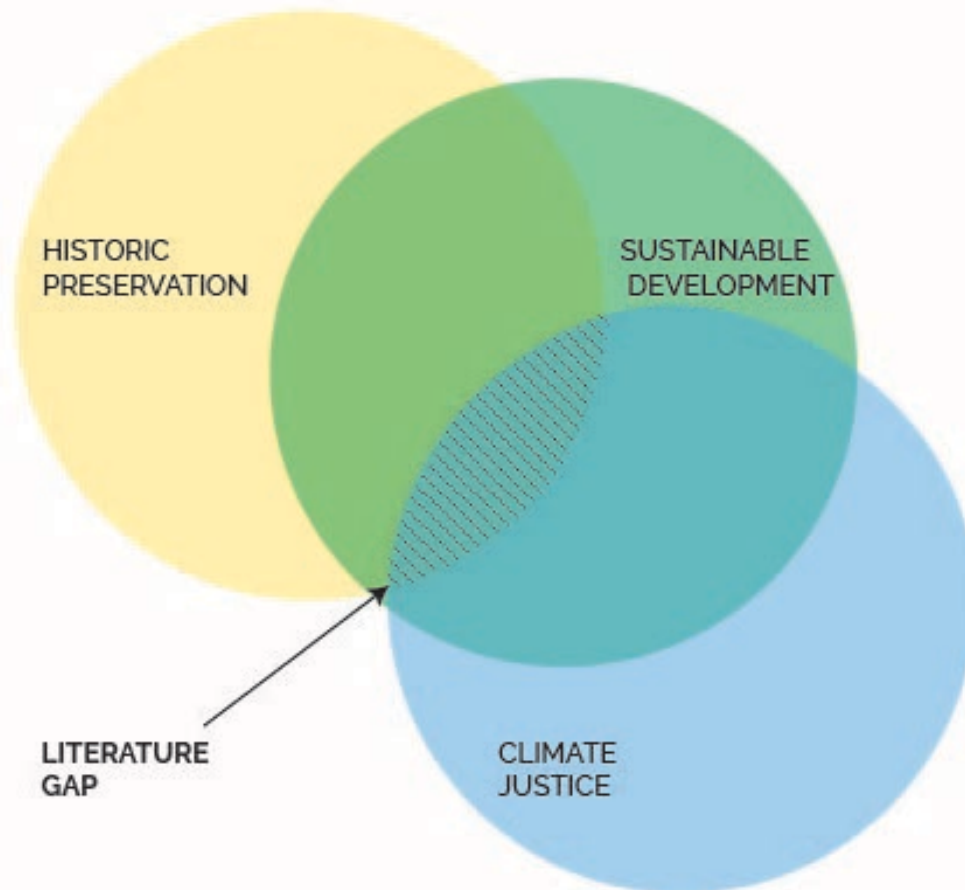


FIGURE 2. This Venn Diagram illustrates the literature gap between historic preservation, sustainable development, and climate justice.



Figure 3. BlocPower’s retrofit of New Mt. Zion Baptist Church will save the church 1.02 metric tons of CO2 emissions per month. Image Source: BlocPower.



FIGURE 4. “The Cowboy Indian Alliance” demonstrates the power of shared goals and broad-based coalition building to unite previously disconnected groups. Image Source: The Conversation.



Figure 5. The adaptive reuse of Austin’s Seaholm Power Plant, a former brownfield site, represents a powerful shift away from environmental harm towards resilience. Image Source STG Design.

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