

Over-the-Rhine: A Predicament of Place on the Road to Carbon Neutrality

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Peering through a lens down a dusty fire road in the Santa Monica Mountains, we observe the lone figure of a man jogging toward us. Growing steadily louder, the rhythmic sound of his breathing drowns out the wind in the leaves, and masks the song of the unseen birds perched among them. As his body fills the frame, we recoil in sudden terror to the sound of a vicious, primal growl. Slowly, we begin to perceive what we have barely seen: the silhouette of a mountain lion has burst through the frame. The scene quickly regains its bucolic tranquility, but our runner is gone. We continue staring in disbelief down the empty trail while, indifferent, the leaves continue rustling in the wind, and the birds resume their pleasant singing. But the vivid colors on the television are gradually washing out, leaving only a stark, white light.

So begins episode sixty of *Six Feet Under*, Alan Ball's serial black comedy produced from 2001-2005. Following the opening sequence, the series' tragically hip protagonist, Nate Fisher, reconciles the fate of the unsuspecting runner with the wildness of the place in which he died. With a single word, Nate initiates the dialogue: "Ecotone." he says. He explains the construct as the zone in which two different ecosystems overlap. In the context of the episode, the ecotone represents the zone in which the realm of human settlement—the city—is encroaching upon the realm of the wild. As viewers, we are being invited to consider the limits of growth and the conflict our widening urban footprint is creating with the natural world. But Nate, ever the mortician, seems to be urging us to consider something more ominous. Nature can bite us back, and we may not be missed when we are gone.

Anthropogenic climate change is the mountain lion pouncing on modern society. As a result of our

choosing to tune out the warning signals of global climate change for more than twenty years, we now stand belatedly at the dawn of a new era in which global carbon emissions must be reduced to a point approaching zero. We possess the technologies to do this in new construction, but, short of unplugging them altogether, older buildings and cities present a challenge. Given the impending social and economic problems presented by global climate change, and bearing in mind all the lessons twentieth-century urban renewal taught us about what makes cities work, is it reasonable to suggest yet again that entire urban quarters should be replaced to advance the welfare of the greater good? Considering both its volatile history and the comparatively favorable projections for its future climate, nowhere in America is this question more urgent than in the Over-the-Rhine neighborhood of Cincinnati, Ohio. For almost a hundred years a persistent question has dogged the people of Cincinnati: "What do we do with Over-the-Rhine?" And now, at the dawn of the Carbon Neutral era, a new question presents itself: Does the challenge of creating a net-zero energy future represent the catalyst for rebuilding Over-the-Rhine? Weaving case study research with a photo-ethnographic engagement of the neighborhood, this paper contemplates the case for sweeping redevelopment of a highly controversial National Historic Place.

First settled in the 1830's by German immigrants, the neighborhood north and east of the Miami & Erie Canal that once ran through downtown Cincinnati quickly became known as "Over-the-Rhine," a pejorative homage to the great German river that, at the time, connoted the "wrong side of the tracks." The area has since been romanticized as a treasure-trove of Italianate architecture, and also as the font of Cincinnati's pervasive German-Amer-

ican cultural heritage.¹ But the contributions of German entrepreneurs to Cincinnati's nineteenth-century boom-years have obscured the fact that at its peak, Over-the-Rhine was the over-crowded home to struggling working class immigrants.² By the 1880's the neighborhood had entered a long period of decline that continues to this day.

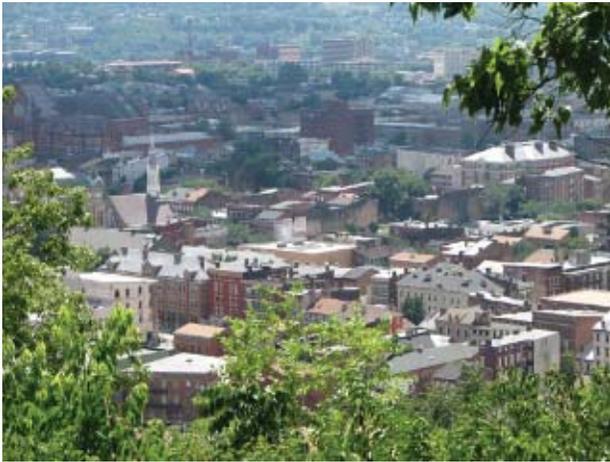


Figure 1. The northeast corner of OTR as seen from Mt. Auburn, July 2008. Photo by Author.

By the 1920's, the city of Cincinnati's response was to repeatedly subject Over-the-Rhine to ambitious urban renewal plans, from proposals to raze and replace it entirely, to efforts to preserve and restore it. As detailed by historians Zane Miller and Bruce Tucker, the most confounding episode of Over-the-Rhine's history is the chapter written in the nineteen-seventies and -eighties. In an attempt to reverse the neighborhood's decline, local preservationists and entrepreneurs hoped the federal financial incentives accompanying a National Historic Place designation would spur a local renaissance of restoration and community investment. To avoid charges of racism and systematized gentrification in what was by then a predominantly African-American neighborhood, the plans of the seventies included anti-displacement laws that proposed maintaining a stock of low-income rental housing units. But the local planning process was skillfully manipulated by a coalition of community housing and social service activists such that redevelopment plans ultimately prioritized low-income housing above all other interests, and at such high concentrations (more than 5,000 units), business

investment in the area was stifled. After nearly a decade of delay tactics and infighting among alliances formed between neighborhood activists and key individuals within the city government, the National Historic Place distinction was finally granted in May of 1983. Yet, while on the surface it appeared the preservationists had won, it is for precisely the economic conditions noted above that very few buildings have been restored within the past 25 years.³

As a result of this neglect, Over-the-Rhine is now largely composed of crumbling nineteenth-century building stock. Collectively, the Italianate and other eclectic period buildings are considered by many to be a cultural asset. But behind their aging masonry skins they are poorly ventilated, dark, and reaching the end of a long period of decay. By the year 2000, the population of Over-the-Rhine had dwindled to approximately 7,600, down from over 45,000 at its peak, and less than half what it had been only ten years earlier. In 2006, over 800 building code violations were issued along the Vine Street corridor alone.⁴ Moreover, of the 5,200 housing units remaining in the area, 1,600 were vacant, and only 4% were owner-occupied.⁵ Over 500 buildings have been abandoned, and empty lots pepper the neighborhood. In 2006, citing poor public policy in concert with the deterioration noted above, the National Register of Historic places put Over-the-Rhine on its annual listing of the Eleven Most Endangered Places in the United States.⁶

Since 2001, public safety has been the predominant concern of those living and working in Over-the-Rhine. In the spring of 2001 an outbreak of rioting followed the April 7 shooting death of a young black man by a white police officer.⁷ This signal event followed a period of five years of increasing frustration in the African American community during which fifteen black youths had died at the hands of the police. Nearly a week of civil unrest followed the latest shooting, including three days of violence that precipitated a citywide curfew. But, in addition to the personal injury and property damage itself, the unrest nearly destroyed the metropolitan area's confidence in downtown Cincinnati as a safe place, highlighting an undercurrent of racial tensions. The years since then have witnessed herculean efforts by the city, businesses, and community groups, each of which has focused on repairing relations with the disaffected residents of

Over-the-Rhine. In the process, the entire city has come to terms with the fact that as its second millennium approaches, Over-the-Rhine has reached a point of social and economic despondency that the region at large can no longer stomach. Racism has not been eradicated, nor has crime or poverty, but optimism is an emerging reality.⁸

Findlay Market—a National Historic Landmark and the de facto Heart of Over-the-Rhine—is easily the most egalitarian place in all of Cincinnati.⁹ Although its continued existence is largely the contrivance of a municipally-backed corporation, it is the only place where all the elements of Cincinnati's society mix freely, receiving equal treatment before the eyes of the marketplace.¹⁰ For a few hours each weekend, the surface lots that occupy empty building sites surrounding the market fill to capacity with all makes and models of vehicles, compact jalopies to luxury sedans. And it isn't too difficult to distinguish those who walked to the market from those who drove.

As I round the southeast corner of the market one June morning, a blues guitarist sits under a canopy playing boisterously. I place a dollar in his hat, and ask if he minds if I photograph him. Literally without missing a beat, he smiles and nods approval, segueing into "The Watermelon Blues," a sanguine tune about pushing through hard times. He enjoys hamming it up for the camera, and I enjoy the music and the encounter. But for all that is good about Findlay Market, the visitor can't deny the fact that it is an island of good intentions in a sea of emptiness. One has to ask, wouldn't these shoppers really prefer to live here, rather than drive here? Many probably would, if they could be assured of the stability of their investment and, more so, their personal safety.

The scientific community has declared anthropogenic climate change "unequivocal."¹¹ But despite its global effects, not all regions will sustain the same degree of changes. For the people of Over-the-Rhine, the modeled effects of climate change are mostly related to prolonged heat waves and the potential for punishing drought and decreased urban water quality during the summer months. Critically, though drought may occur in the summer, the severity of individual storm events is projected to increase, as is overall annual rainfall in the area. These conditions will have dramatic consequences



Figure 2. Findlay Market, June 2008. Photo by author.

for Cincinnati's future as a city.¹² As challenging as they may be, though, the direct climatic changes are not what threaten Over-the-Rhine the most. Rather, it is the socio-economic impacts resulting from the impending public policy changes and market-driven demographic shifts that will follow the onset of climate mitigation and adaptation strategies.

Climate mitigation involves any technology or strategy that reduces greenhouse gas emissions sufficiently to prevent further acceleration of global climate change, and one of the most widely touted mitigation tools being deployed is more a social than a technological one. Carbon trading markets around the world are already quantifying the cost of polluting the atmosphere.¹³ As participation in these markets is legislated, and as the market price for carbon emissions increases, such a mechanism will transform activities like driving a car or cooling a suburban single-family house into very expensive propositions.¹⁴ This carries enormous consequences for the physical composition of the metropolis. Whereas cheap fossil fuels hastened the decline of the urban core by facilitating the out-migration of higher income residents, the increasing cost premiums for this lifestyle will soon begin to reverse the situation.¹⁵ Quite simply, the imperative for a net-zero energy future signals the resurgence of the urban settlement pattern in America. Given

the increasing costs of both “dirty” coal power and automobile transportation that would accompany a cap-and-trade system, suburban land use will become largely unaffordable, and could become an economic trap for millions of Americans. Faced with the steady devaluation of their property and increasing difficulty affording individual motorized transportation to work, the value of the multi-centered inner city will rise again as suburbanites with sufficient resources begin to “colonize” the inner cities their parents and grandparents had once abandoned.¹⁶

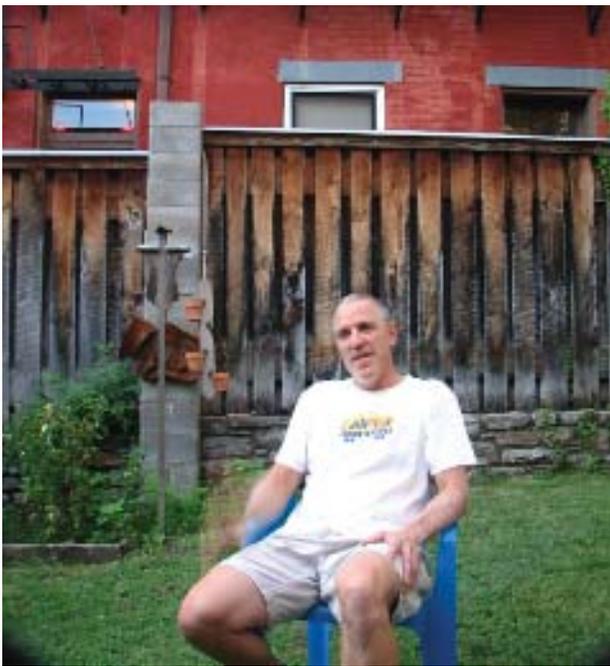


Figure 3. Pendleton, August 2008. Photo by author.

Pendleton is the name of the eastern corner of Over-the-Rhine. One evening in August I call on a friend and former colleague, Ledoux Provosty. Ledoux is an architect who bought his house in Pendleton in 1980 while a student, just as the battle over the National Historic Place designation was reaching fever pitch. A native of New Orleans, he was convinced that the people of Cincinnati would flock to such a charming, architecturally rich area. He spent several years renovating his house, and several more working as architect and contractor for a low-income housing developer, all while raising his family and acting, in his words, as a “stabilizing influence” in the neighborhood. Ledoux is

incredulous that, even after 28 years, he is seen as a “gentrifier” in the eyes of those that would prefer to keep “colonizers” out of the area. Colonizers, he notes, that never showed up. He dismisses the non-profit groups that led the effort to monopolize the real estate market in service of the poor as “criminals” who “trapped” people in poverty by neglecting the condition of their holdings. And he notes anecdotally that when the neighborhood’s largest property owner divested his real-estate portfolio in 2002, about 1,500 people who were given rental vouchers seized upon the sudden opportunity and left Over-the-Rhine. A devoted follower of the Indian mystic Meher Baba, Ledoux, 53, is also one of the city’s best bicycle racers.

Complicating the outcomes from climate mitigation will be the fallout from climate adaptation. Adaptation refers to the steps required to deal with the present and future effects of climate change. In the United States, this will mean dealing with both foreign and domestic populations that will be far more severely affected than southwest Ohio. In addition to projected population increases, the United States will see its domestic population shifting geographically in response to climate change. Moderately affected metropolitan areas like Cincinnati, with its overall anticipated rainfall increase, could see large population increases as extreme drought and crop reduction render large areas of the western United States inhospitable.¹⁷

In this scenario, Over-the-Rhine will likely become highly prized: its hundred and ten underutilized blocks lie on the doorstep of Cincinnati’s central business district, the economic engine powering a three-state region. Given its central location within a riverfront city, the anti-gentrification lobby will in the future be overwhelmed by an influx of both investment capital and relocating suburbanites prescient enough to avoid becoming the first wave of domestic carbon refugees. The arguments of the activists that prioritized the rights of individuals to live in a publicly-supported state of destitution by choice—arguments that have already begun unraveling—will be no match for our society’s widespread deference to minimally-regulated economic markets, private investment, and even supreme court-affirmed use of eminent domain for private development.¹⁸ Further, the lack of conclusive evidence that people’s lives deteriorate due to urban relocation programs, coupled with the outcomes

of 2001's civil unrest will render anti-displacement arguments difficult.¹⁹ In fact, the Over-the-Rhine Comprehensive Plan of 2002 is focused more on economic development than on protections for low-income or homeless people.²⁰

Main Street is the locus of nightlife in Over-the-Rhine, but mainly for people who don't actually live in Over-the-Rhine. Main Street's re-development began in the early nineteen-nineties with the establishment of several nightclubs, art galleries, and microbreweries. Although its gritty urban character contributed to its success during the boom-years of the nineties, the riots of 2001 hit Main Street's businesses hard as its young, professional clientele sought other nightspots in safer areas away from the urban core.

As I walk down Main Street with camera in hand, a man sitting on the sidewalk asks if I am a photographer. When I reply that I am more student than artist, he tells me proudly that he is a photographer, and that he has a book coming out about children. I ask to see his work, and he presents a picture of a missing child clipped from a magazine advertisement. He eagerly shows me his sketchbook, too, which is filled with page after page of abstract, graffiti-like drawings. He asks if I will take his picture and send him a copy, and I agree enthusiastically. After sharpening his pencil with a fingernail, he writes down his address for me: Ronald, Freestore Food Bank.

Viewed in retrospect, the arc of the separatist battle for Over-the-Rhine that occurred between 1960 and 2001 correlates nearly precisely with the rise and peak of America's investment in a highly carbon-intensive, car-dependent suburban lifestyle. Curiously, the rate of income decentralization in US cities, a statistic that has climbed consistently since World War II, remained level throughout the 1990's, despite high economic growth.²¹ This breaks with previous research that correlated increasing incomes with increasing rates of economic decentralization. In addition to the pressures of climate change, this could be further evidence that the suburban era is closing behind us. If true, the tide of urban re-settlement over the coming decades will likely transform the real-estate market to such an extent that the objections of Over-the-Rhine's low-income social interests will be deluged. For Over-the-Rhine's residents, commencing with



Figure 4. Main Street, July 2008. Photo by author.

an adaptive response to climate change is an urgent reality. Without concerted effort by everyone involved to work toward establishing a healthy mix of both racial and economic diversity during the inevitable re-building of the neighborhood, the overwhelmingly African American low-income community will ultimately succumb to "annihilation by dissemination."²² In purely mathematical terms, Over-the-Rhine is physically capable of supporting a new base of middle- and higher-income residents, while still maintaining the existing low-income population. And there is no doubt that the existing homeless and low-income population needs to be protected. But, as architect and urban designer Andres Duany has noted, a healthy dose of gentrification is exactly what is needed in a great many American cities.²³ Duany reminds us that it is not poverty itself that creates urban problems; it is concentrated poverty, a condition for which Over-the-Rhine might well be said to have become a poster child.

If gentrification is itself on the verge of displacement as the central argument in reviving Over-the-Rhine, the challenges to achieving carbon-neutrality posed by its National Historic Place designation remain. As noted above, the motivations for securing Over-the-Rhine's listing on the National Register were originally economic: the business community hoped that access to the federal financial incentives

accompanying a place on the list would spur economic investment through housing and business redevelopment projects. In pursuing this avenue, the business community was unwittingly reinforcing the contemporary preservationist movement's desire to establish buildings themselves as history. This new effort was aimed at broadening the movement's traditional emphasis on saving buildings in which historical figures had lived and in which historic events had taken place, to one that valued nearly any reasonably intact building of an identifiable period. Even today, the implications of this expanded mission are that, in preservationist terms, buildings themselves are deserving of "rights" protecting their existence and authenticity, not unlike the rights American citizens grant themselves under the US Constitution.²⁴ Under this paradigm, if a particular building represents a particular period in history, then it is deemed worthy of preservation independent of its architectural or craft quality, or its association with historic people and events. In short, everything is worth saving. This emphasis on the "objects" of the city downplays consideration of the social interactions occurring within them. It is not that people do not matter, but that their interactions are independent from—even irrelevant to—the historical "authenticity" of the places in which they occur.

The sociological concept of place is somewhat at odds with the object-oriented preservationist viewpoint. The Interactionist theory of place attachment holds that people form bonds to the spaces they inhabit by the very process of interacting with them, rather than by "inheriting" the legacy of those that came before. In this way, even former inhabitants of spaces that no longer exist develop new attachments to replacement spaces. While they may behave nostalgically, people adapt, and do indeed become bound to new spaces through participation in human interactions within them.²⁵

The implications of the object-oriented construction of historic places present difficulties with respect to a world threatened by climate change. Because we are now at a point where carbon mitigation efforts are critically important, Americans have finally begun to engage earnestly in national and global negotiations on how to limit our carbon footprint, and by how much.²⁶ The conversation necessarily includes the carbon footprint of our buildings, which by 2005 embodied over thirty-nine percent of our nation's primary energy consumption.²⁷ To achieve

carbon neutrality within the next twenty-five years, even assuming our society is able to successfully deploy a portfolio of renewable energy sources, we will still require a substantial shift to passively ventilated and day-lit buildings.²⁸

Accepting his Vincent Scully Award in 2007, Richard Moe noted that as early as 1980, the National Trust for Historic Preservation was touting the inherent sustainability of existing buildings on the basis of embodied energy. New construction is inefficient, Moe explained, because it requires an enormous initial expenditure of energy. By contrast, existing buildings are a renewable resource that can be tapped to avoid additional carbon emissions.²⁹ To be sure, there is a carbon penalty associated with the replacement of existing structures. But, in building to a carbon neutral standard, the return on that carbon investment would be swift.

Certainly, there is an important case to be made for saving structures that can continue to serve their users. But, the inevitable conclusion we must face is that policy-makers and planners should at this very moment be contemplating the replacement of a very large number of outmoded structures. In Cincinnati, this means replacing a large percentage of Over-the-Rhine's buildings. Further, it is not just the buildings that are at odds with a net-zero future; it is the planning grid itself, with its orthogonal grid oriented with the long sides of the blocks facing east and west, rather than the optimum north and south. To be most effective, much of Cincinnati's street pattern, including Over-the-Rhine's, should be re-oriented.³⁰ To many this will be seen as a radical proposal, but given the circumstances we face, it is not far fetched. Whether the people of Cincinnati can contemplate this magnitude of change remains to be seen.³¹

The battle between Over-the-Rhine's pro-preservation business lobby and anti-gentrification social activists in the nineteen-seventies and -eighties was both protracted and vitriolic. Similarly, if and when a critical mass of citizens emerges who recognize the magnitude of reconstruction required by climate change, and if local, state, and federal legislation restricts carbon emissions within the next few years, a new fight can be expected as preservationists struggle to protect the buildings of Over-the-Rhine. Good or bad, the objective realities of restricting carbon emissions coupled with a shifting and grow-

ing population will subject large numbers of buildings to drastic alterations and even demolition. Given the pressures to transform our carbon intensive lifestyles, it is not unreasonable to suggest that a majority of Over-the-Rhine should be replaced with a carbon neutral neighborhood that safely increases density, and preserves a carefully chosen but limited amount of historical urban fabric. While the experience of actually engaging with Over-the-Rhine may cause us to mourn this conclusion, it can equally be seen as an opportunity to embrace the interactionist understanding of place attachment, one in which the participatory acts of reconstructing our cities can both strengthen existing and also foster the creation of new emotional bonds to our cities and communities. The design and construction process—among the earliest and most essential acts of human making—must be seen as an opportunity for the community to deal with the inevitable changes foreshadowed by climate change. By literally rebuilding their city from the street up, the people of Over-the-Rhine will construct a new sense of place, and both individuals and families will be granted the opportunity to form and re-form attachments to the place known as Over-the-Rhine.³²

History and place are critically important to our culture, a conclusion buttressed not only by unearthing academic arguments, but also by interacting with the people that give urban spaces their life. But we are now forced to make difficult decisions about our cities; decisions that may prioritize ongoing human health and economic opportunity above the inanimate bricks and mortar laid by our ancestors. Climate change demands immediate cooperation between municipal governments, development interests, and the people they serve in order to make and re-make urban environments to a carbon neutral standard. We must recognize that the future can and should reasonably accommodate the preservation of our urban heritage, including the people that live there. But we must also accept that not all of our heritage can be accommodated. Without the ability to work together to balance these competing interests, we risk losing an ever-narrowing opportunity to extricate ourselves from the mountain lion's jaws.

ENDNOTES

1. Grace, Kevin and Tom White. *Cincinnati's Over-the-Rhine*. Images of America. Charleston, SC: Arcadia, 2003, p. 7.
2. Leonard, Lewis Alexander and Will Leach Clark. *Greater Cincinnati and its People: A History*. New York, Chicago etc.: Lewis Historical Publishing Company, Inc., 1927, pp. 104-105.
3. Miller, Zane L. and Bruce Tucker. *Changing Plans for America's Inner Cities: Cincinnati's Over-the-Rhine and Twentieth-Century Urbanism*. Urban Life and Urban Landscape Series. Columbus: Ohio State University Press, 1998. Miller and Tucker provide a highly detailed account of Over-the-Rhine's struggles against both government sanctioned urban renewal and private business development.
4. Cincinnati Police Division. "District One 4th Quarter Problem Solving Report 2006. Hamilton County Ohio. <http://cagisperm.hamilton-co.org/cpop/documents/qrtreps/4th06/Dist%20One%204th%20Quarter%20Problem%20Solving%20Report%202006.pdf> (accessed September 7, 2008).
5. City of Cincinnati. "2005-2009 Consolidated Plan, Volume One: Profile of Cincinnati." City of Cincinnati. http://www.cincinnati-oh.gov/cmgr/downloads/cmgr_pdf9700.pdf pp. 208-212 (accessed September 7, 2008).
6. National Register of Historic Places. "11 Most Endangered: Over-the-Rhine Neighborhood." National Register of Historic Places. <http://www.preservationnation.org/travel-and-sites/sites/midwest-region/over-the-rhine-neighborhood.html> (accessed March 10, 2008).
7. The Associated Press State and Local Wire. "Cincinnati police officer shoots, kills 19-year-old man." LexisNexis. http://www.lexisnexis.com.proxy.lib.muohio.edu/us/lnacademic/results/docview/docview.do?docLinkInd=true&risb=21_T4534468126&format=GNBFI&sort=DATE,A,H&startDocNo=1&resultsUrlKey=29_T4534466021&cisb=22_T4534466020&treeMax=true&treeWidth=0&csi=304481&docNo=4 (accessed September 2, 2008).
8. Cincinnati Business Courier. "Over-the-Rhine's Future is Now." Cincinnati Business Courier. <http://www.bizjournals.com/cincinnati/stories/2001/10/15/story1.html> (accessed June 30, 2008). Because the National Association for the Advancement of Colored People had supported a boycott of Cincinnati in the years immediately following the riots, the decision by the group to hold its national convention in Cincinnati in the summer of 2008 was hailed locally and nationally as an endorsement of the community's efforts.
9. It is worth noting the irony that Over-the-Rhine's other National Historic Landmark, Cincinnati Music Hall, is probably among the *least* egalitarian places in all of Cincinnati.
10. Although Findlay Market is open from Wednesday through Sunday, it is really only vibrant on Saturday mornings. This has presented a perennial problem for the Findlay Market Corporation, which faces a constant challenge to the market's success in overcoming the fact that Cincinnati's have been conditioned to shop the market primarily during a 6-hour window each weekend.

11. According to various opinions, the world must collectively reduce carbon emissions by between seventy and ninety percent by 2050 to avoid the worst effects of creating an artificially exaggerated climate change cycle. For comprehensive and accessible summaries of climate science for the non-scientist, see the Intergovernmental Panel on Climate Change's quadrennial Assessment Reports. The most up-to-date report is available via the IPCC website. See: Intergovernmental Panel on Climate Change. "Climate Change 2007: Synthesis Report." United Nations Intergovernmental Panel on Climate Change. <http://www.ipcc.ch/ipccreports/ar4-syr.htm> (accessed April 28, 2008).
12. For Ohio in general, extremely hot summer days will likely increase in number, as will the intensity of summer thunderstorms. Annual heat-related casualties in Cincinnati are projected to triple with an average warming of three degrees Fahrenheit, rising from fourteen deaths to forty-two. Ground level ozone, a major contributor to respiratory illnesses and already a root cause of Cincinnati's significant summer smog problem, is expected to increase as much as eight percent. Due to increases in natural hydrocarbon production by trees and shrubs during hot weather, air pollution would continue to worsen, a condition exacerbated by pollutants emitted by the region's coal-fired power plants. Insect-borne diseases such as malaria, dengue, and encephalitis could become more prevalent in the hotter, more humid future. For further information, see: United States Environmental Protection Agency. Document number 236-F-98-007s, "Climate Change and Ohio." United States Environmental Protection Agency. [http://yosemite.epa.gov/oar/globalwarming.nsf/UniqueKeyLookup/SHSU5BVJVM/\\$File/oh_impct.pdf](http://yosemite.epa.gov/oar/globalwarming.nsf/UniqueKeyLookup/SHSU5BVJVM/$File/oh_impct.pdf) (accessed May 12, 2008).
13. As of September 10, 2008 (the date of this paper's submission), the value of a metric ton of carbon emissions on the Chicago Climate Exchange, America's largest exchange, was \$2.50. By contrast, the value of the same metric ton on the European Climate Exchange was €22.86, or \$31.89.
14. Many argue that peak oil is the more pressing threat for the American metropolis, indeed for industrial economies in general. But alternatives for oil do exist, even if they are prohibitively expensive at this time. As oil prices rise, alternatives such as coal-based electricity, oil sands and oil shale, bio-fuels, and synthetic oil derived from coal will likely emerge. Unfortunately, these alternatives are still highly carbon intensive, thus it can be argued that climate change outweighs declining oil reserves as the primary motivator for long-term economic change. For an excellent thought experiment on the economic implications of both peak oil and climate change, see Kunstler, James Howard. *The Long Emergency*. New York: Atlantic Monthly Press 2005.
15. For discussion of the causes and effects of economic decentralization in urban environments, see Squires, Gregory D. *Urban Sprawl: Causes, Consequences & Policy Responses*. Washington, D.C.: The Urban Institute Press, 2002.
16. Dutton, Thomas A. "Colony Over-the-Rhine." *Black Scholar* 33, no. 3 (Fall, 2007): 14-27. Seizing upon a racially insensitive comment by which one of the entrepreneurs engaged in the revitalization of Main Street characterizes his efforts as "colonizing" the neighborhood, Dutton, a long-time Over-the-Rhine observer, betrays his disdain for the fact that redevelopment by business interests from outside the neighborhood may be inevitable.
17. Natural Resources Defense Council. "Hotter and Drier: The West's Changed Climate." Natural Resources Defense Council. <http://www.nrdc.org/globalWarming/west/west.pdf> (accessed May 22, 2008). The NRDC's document reports on evidence drawn from 50 scientific studies and 125 other government and scientific studies, concluding that anthropogenic climate change is already responsible for increased heat-related deaths and huge economic losses due to agricultural impacts.
18. In 2005 the US Supreme Court affirmed the use of eminent domain by local governments intent on boosting private development where deemed a benefit to the greater public good. *The New York Times*. "Justices Affirm Property Seizures." *The New York Times*. http://www.washingtonpost.com/wp-dyn/content/article/2005/06/23/AR2005062300783_pf.html (accessed August 9, 2008).
19. Fried, Marc. "Grieving for a Lost Home." *The Urban Condition*. Leonard J. Duhl, ed. New York: Basic Books, Inc. (1963): 151-171. Fried concludes that for the greatest number of affected people, dislocation due to urban renewal is likely to increase neither social nor psychological "pathology," nor is it likely to create new opportunities for social mobility.
20. City of Cincinnati Community Development Department. "Over-the-Rhine Comprehensive Plan, June 2002." City of Cincinnati. <http://www.cincinnati-oh.gov/cdap/pages/-3652/> (accessed August 15, 2008).
21. Dawkins, Casey. "Exploring Changes in Income Clustering and Centralization during the 1990's." *Journal of Planning Education and Research*, Vol. 26, No. 4 (2007): 404-414.
22. Preventing "Annihilation by Dissemination" is the goal of the Shishmaref Erosion and Relocation Coalition. Shishmaref, Alaska is an island so threatened by global warming, flooding, and erosion that the community has opted to relocate en-masse to mainland Alaska rather than simply dissolve. See Kolbert, Elizabeth. "Field Notes from a Catastrophe." New York: Bloomsbury Pub., 2006. See also Shishmaref Erosion and Relocation Coalition. <http://www.shishmarefrelocation.com/> (accessed August 3, 2008).
23. Andres Duany. "Three Cheers for Gentrification." *The American Enterprise Online*. http://www.taemag.com/issues/articleID.15591/article_detail.asp (accessed August 14, 2008).
24. Milligan, Melinda J. "Buildings as History: The Place of Collective Memory in the Study of Historic

Preservation." *Symbolic Interaction* 30, no. 1 (02/32, 2007): 105-123.

25. Milligan, Melinda. "Interactional Past and Potential: The Social Construction of Place Attachment." *Symbolic Interaction* 21, no. 1 (03, 1998): 1-33. Milligan's study of a campus coffee house that is relocated to a new facility documents the degrees to which those who worked in the old location attached themselves to the new, as well as chronicling the attitudes of new employees unfamiliar with the old. See also: Smith, Ronald W. and Valeri Bugni. "Symbolic Interaction Theory and Architecture." *Symbolic Interaction* 29, no. 2 (2006): 123-155.

26. As of September 5, 2008, a search of *Thomas* (the legislative website of the US Library of Congress) revealed that there were approximately 271 bills in the US Congress related to climate change. The one garnering the most news attention is S.3036, popularly known as the Lieberman-Warner Climate Security Act. One of its provisions is to create a mandatory cap-and-trade system for carbon emissions. United States Library of Congress. "Lieberman Warner Climate Security Act of 2008." *Thomas*. <http://thomas.loc.gov/cgi-bin/query/D?c110:3:./temp/~c110trRBuO::> (accessed September 5, 2008).

27. United States Department of Energy. "2007 Buildings Energy Data Book." United States Department of Energy. <http://www.btscoredatabook.net/default.asp> (accessed August 12, 2008).

28. Pacala, S. and R. Socolow. "Stabilization Wedges: Solving the Climate Problem for the Next 50 Years with Current Technologies." *Science* 305, no. 5686 (August 13, 2004): 968-972. Pacala and Socolow's work proposes to cap emissions at 2005 levels, and divides increasing carbon emissions into wedges assigned to different technology sectors for elimination. Buildings represent two of those wedges.

29. National Trust for Historic Preservation. "Sustainable Stewardship: Vincent Scully Prize: Preservation's Essential Role in Fighting Climate Change." National Trust for Historic Preservation. <http://www.preservationnation.org/about-us/press-room/speeches/sustainable-stewardship-scully.html> (accessed April 20, 2008). The preservationist argument rightly contends that the longer an existing building remains in service, the smaller its effective carbon footprint becomes, because the return on the "carbon investment" of its construction is "amortized" over a longer time span. But existing buildings rarely remain untouched; they are most often subjected to intensive renovations to make them suitable for contemporary use. To date, I am unaware of any peer-reviewed data establishing that the initial carbon investment in renovation work is significantly smaller than building new.

30. Cincinnati's downtown grid, including Over-the-Rhine, is aligned with the bank of the Ohio River, approximately 15 degrees off of true north. A serious carbon neutral plan for OTR would involve reorienting the street grid in addition to replacing a large number

of buildings. For an overview of the impact of street orientation on climate performance of cities, see Givoni, Baruch. *Climate Considerations in Building and Urban Design*. New York: Van Nostrand Reinhold, 1998., p. 286-291.

31. The City of Cincinnati recently completed a document aimed at reducing its contribution to climate change. The document advocates reducing carbon emissions 84% below 2006 levels by 2050, but it does not adequately contemplate the sweeping changes that will be required to achieve such a goal, including the renovation and replacement of energy-hungry buildings. City of Cincinnati. "Climate Protection Action Plan: The Green Cincinnati Plan." City of Cincinnati. http://www.cincinnati-oh.gov/cmgr/downloads/cmgr_pdf18280.pdf (accessed July 6, 2008).

32. A solution worth further exploration is to fund Over-the-Rhine's low-carbon restoration with the development of vacant or under-utilized city lands into net-zero communities. Five miles due east of Over-the-Rhine, the mouth of the Little Miami River empties into the Ohio in a wide basin similar to the "bottom" in which downtown Cincinnati lies. Within the Little Miami basin, the City of Cincinnati operates the Cincinnati Municipal Airport (Lunken Field), and the Cincinnati Park Board operates an adjacent playfield and golf course. The entire area would easily contain a city the size of both Cincinnati's central business district and Over-the-Rhine.

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