

PLACING COLOR:
ARCHITECTURAL COLOR & FACADE IMPROVEMENT PROGRAMS IN
COMMERCIAL CORRIDOR REVITALIZATION IN PHILADELPHIA

Erica Janine Maust

A THESIS

in

Historic Preservation

Presented to the Faculties of the University of Pennsylvania in
Partial Fulfillment of the Requirements of the Degree of

MASTER OF SCIENCE IN HISTORIC PRESERVATION

2013

Advisor
Eduardo Rojas
Lecturer in Historic Preservation

Acting Program Chair
Frank G. Matero
Professor of Architecture

For Kelton & Carrie.

ACKNOWLEDGEMENTS

I am most grateful to my advisor, Eduardo Rojas, for all of his advice, assistance, and support throughout this process of research and writing. His knowledge and insight was invaluable, and I have appreciated our conversations and his guidance. He has provided much more depth to this study than I could have achieved alone.

Many thanks to those members of the Philadelphia preservation community and community development corporations who are committed to making this city a better place. Without your help and enthusiasm, this research would not have been possible. I am grateful for your time and valuable knowledge of urban economic development.

Finally, thank you to my family and friends for your love and support over the past two years.

TABLE OF CONTENTS

LIST OF FIGURES	v
LIST OF TABLES	vii
INTRODUCTION	1
Changing the Urban Environment.....	2
Justification.....	4
CHAPTER 1: RELEVANT LITERATURE ON HISTORIC PRESERVATION & SUSTAINABILITY	10
Historic Preservation & Sustainability.....	10
Preservation & Economic Development	13
Façade Improvement Programs.....	15
Color	17
Architectural Color.....	19
CHAPTER 2: ARCHITECTURE & COLOR	24
Architectural Color History	24
Exterior Color as an Element of Building Assessment.....	32
Color, Perception & Environmental Experience	34
CHAPTER 3: PUBLIC SPACE & THE URBAN ENVIRONMENT	38
Public Space.....	38
Neighborhood Character & Sense of Place.....	40
Ubiquity of Connections to Place	41
New York City Transit System	42
Collaborative Project in the Historic Center of Quito, Ecuador	44
Colors in Tirana, Albania.....	47
Aesthetic Connectedness	49
CHAPTER 4: COMMERCIAL CORRIDOR REVITALIZATION	52
Commercial Corridor Revitalization.....	52
Environment and Urban Development	54
Commercial Corridors in Philadelphia	55
City of Philadelphia Façade Improvement Programs	56
Research Methodology	58
CHAPTER 5: PHILADELPHIA CASE STUDIES.....	63
Population Demographics	65
Residential Vacancy Rates	66
Population Demographics & Residential Vacancy Rates Analysis.....	68
Property Values	69

Property Values Analysis	75
CHAPTER 6: QUALITATIVE IMPACTS & RECOMMENDATIONS	76
Qualitative Aspects of Façade Improvement Programs.....	76
Façade Improvement, Community Development & Historic Preservation.....	77
Recommendations	80
CONCLUSION	82
BIBLIOGRAPHY	86
APPENDIX A: POPULATION, VACANCY RATES, AND PROPERTY DATA....	91
APPENDIX B: DEMOGRAPHIC DATA.....	96
INDEX	103

LIST OF FIGURES

Figure 1	Before and after photographs of façade improvements at Mermaid Bar, 6745 Germantown Avenue. Image courtesy of Mt. Airy USA Community Development Corporation.	8
Figure 2	Plate 157, “La Ventana Sala de Las Dos Hermanos, La Alhambra,” from <i>Plans, Sections, Elevations and Details of the Alhambra</i> (Goury et al 1842, 157).	20
Figure 3	Faber Birren’s geographic guide to selling with color in the continental United States (Birren 1945, 38).	22
Figure 4	Walter B. Denny, Selimiye Mosque courtyard, Edirne, Turkey. Ottoman Dynasty, 1568-1574. Digital reproduction of 1990 photograph. Available from: ARTStor, http://www.artstor.org (accessed March 28, 2013).	27
Figure 5	Walter B. Denny, Shah Mosque entrance, Isfahan, Iran. Safavid Dynasty, 1603-1619. Digital reproduction of 1977 photograph. Available from: ARTStor, http://www.artstor.org (accessed March 28, 2013).	28
Figure 6	Erich Lessing/ART RESOURCE, N.Y., Mezquita Mosque and Cathedral; view of red and white Moorish arches, Córdoba, Spain. 8 th century. Photograph. Available from: ARTStor, http://www.artstor.org (accessed March 28, 2013).	29
Figure 7	Color specimens for architectural exteriors from Andrew Jackson Downing’s <i>Cottage Residences</i> , 1847 (Downing 1847, 17).	31
Figure 8	<i>Spectrum of the Senses</i> , based on scopes of impression, action, and meaning (Meerwein et al 2007, 12).	35
Figure 9	Diverse architectural colors along a historic street in Quito, Ecuador. Photograph by Eduardo Rojas, 2012.	47
Figure 10	“Philly Painting” by Haas&Hahn (Jeroen Koolhaas and Dre Urahn), 2500-2800 Germantown Avenue, Philadelphia. Photograph courtesy of the City of Philadelphia Mural Arts Program, 2012.	50
Figure 11	2009 Targeted Blocks Grant program commercial corridors in Philadelphia. Map created by the author.	64
Figure 12	Percentage of population growth in each commercial corridor from 2000—2010, as compared to the City of Philadelphia.	66
Figure 13	Changes in Philadelphia vacant and occupied housing units between 2000 and 2010, according to census data.	67
Figure 14	Changes in vacant housing units in the Targeted Blocks commercial corridors between 2000 and 2010, according to census data.	68
Figure 15	Average and median market values for commercial properties that received funding from the 2009 Targeted Blocks program in the commercial corridor of 3900 & 4000 Block of Lancaster Avenue between 2007-2013.	71

Figure 16	Average and median property taxes of commercial properties that received funding from the 2009 Targeted Blocks program in the commercial corridor of 3900 & 4000 Block of Lancaster Avenue between 2007-2013.71
Figure 17	Average and median market values of commercial properties that received funding from the 2009 Targeted Blocks program in the commercial corridor of Ridge Avenue from Green Lane to Leverington Avenue between 2007-2013.72
Figure 18	Average and median property taxes of commercial properties that received funding from the 2009 Targeted Blocks program in the commercial corridor of Ridge Avenue from Green Lane to Leverington Avenue between 2007-2013.73
Figure 19	Average and median market values of commercial properties that received funding from the 2009 Targeted Blocks program in the commercial corridor of 5600 Block of North Fifth Street between 2007-2013.....74
Figure 20	Average and median property taxes of commercial properties that received funding from the 2009 Targeted Blocks program in the commercial corridor of 5600 Block of North Fifth Street between 2007-2013.....74
Figure 21	Before and after photographs of façade improvements at Nicken’s Agency, 6747 Germantown Avenue. Image courtesy of Mt. Airy USA Community Development Corporation.78
Figure 22	Before and after photographs of façade improvements at Johnson’s Barber Shop, 7128 Germantown Avenue. Image courtesy of Mt. Airy USA Community Development Corporation.79
Figure 23	Changes in Philadelphia population demographics between 2000 and 2010, according to census data.98
Figure 24	Changes in Hispanic population between 2000 and 2010 in census blocks located in areas in which the 2009 Targeted Blocks Façade Grant Program was implemented, according to census data.99
Figure 25	Changes in White population between 2000 and 2010 in census blocks located in areas in which the 2009 Targeted Blocks Façade Grant Program was implemented, according to census data.100
Figure 26	Changes in Asian population between 2000 and 2010 in census blocks located in areas in which the 2009 Targeted Blocks Façade Grant Program was implemented, according to census data.101
Figure 27	Changes in Black population between 2000 and 2010 in census blocks located in areas in which the 2009 Targeted Blocks Façade Grant Program was implemented, according to census data.102

LIST OF TABLES

Table 1	The Values of Urban Heritage. Source: Rojas (2013) (after Throsby [2002]; Mourato and Mazzanti [2002]).	11
Table 2	Percentage of population growth in each commercial corridor from 2000—2010, as compared to the City of Philadelphia.	91
Table 3	Changes in Philadelphia vacant and occupied housing units between 2000 and 2010, according to census data.	91
Table 4	Changes in vacant housing units in the Targeted Blocks commercial corridors between 2000 and 2010, according to census data.	92
Table 5	Changes in occupied housing units in the Targeted Blocks commercial corridors between 2000 and 2010, according to census data.	92
Table 6	Average and median market values for commercial properties that received funding from the 2009 Targeted Blocks program in the commercial corridor of the 3900 & 4000 Block of Lancaster Avenue between 2007–2013.	93
Table 7	Average and median property taxes of commercial properties that received funding from the 2009 Targeted Blocks program in the commercial corridor of the 3900 & 4000 Block of Lancaster Avenue between 2007–2013.	93
Table 8	Average and median market values of commercial properties that received funding from the 2009 Targeted Blocks program in the commercial corridor of Ridge Avenue from Green Lane to Leverington Avenue between 2007–2013.	94
Table 9	Average and median property taxes of commercial properties that received funding from the 2009 Targeted Blocks program in the commercial corridor of Ridge Avenue from Green Lane to Leverington Avenue between 2007–2013.	94
Table 10	Average and median market values of commercial properties that received funding from the 2009 Targeted Blocks program in the commercial corridor of 5600 Block of North Fifth Street between 2007–2013.	95
Table 11	Average and median property taxes of commercial properties that received funding from the 2009 Targeted Blocks program in the commercial corridor of 5600 Block of North Fifth Street between 2007–2013.	95
Table 12	Philadelphia population demographics between 2000 and 2010, according to census data.	96
Table 13	Changes in Hispanic population between 2000 and 2010 in census blocks located in areas in which the 2009 Targeted Blocks Façade Grant Program was implemented, according to census data.	96
Table 14	Changes in White population between 2000 and 2010 in census blocks located in areas in which the 2009 Targeted Blocks Façade Grant Program was implemented, according to census data.	97

Table 15	Changes in Asian population between 2000 and 2010 in census blocks located in areas in which the 2009 Targeted Blocks Façade Grant Program was implemented, according to census data.....	97
Table 16	Changes in Black population between 2000 and 2010 in census blocks located in areas in which the 2009 Targeted Blocks Façade Grant Program was implemented, according to census data.....	98

INTRODUCTION

Color is in everything! From costly architecture down to 10-cent thimbles!
How did this great color movement start?
How far reaching will it be?
How, when, and where will it end?
What effect is it having upon us?
How costly is it proving—to the manufacturer and to the consumer?

—*Magazine of Business*, 1928

The very beginnings of the use of color as it is experienced today in a commercial and environmental sense can be traced back to the 1920s, when American consumers became more conscious of the products they were buying and the messages those products conveyed to those around them. As vehicles, appliances, and housewares became ever more colorful, advertising continued to market a vibrant environment to the masses. What has been continually overlooked, however, is the role color plays in the urban environment. Although architectural color is a fundamental aspect of daily city life, it has been overlooked for decades in the realm of academic literature. Perhaps this can be explained through a suggestion of Mayer Spivack (the late artist and consultant on organizational behavior and learning):

Because the environment is familiar, because we walk on it, move through it, sit on it, and talk in it, without acting directly on it, we are accustomed to tuning our awareness to more significant things...our larger urban and natural environments are out of control precisely because they are out of awareness most of the time (Spivack 1974, 650).

The existing built environment and the historic fabric that contribute to the most important aspects of a place's character have are crucial to the conversation of sustainability

in urban heritage areas. As this discourse becomes ever more widespread and pertinent, the question of what to do with the existing historic fabric of cities always arises. The evolving natures of work, play, education, and lifestyle have dramatically altered the way people experience cities.

The field of historic preservation has played a pivotal role in communicating the many values of historic buildings, landscapes and environments to a greater public: as connections to a shared past, remnants of cultural histories, physical manifestations of embodied energy, and opportunities for economic growth and development in cities. As a result, buildings that may otherwise have been demolished have become success stories of adaptive reuse and rehabilitation, and entire neighborhoods have been transformed through preservation and urban renewal efforts.

CHANGING THE URBAN ENVIRONMENT

Exterior changes to existing historic structures in depressed urban historic areas signify financial investment and change, and have the potential to play a significant role in both urban preservation and revitalization. Changes to exterior architectural colors are perhaps the most visible signifier of such revitalization, as the use of color change as a tool in façade improvement programs nationwide demonstrates. As part of façade improvement programs, changes to the exteriors of existing buildings in historic cities are most often a visual indication of adaptive reuse. Urban façade improvement programs that are dedicated to commercial corridor revitalization provide a variety of funding and services to business and property owners. The existence of such programs suggests that beautifying neighborhoods through changes to existing building exteriors will benefit business and property owners economically.

This thesis is both a brief exploration of the history of exterior architectural color, and an analysis of the roles that color and color changes have played in recent years as a part of the City of Philadelphia's façade improvement programs—in particular, a 2009 initiative called the Targeted Blocks Façade Grant Program. Researching the measurable economic and social impact of façade improvement programs on commercial corridor revitalization projects throughout the city can determine the long-term sustainability of such programs after initial city investment. Changes to exterior color through façade improvement programs are indicative of changes of use of properties (for the better), and promoting these changes in façade colors has the potential to improve the quality of life in the urban environment by creating a more attractive environment in which people wish to live, work, and shop. This, in turn, promotes continued maintenance and adaptive rehabilitation of both the improved properties and the surrounding properties.

If the results of façade improvement programs are indeed successful as indicators of change within a community (even if it is not formally recognized as historically significant at any level), and thereby adaptive reuse of existing buildings, then the application of such programs within historic districts has the potential to dramatically impact the way we view, use, and reuse the existing built fabric of our cities. This thesis examines, from an restricted but significant perspective, the 2009 Targeted Blocks Façade Grant Program and its application citywide through Philadelphia-specific case studies that are exclusive to façade improvements or upgrades rather than those that include façade improvements as part of a more comprehensive rehabilitation strategy for individual structures or neighborhoods. This approach allows for analysis of the effect of facade improvements independently of other interventions to the buildings or the neighborhoods, and for observation of the effects of facade improvements—and particular color changes—over the

social and economic dynamics of the neighborhood. When façade improvements programs are initiated as an isolated activity, rather than one element of many in rehabilitation programs, the impact of changing the environment visually is more easily measured. The efforts of this and similar programs in cities throughout the United States are generally focused on cosmetic improvements to building exteriors: new signage, awnings, and paint colors. However, these small, seemingly insignificant changes can have a remarkable impact on the way residents interact with and within their urban environments. It must be noted that in adopting this approach, this thesis examines only one aspect of the multifaceted issue of urban socioeconomic development.

JUSTIFICATION

City planners often cite the importance of “public space” in urban centers, and preservation professionals are generally strong proponents of retaining historic fabric in the built environment (or at the very least, “faking it” with historically-accurate aesthetics). Where these disciplines continually have the opportunity to converge is in the realm of architectural exteriors. Building exteriors are, in essence, as much a part of the public realm as sidewalks, street furniture, and parks (among other urban elements). Architectural facades are arguably the most visible aspect to convey the character of a city, and contribute to a sense of place more so than any other aspect of the urban fabric, especially in a city of neighborhoods like Philadelphia. Color is perhaps the most easily seen and recognized physical aspect in our surroundings. Less obvious, however, and more fundamental, is the significant impact of architectural color on the overall perception of an urban environment. New fields such as embodied cognition and neuroaesthetics are only beginning to examine the role that the environment plays in the development of cognitive

capacity, as well as the biological role of aesthetic experiences in our day-to-day lives. As architects and designers have long suggested (and as neuroscientists and psychologists have begun to prove empirically), quality of place and aesthetics have a very real impact on how humans feel, act, and interact with one another in the urban environment.

This does not suggest that urban policies, economics, and city governance should cease to play such major roles in the management of cities. However, the design and maintenance of building exteriors in the public realm is often overlooked in areas lacking official “historic” designation, despite the fact that appearances of facades have the potential to most directly affect how public spaces are seen and used. This use of what Danish architect Jan Gehl so eloquently refers to as the “life between buildings” is intrinsically linked to quality of life in any given neighborhood, and in turn has the potential to contribute significantly to the economic dynamism of a city. Architectural color can play a significant role in the socio-economic revitalization of historic urban centers, and this thesis proposes that there are quantifiable measures related to individual buildings and neighborhoods when cities utilize façade improvement programs and exterior architectural colors are rediscovered and conserved, exposed, renewed, or even changed. This suggests a relationship between the quality of life and the economic development of neighborhoods and cities.

Buildings often change dramatically over time as urban neighborhoods go through cycles of growth and decay. As building functions evolve, so too do structures and facades. Façade improvement programs are one type of systematic approach by which governments and/or organizations assist property owners and businesses with upgrades to building exteriors. Such programs are often part of broader commercial revitalization strategies: improvements to commercial buildings have the potential to directly improve the business

district visually, thus benefiting it economically. Façade improvement programs claim to benefit communities in a number of ways, including enhancing a sense of place by making commercial districts more safe, inviting, interesting places to walk, shop, live, work, and spend time. Well-organized historic preservation programs often include façade improvement projects as a relatively small percentage of larger-scale structural improvements to buildings. When façade improvements are architecturally and historically sensitive, they are often attractive, functional, and contribute to coordinated streetscapes within commercial districts or corridors. In many instances, however, façade improvement programs are not necessarily tied to buildings, neighborhoods, or districts that are officially designated as “historic.” Most often such programs are used to revitalize depressed commercial corridors or areas of the city where historic importance and integrity is not as apparent or recognized.

While façade improvement programs are used extensively throughout the United States to revitalize commercial corridors, very little information is available about how they are developed, regulated, and maintained; what makes them “successful” (and how to determine and quantify this success); how buildings and facades are maintained after initial investment; and if continued investment into façade improvements is a sustainable and sensible practice.

Significant amounts of funding are available to Philadelphia property owners and businesses for façade improvement programs that address only visual exterior upgrades to historic or existing buildings while ignoring structural rehabilitation. According to Mayor Michael Nutter, façade upgrades will improve the aesthetics and overall business climate along existing and potential commercial corridors in the city. This substantial public investment suggests that immediate visual results in depressed urban neighborhoods may

jumpstart economic growth, but it does not require property owners or businesses to continue to invest in the structural rehabilitation of their buildings after façade upgrades have been completed.

Chapter 1 of this thesis features an overview of the literature associated with historic preservation and sustainability, economic development in relation to preservation and culture, color history and theory, and architectural color. It serves as a brief survey of the interconnected natures of urban culture and economics. Chapter 2 presents the history of architectural color as it has evolved from a material element, to a decorative one, to a part of a building's form. Exterior architectural color, like architectural design and style, conveys both function and meaning. Especially in urban commercial corridors, it is a means of visual communication and representation of what exists on the building interior. Chapter 3 provides a discussion of public space and the urban environment, in which it is argued that visual appearances affect the human experience of the urban landscape. Chapter 4 provides an overview of commercial corridor revitalization and introduces the 2009 Targeted Blocks Façade Grant Program in Philadelphia (an example of the projects completed during this program is shown in FIGURE 1). This chapter also presents the research methodology used in the analyses in Chapter 5. Data evaluation and analysis from Census comparisons is included in Chapter 5, along with changes in property value within the three of the five commercial corridors. Chapter 6 is a discussion of the effects of these programs in a more qualitative way on the neighborhoods from the perspective of local and City leaders. This chapter also includes recommendations for more in depth analysis and future use of façade improvement programs as an element of preservation, even when older neighborhoods or buildings may not be deemed “historically” significant.



Before



After

FIGURE 1 Before and after photographs of façade improvements at Mermaid Bar, 6745 Germantown Avenue. Image courtesy of Mt. Airy USA Community Development Corporation.

Using the Targeted Blocks program as a case study is important, as the Philadelphia neighborhoods in which these improvements took place in 2009 each have significant histories, yet have been continually overlooked for reasons of crime, poverty, politics, etc. By presenting the measures of true indicators in these areas (which happen to be economic and population based), this thesis aims to determine if these programs do have an impact on the dynamic relationship between economics and quality of life in urban areas. This research suggests that the five commercial corridors in the 2009 Targeted Blocks program

have performed better in terms of population growth and vacancy rate decline in comparison to the City as whole, and determines if continued public investment in façade improvements programs is sufficient to improving depressed urban neighborhoods and the City of Philadelphia.

CHAPTER 1: RELEVANT LITERATURE ON HISTORIC PRESERVATION & SUSTAINABILITY

The fundamental relationship between historic preservation and urban revitalization has been taught, studied, and practiced for years. Economic development experts, city planners, and urban designers are generally in agreement with preservation professionals that the rehabilitation of historic buildings—especially at a community or neighborhood scale—can have significant economic benefits for neighborhood residents and business owners. Studies have shown that the adaptation or reuse of existing buildings in deteriorating urban neighborhoods (whether or not they have been officially designated as “historically significant” on a local, state, or national level) can be economically reinvigorating for the community as whole (some examples include Stas 2007; Shipley et al 2006).

HISTORIC PRESERVATION & SUSTAINABILITY

Any act of building reuse is itself a form of preservation. However, where such reuse lies on a scale of preservation interventions can have remarkably varied impacts on the surrounding built environment and community behavior and interactions. Intensive building rehabilitation for a change of uses is a markedly different act that impacts the facets of urban life more so than simply a passive change of tenants. While historic buildings are—at the most fundamental level—real estate, consideration must also be given to their role as tangible representations of heritage within a city. Economist David Throsby suggests that the urban (or built) heritage can be conceived of as both fixed and cultural

capital (Throsby 2002). Preservation of the historic built environment therefore has the potential to provide not only economic benefits to an individual, community, or city as a whole—but also other qualitative social advantages that may often be overlooked, as shown in TABLE 1 below.

ECONOMIC VALUES					
USE VALUES			NON-USE VALUES		
Direct Use		Indirect Use	Existence	Inheritance	Philanthropic
Non-consumption	Consumption				
SOCIOCULTURAL VALUES					
Aesthetic	Spiritual	Social	Historic	Symbolic	

TABLE 1 The Values of Urban Heritage. Source: Rojas (2013) (after Throsby [2002]; Mourato and Mazzanti [2002]).

Despite this, the material heritage and built environment of historic cities has deteriorated in the United States, especially since the mid-twentieth century. Urban planner and preservation advocate Norman Tyler suggests that much of the decline of downtown vitality can be traced back to misdirected planning policies. “New office complexes with high-rise structures were emphasized, and not enough attention was paid to existing smaller businesses and downtown residential uses. The goal was to increase the tax base and generate revenues. But recent studies show the emphasis on the big project versus the small may be wrong” (Tyler 2000, 169). Economist Donovan Rypkema writes in *The Economic Benefits of Historic Preservation: A Community Leader’s Guide* that “historic preservation is an incremental economic development strategy”—rarely is it a large-scale or immediate solution to a city’s economic woes (Rypkema 1998, 22). Although private

developers and city administrators may wish to see positive results of preservation approaches immediately, almost always a building-by-building and a business-by-business approach is essential to the economic viability of a neighborhood's redevelopment. A neighborhood's capacity to sustain a business community, and its ability to overcome preexisting and intensely negative perceptions often requires such an approach, and the implementation of new planning policies that recognize this in cities has the potential to revitalize struggling commercial corridors in older neighborhoods. In contrast, however, urban historian Delores Hayden has suggested "preservation at the local level, in most cities and towns, tends to the adaptive reuse of historic structures by local real estate developers, with little public access of interpretation, and often involves gentrification and displacement for low-income residents" (Hayden 2007, 197).

In as much as the reuse of historic buildings is necessary for both preservation and development in cities (as counterintuitive as the two may seem), the process is necessary should cities hope to become participants and leaders in the ever important contemporary discourse of sustainability. It is estimated that more than 80 percent of the built environment that will exist in 2050 has already been built (Jones and Mean, 2010). It is therefore imperative that individuals and governments recognize the immediate need for the stewardship of heritage resources. Preservation and sustainability of the built environment extend beyond issues of embodied energy, however, as the resiliency of a city depends also on the continuance of broader ideals cultural and heritage:

Central to the greater productivity of place is the idea of the 'restorative commons', the public spaces, assets and resources we hold in common ownership or to which we at least have common access, of which heritage infrastructure networks form a foundational skeleton. An important part of this is a broader notion of asset-based welfare built on developing the shared assets that people hold in common, rather than private. The rewards of such an approach could be substantial. If the right patterns of participation and

stewardship are developed to support these assets then they also have the potential to produce the types of social and spatial relationships that help places endure difficult or stressful episodes in wider society and the economy (Jones and Mean 2010, 52).

These “heritage infrastructure networks” can only be maintained if the shared assets of the historic built environment offer opportunities for continued use and reuse. This acceptance and practice of building adaptation contributes to the dialogue and implementation of preservation as much as those of sustainability. It also contributes to the continuation of the cultural and social practices that take place in these shared spaces and within infrastructure networks, as urban development specialist Eduardo Rojas notes:

The preservation process in urban heritage can be considered self-sustained when the area is attractive for a variety of users—such as residents of different income levels, local shoppers, tourists, business owners, and people involved in community service, cultural, and government activities—and the associated demand for space mobilizes private investment and drive real estate returns to levels comparable to other active areas of the city (Rojas 2013).

Thus, the practice of preservation is, by nature, a collaborative undertaking that effects not only the changes that take place within the built environment, but also the resiliency of a community or city, the cultural and social networks that take place in and around the spatial infrastructure, and the financial resources and investments of public and private stakeholders.

PRESERVATION & ECONOMIC DEVELOPMENT

The literature on the economics of historic preservation is substantial and varied, and this chapter reviews only a sampling of what has been written on the topic. Economist Donovan Rypkema has written extensively on the economic benefits of preservation practices and policies. His book *The Economics of Historic Preservation: A Community Leader's Guide* features a series of arguments (supported by case studies, firsthand experience and

research) for preserving historic resources. In this and other work by Rypkema, preservation is presented as an invaluable tool for job creation, small business incubation and business recruitment, downtown revitalization, affordable housing, and heritage tourism.

In *Urban Economics and Real Estate Markets* (1996), authors Denise DiPasquale and William C. Wheaton present a combination of applications for economic theory and real estate to provide readers with the necessary tools and techniques for understanding the way urban real estate market operate. DiPasquale and Wheaton identify the patterns of urban land markets and the characteristics of behavior within individual parcels. Using Boston as a case study in their chapter, “The Operation of Property Markets,” the authors argue that relative property price and value of individual parcels within a city are effected by two types of situations: (1) a change in consumer valuations of physical or locational attributes, or (2) a change in the physical attributes of a property itself (DiPasquale and Wheaton 1996, 22-34).

Cultural economist David Throsby has also written extensively on the economic role of culture. In his 2001 book *Economics and Culture*, Throsby discusses the value of tangible heritage and cultural goods as related to both economic and cultural capital, and argues for the necessity of culture in economic development. He introduces the concept of cultural capital, suggesting that the economic sustainability of a place is intrinsically linked to its cultural sustainability. Throsby’s most recent book, *The Economics of Cultural Policy* (2010), makes a case for the relationship of the ideas of cultural capital to policy-making decisions in the public sector, and attempts to analyze the process of cultural policy-making from a broad economic perspective.

The Value of Culture (1996), edited by Arjo Klammer, is an interdisciplinary collection of texts on the relationship between economics and art. Contributors argue that culture manifests itself in every human activity, even down to the smallest aspects of ordinary life—yet the means by which these contributions are evaluated are tricky, unconventional, and constantly shifting (Klammer 1996). In *The Living City: How America's Cities are Being Revitalized by Thinking Small in a Big Way* (1994), author Roberta Brandes Gratz refers to the most genuine of urban revitalization processes as “urban husbandry.” Gratz argues that by looking at the built environment as a manmade ecosystem, revitalization can become the result of a more participatory planning effort of government, urban planners, and average citizens. By understanding the historic built environment and the social infrastructures that support it (Gratz argues that “people are rooted in neighborhoods because of...human factors as well as because of the more visible buildings”), management and conservation practices are more easily and effectively utilized (Gratz 1994, 153). Gentle change can often have the most significant impacts.

FAÇADE IMPROVEMENT PROGRAMS

It has proven difficult to find adequate academic literature on façade improvement programs. While these programs are virtually ubiquitous throughout the United States, it is a complicated process to determine the success or validity of many of these programs because often a number of other factors influence the outcomes. Preservation has traditionally been about saving historic buildings. “Yet a program intent only on saving downtown buildings is not enough,” Tyler suggests, “for the issue is not just the deterioration of the physical environment of the downtown, but also the decline of its economic and social environment” (Tyler 2000, 172).

As mentioned earlier in the chapter, several studies have shown that the preservation of the physical elements of a neighborhood—the preservation of older buildings, historic facades, and traditional streetscapes—are important elements that impact the economic and social health of urban neighborhoods. However, only in combination with the preservation and encouragement of other critical functional aspects of the environment do all of these factors contribute to successful and viable commercial revitalization. Façade improvement programs are uniquely tailored towards both of these goals: in addition to improving a neighborhood’s public space and enhancing the urban environment, they are also designed to encourage the continued viability of existing businesses and other social community assets. In as much as façade improvement programs are about beautification, they are also hugely important in supporting the economic and social traditions within urban neighborhoods.

Façade improvement programs are an integral part of historic preservation and downtown revitalization programs nationwide. Even in smaller cities (such as Portland, Maine, Knoxville, Tennessee, and Wichita, Kansas), façade improvement programs offer grant funding and design assistance to business and property owners for the purposes of restoring and reinvigorating commercial storefronts and business districts. Specific objectives for these programs in targeted neighborhoods or streets often include the following (adapted from the Objectives of the Economic Development Department of the city of Portland, Maine’s website):

- Encourage private investment in the visual improvement of commercial corridors (including storefronts, signs and awnings);
- Enhance streetscape appearances;
- Reduce vacancies in storefronts and upper floors;
- Strengthen and/or restore the original character of historic buildings;

- Provide a catalyst for others to improve their buildings, storefronts, signs and awnings.

COLOR

The history of architectural color is (much like the history of color theory) long and varied, and it is an especially compelling subject within the fields of historic preservation and urban planning. Color is perhaps the most easily seen and recognized physical aspect in our surroundings. Less obvious, however, and more fundamental, is the significant impact of architectural color on the overall perception of an urban environment.

Color is essential to the way humans experience the world—physically, emotionally and psychologically. One of the earliest formal explorations of color theory was Johann Wolfgang von Goethe's treatise on the nature, function, and psychology of colors. Published in 1810, *Theory of Colours* contained the poet's views on the nature of colors, and how humans perceive color. His writings are some of the earliest published descriptions on visual phenomena such as complementary colors and chromatic aberration. Goethe also investigated the way color affects individual physiologies, and his most fascinating theories explored the psychological impacts of different colors on human mood and emotion. He associated aesthetic qualities with colors: red with dignity, grace, and beauty; orange with nobility; yellow with brightness and good; green with grace and simplicity; blue with negativity, "a kind of contradiction between excitement and repose"; and purple with the unnecessary (Wolfgang von Goethe 1840, 311). Though hardly considered a scientific work in its time, many of Goethe's insights have been corroborated by hard science since the book's publication over two centuries ago, and his writings have influenced a number of prominent philosophers and physicists.

Throughout history, color has played an essential role in the built environment. Ancient Egyptian jars were made of richly colored glass, and Greek ceramic arts featured a range of colors that were tied to the materials from which they were made. Some historians have suggested that this tradition in the ceramic arts directly influenced the way in which Greek architecture and public monuments—such as the Parthenon—were painted in bright, vivid colors. In the 1940s, archaeologist Donald N. Wilber suggested that “the closest balance and most complete cohesion between exterior and interior color decoration has occurred in those historic periods in which enclosed, constructed space between out-of-door space and architectural space is most loosely drawn, as in Minoan palaces, Greek temples, and Islamic mosques” (Wilber 1942, 18). Thus, the relationship of color in architectural interiors is undeniably linked to what also existed on the exterior.

As artisan practices became more professionalized and specialized—and thus, separated from traditional craft—the current discipline of fine arts came into existence. Formal schools and academies taught and perpetuated conventions and styles, and thus color as imparted by the “artist” became available to the masses. During the mid-twentieth century, the practice of color was professionalized, as scientists (following in the footsteps of Sir Isaac Newton) became “concerned with ‘why’ light behaved as it did to create the spectrum, while aesthetic theorists wondered ‘how’ certain colors elicited human response or acquired their cultural meanings” (Błaszczuk 2012, 10). Perhaps one of the most well known of these professional color consultants was Faber Birren, who during the mid-twentieth century became a leading authority on the effects of color on one’s environment. His many writings and publications include *Selling with Color* (1945); *Principles of Color* (1969); *Color Psychology and Color Therapy: A Factual Study of the Influence of Color on Human Life* (1978); and *Light, Color and Environment: A Discussion of the*

Biological and Psychological Effects of Color, with Historical Data and Detailed Recommendation for the Use of Color in the Environment (1988).

More recently, the historian Regina Lee Blaszczyk has authored *The Color Revolution*, in which she documents the evolution of the color profession from the mid-nineteenth century to the 1970s. Blaszczyk's research chronicles how the changes in usage of color occurred as manufacturing, consumerism, and marketing fundamentally altered the global economy. *The Color Revolution* is inherently a history of color in the realm of product design and the industrial arts, a story of the advent of globalization, the commoditization of color, and the way it has impacted the built environment.

ARCHITECTURAL COLOR

Architectural pattern books produced in Europe as early as the eighteenth century greatly impacted architectural styles and tastes, as well as domestic life, throughout the Western world. "Such publications were primarily narrative and intended to influence the design values of the reader. They generally promoted an individual architect-author or specific housing reform concepts" (Anderson and Krafft 1994, 150). Folios containing illustrations made with colors plates, such as *Plans, Sections, Elevations and Details of the Alhambra* (1836–1845) by the British architect and designer Owen Jones noticeably affected architectural color of the Victorian age [FIGURE 2]. This tradition continued in publications such as Andrew Jackson Downing's *The Architecture of Country Houses* (1850); William T. Comstock's *Modern Architectural Designs and Details* (c. 1881); Albert Fuller's *Artistic Homes* (1882); and Edward C. Gardner's *Homes and How to Make Them* (1873), among others.

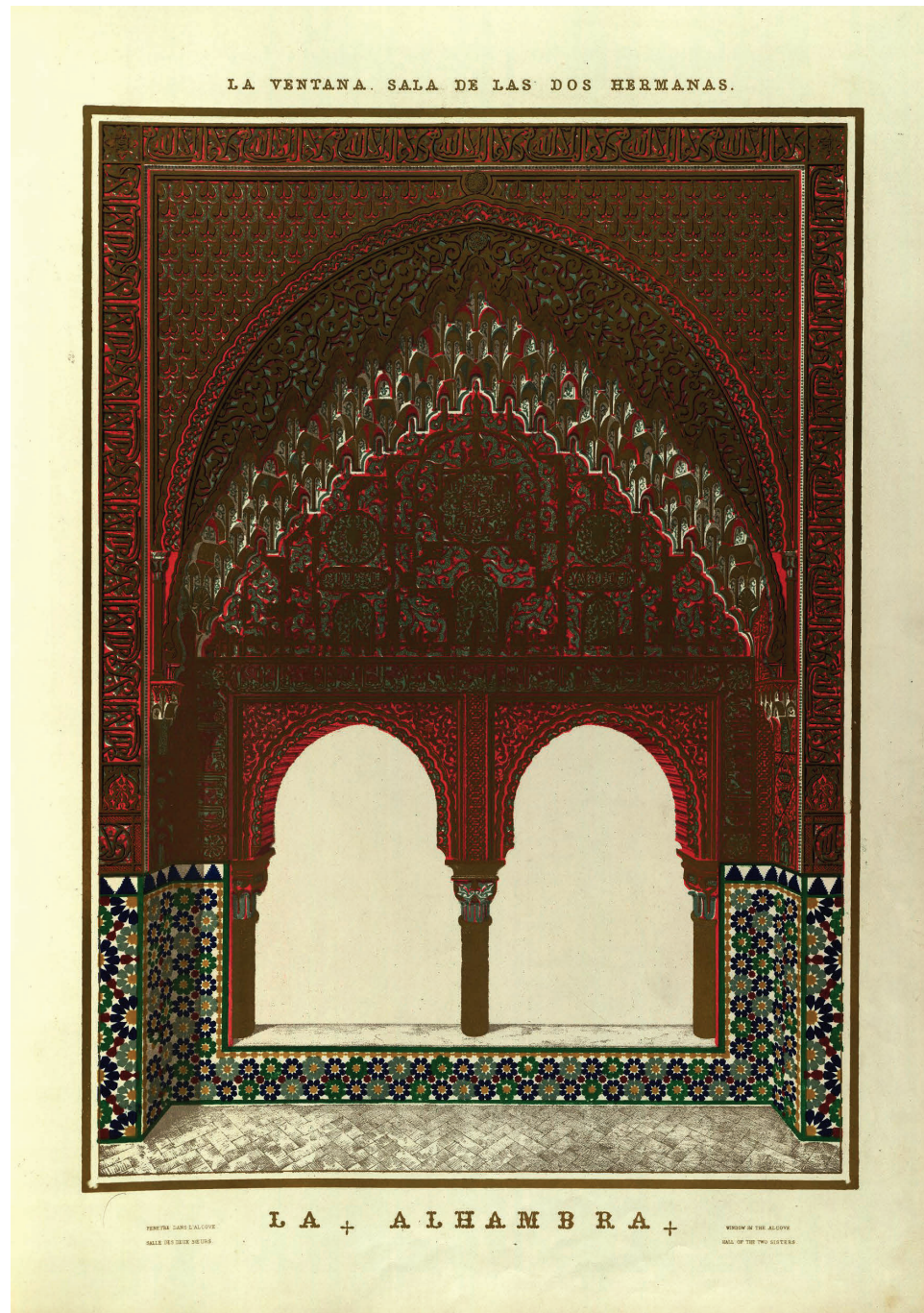


FIGURE 2 Plate 157, “La Ventana Sala de Las Dos Hermanos, La Alhambra,” from *Plans, Sections, Elevations and Details of the Alhambra* (Goury et al 1842, 157).

In “The Role of Color in Architecture” from *The Journal of the American Society of Architectural Historians*, Wilber was one of the first historians to identify the marked correlation between color and geography:

Color has played a prominent part in the architecture of many lands and periods. Historical examples run a wide gamut to include Egypt, Assyria, Minoan Crete, Greece, Maya, Spain and Mexico, Persia, India, China, and medieval Italy. Most of these countries either lie in the Mediterranean area or in the prolongation of these latitudes. The logical explanation is climatic; strong sunlight tends to absorb color so that in hot countries vivid surface appear quite subdued (Wilber 1942, 18).

Only a few years later, Birren suggested in his book *Selling with Colour* (1945) that sunlight played a large role in regulating human taste in color—and more specifically, the distribution of sunlight and geographic location. Birren argued that this knowledge was a fundamental aspect of marketing, advertising and product design, as consumers in different geographic area would want different things: “Where sunlight is abundant, the colors wanted are strong, rich, and frequently brilliant, like red—whether in northern latitudes or southern. Where sunlight is more scarce, the colors wanted are softer, duller and a greater preference for blue is noted” (Birren 1945, 39). Thus, in both architecture and advertising, regional color preferences can be both seen and understood [FIGURE 3].

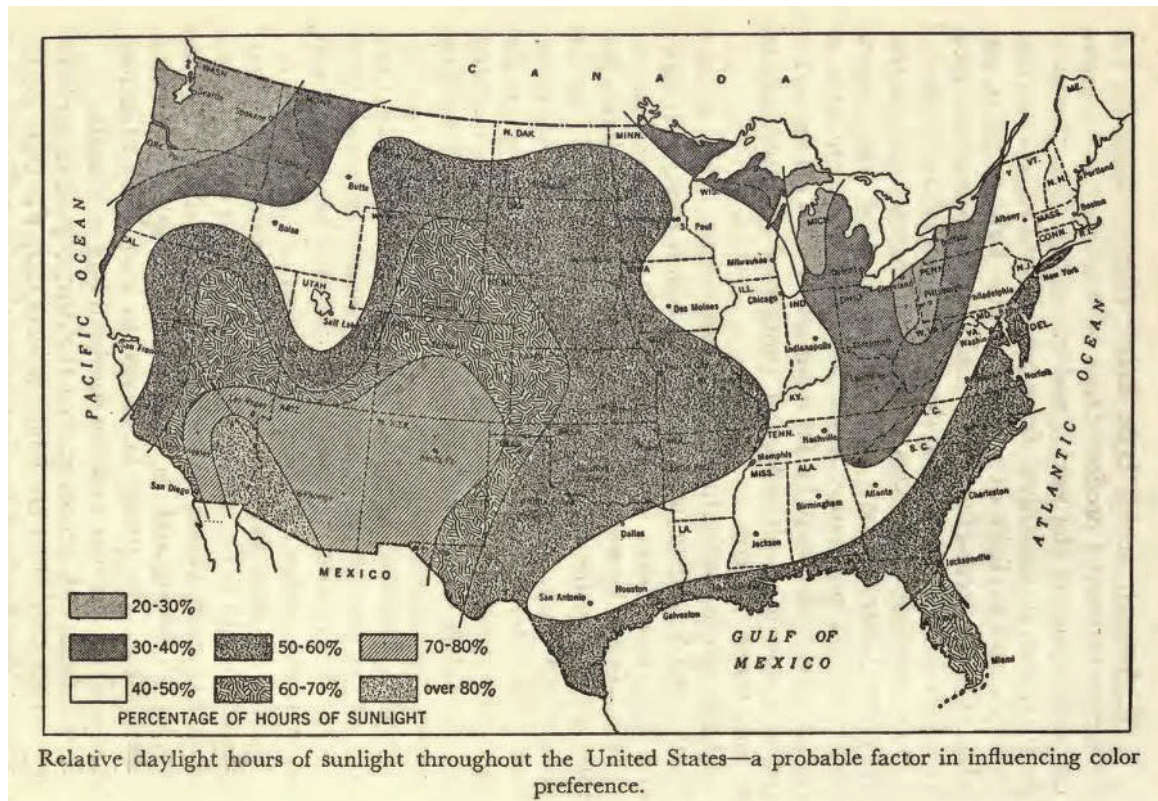


FIGURE 3 Faber Birren's geographic guide to selling with color in the continental United States (Birren 1945, 38).

In his dissertation “An Historical Survey of the Use of Exterior Color in Western Architecture” (1983), Philadelphia-based architect and interior designer Mark Karlen provides a comprehensive overview of the roles and uses of exterior architectural colors in a Western context. Karlen suggests that “The greatest potential for new uses of [exterior architectural color] lies in environmental color, at a scale beyond that of the individual building or group of buildings; but rather, at a scale which encompasses the broad complexity of urban functions and experiences” (Karlen 1983, 137).

More recently, contemporary scholars have begun to document the affects of color on the human experience of the built environment. In *The Color of Cities: An International Perspective* (2000), Lois Swirnonff documents the use of color in urban areas around the

world, demonstrating how color contributes to a city's unique character and appearance. Her book serves as an excellent record of urban architectural color, although its focus is primarily a demonstration on how local color selection is rooted in the geophysical, determined in large part by how colors originate in (and are altered by) the angle of the Sun's rays. Other experiments and studies conducted by Swirnoff and her students have suggested the important role of color and form, especially as it pertains to the built environment:

Our experiments suggest that color can be a significant attribute of form. Clearly, advantage can be taken of this attribute in environmental design. In architecture, for example, the texture of colored surfaces of buildings can be designed to change progressively in appearance during the normal daily variations in daylight illumination. Thus illusions or transformations, which are a visual device in nature, could be introduced to enhance aesthetically the human-made environment (Swirnoff 1976, 195).

Color, then, can not only be used to enhance the built environment and signify change, but can also serve as a profoundly powerful tool when used in urban façade improvement programs—especially as a unifying factor to the seemingly disparate disciplines of historic preservation, urban planning, sustainability, economic development, and architectural history.

CHAPTER 2: ARCHITECTURE & COLOR

Virtually no comprehensive historical studies of exterior architectural color have been written. Buildings and cities are constantly changing, and the same is true for the colors of urban landscapes. The use of color in architecture has shifted dramatically from a practice based purely on material availability and geographic locality to one of contemporary subjectivity. Technological advancements, color theories and histories, and the availability of paint in virtually any shade imaginable from a local hardware store have dramatically changed the way humans experience the world. Despite its obvious connection to the built environment, architect and designer Mark Karlen has noted that information about exterior colors has never been an integral part of the way architecture is thought about or studied (Karlen 1983, 4).

As the primary aim of this thesis is to examine the impacts of architectural color on surrounding neighborhoods in recent façade improvement programs in Philadelphia, this chapter is meant to serve only as a brief overview of the evolution of the use of color in architecture. The discourse of art history and theory has produced a variety of exceptional and comprehensive treatises on color, and in recent decades members of the architectural discipline have also become aware of the history and complexity of the issues of color in buildings and cities.

ARCHITECTURAL COLOR HISTORY

Especially in the past century, architectural historians have recognized the strong

relationship between geography and polychromatic architecture. In the 1940s, archeologist Donald N. Wilber was one of the first historians to propose that exterior architectural color is “more highly developed in a limited geographical zone,” suggesting that architectural color is inherently linked to global locality (Wilber 1942, 18). Several decades later, Lois Swirnoff, a well-known artist, colorist, and “design scientist” at Massachusetts Institute of Technology, published *The Color of Cities*, documenting the affects of light from the sun on architectural colors in cities across the globe:

Local expression is vividly coded in the color of cities. Patterns of usage emerge, showing a universal syntax within the diversity of local vernaculars. Over time and distance, variations in urban color appear to be influenced by their geographic locations. Clearly, the quality and intensity of environmental light depends upon the angle of the Sun. But more fundamentally, perhaps, environmental light may prove to be a formative condition, to which the human visual sense adapts itself, or is shaped. City color in diverse parts of the world shows a distinct relationship between locale and palette, a variance in spectrum shaped in light (Swirnoff 2000, ix).

Color in the urban landscape, then, is both a reaction to the environmental conditions in as much as it is a contributor. Romaldo Giurgola, the Italian-born architect and academic, has written: "It is the peculiar task of architecture to reach meaning" (Giurgola 1961, 11), although meaning along has never been the primary aim of architecture:

The central purpose of architecture is to provide shelter, protection, and accommodation for the physical activities of man. The communication function of architecture is necessary, however, to guide people into using buildings as intended and to enrich the experience of so doing. Meaning is, therefore, a necessary part of what makes a building architecture, but it is not sufficient. It is important that a building communicate its ability to shelter, protect, and accommodate; but it is equally or more important that it does in fact shelter, protect, and accommodate (Hershberger 1970, 39).

Architecture grew out of a basic human necessity, and as craft, artisan, and technological traditions advanced, so too did architecture's means of communication. The colors of the earliest human structures were limited only to material availability, and thus to geographic

location. As functional and decorative arts evolved, so too did the decoration of spaces, as Wilber recognized in the mid-twentieth century:

The use of color as architectural decoration is subject to certain general limitations. It is either of a permanent nature, as in glazed tiles or the actual hues of natural materials, or is it impermanent, as in painted surfaces. The two techniques produce markedly dissimilar effects. Secondly, the colors used in architecture were never, until relatively modern times, freely selected by the artisan, but were dictated by the material at hand or by cultural restrictions. For example, the colors of enameled surfaces depend upon the available glazing ores. Colors are frequently dictated by ritual custom and habit. Patterns transferred to architecture from the minor arts usually retain the color schemes developed in the original mediums... In fact, color came to architecture second hand, for wall paintings and reliefs illustrating architectural constructions preceded the decoration of the monuments themselves, and set the palette later used on buildings (Wilber 1942, 18-19).

Ancient architecture of Asia and the Middle East reflects these processes, as over time the techniques and uses of impermanent decorative materials became an integral part of the materials and form of buildings. Perhaps some of the most exemplary examples of this shift can be seen in the Selimiye Mosque in Edirne, Turkey [FIGURE 4]; the Shah Mosque in Isfahan, Iran [FIGURE 5]; and the Mezquita in Córdoba, Spain [FIGURE 6].

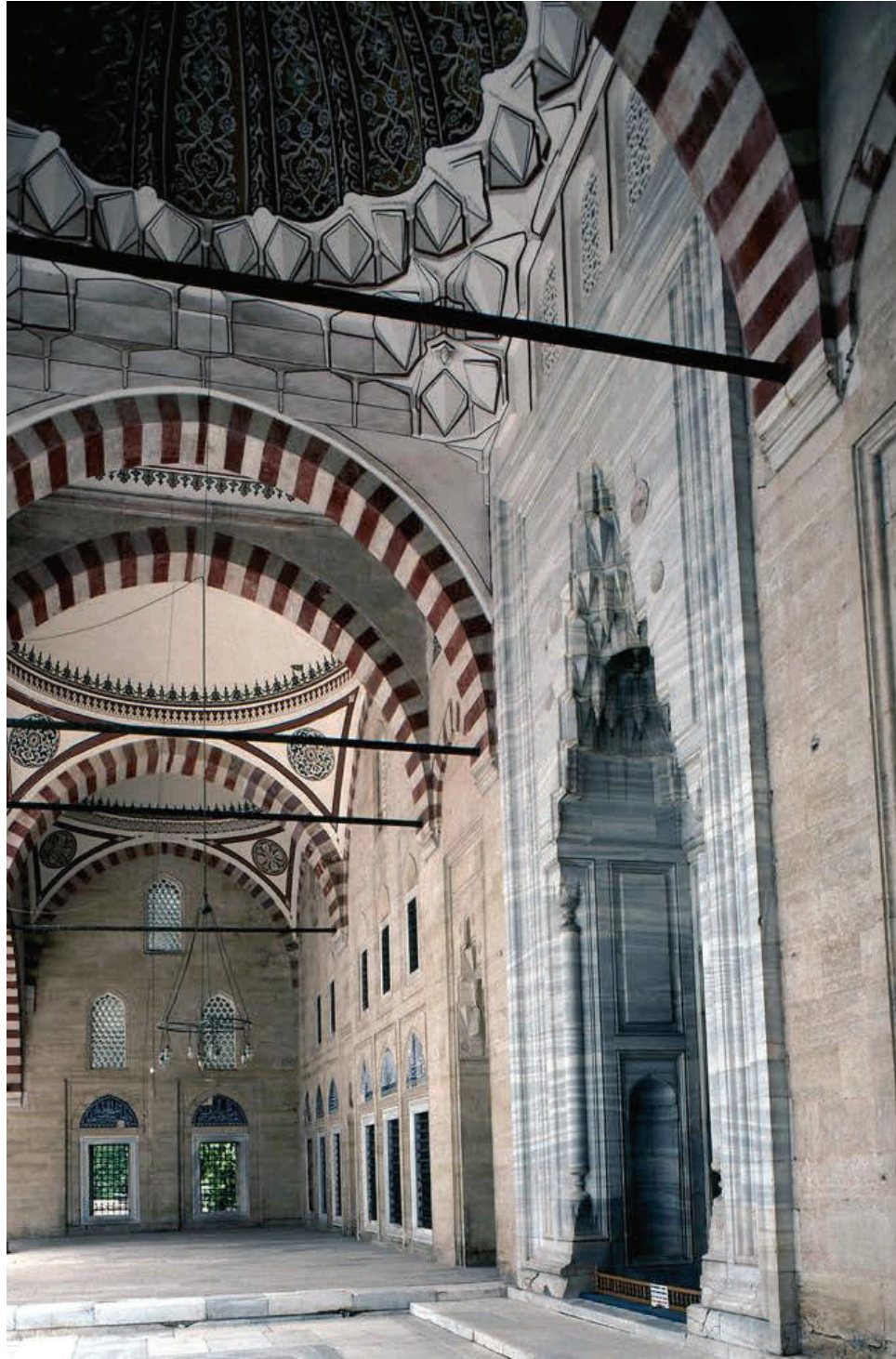


FIGURE 4 Walter B. Denny, Selimiye Mosque courtyard, Edirne, Turkey. Ottoman Dynasty, 1568-1574. Digital reproduction of 1990 photograph. Available from: ARTStor, <http://www.artstor.org> (accessed March 28, 2013).

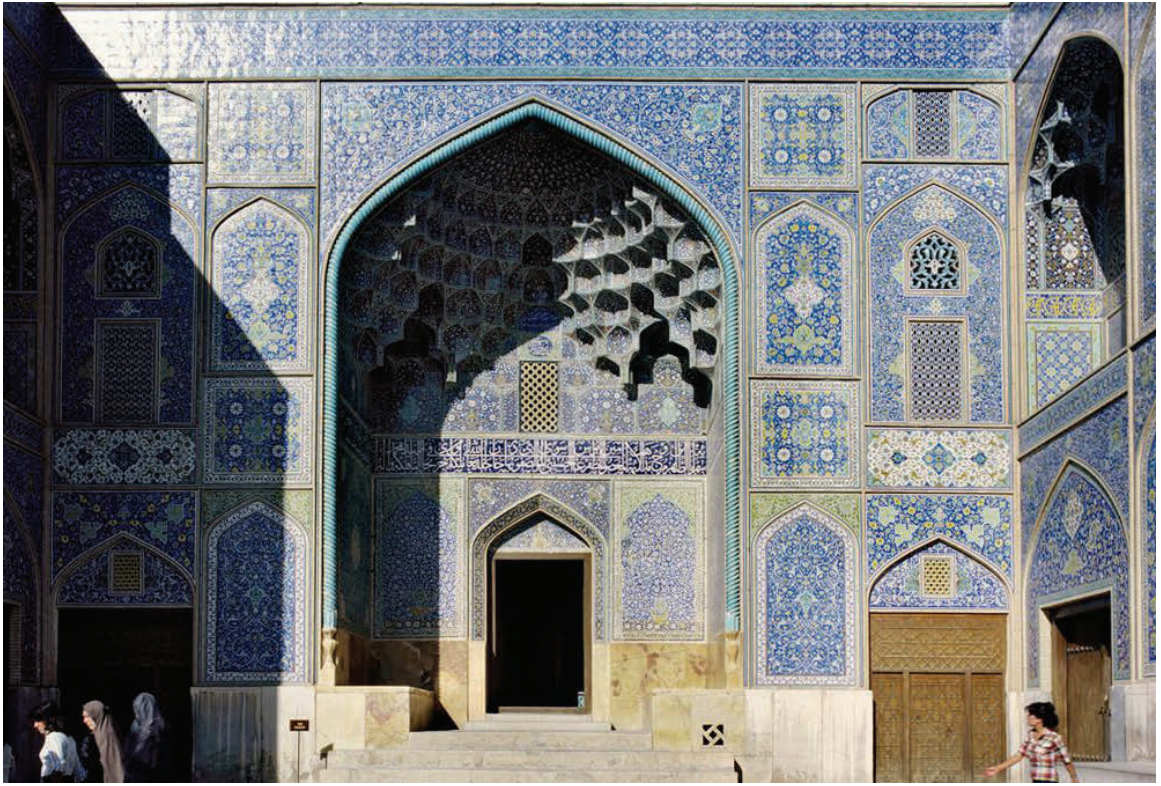


FIGURE 5 Walter B. Denny, Shah Mosque entrance, Isfahan, Iran. Safavid Dynasty, 1603-1619. Digital reproduction of 1977 photograph. Available from: ARTStor, <http://www.artstor.org> (accessed March 28, 2013).



FIGURE 6 Erich Lessing/ART RESOURCE, N.Y., Mezquita Mosque and Cathedral; view of red and white Moorish arches, Córdoba, Spain. 8th century. Photograph. Available from: ARTStor, <http://www.artstor.org> (accessed March 28, 2013).

Even centuries after these great architectural feats, Andrew Jackson Downing, the influential American architect, landscape designer and author, insisted on the importance of environmental color. “The color of buildings may very properly be made to increase their impression of truthfulness,” Jackson wrote in his 1847 book *Cottage Residences; or, A Series of Designs for Rural Cottages and Cottage Villas and their Gardens of Grounds* (Downing 1847, 14). Downing encouraged the readers of his nineteenth-century pattern books to consider color in their choice of materials for the home: yellow ochre mixed into the rough cast of lime mortar “gives the whole a slightly fawn-colored shade, more agreeable to the eye

than white,” and brick was always to be painted “to harmonize with the stone dressing of the windows, doors, cornices, etc. (perhaps a few shades lighter or darker,” with the effect being “highly satisfactory.” When it came to the colors of stone to be used in home construction, however, Downing fervently voiced restrictions in architectural material choice:

We are here, however, compelled to admit that we have serious objections in point of taste, to building small cottages of sombre [*sic*] looking, blue or grey stones. Dark limestone and granite, in a cottage, have a jail-like and severe aspect, and in all small buildings we would, if none but such dark colored stone can be had, prefer either to color the stone or to build of rough stone or brick, covering them with stucco. Even in villas of moderate size, a sombre [*sic*] stone often destroys much of the cheerfulness of a pleasing exterior (Downing 1850, 66–67).

Downing urged his readers to consider the entirety of the experience of the architecture when choosing both style and material:

A little reflection will convince any observing person of taste, that the color of a stone building has a great deal to do with its expression and with the effect it has upon our feelings; and that with the outward hue which the material employed will force the edifice for ever after to represent to the eye, is a point worthy of very serious consideration (Downing 1850, 68–69).

Downing was influenced by the writings of Sir Uvedale Price, the author of *Essays on the Picturesque*, and reiterated Price’s theories and opinions on sunlight and color in both the rural landscape and in the paintings and reproductions of it. He was so concerned with the ability of using words to convey “a proper idea of delicate shades of color” in his pattern books that he included “specimens” in *Cottage Residences* that he found to be “highly suitable for the exterior of cottages and villas,” as shown in FIGURE 7 (Downing 1847, 15–16).

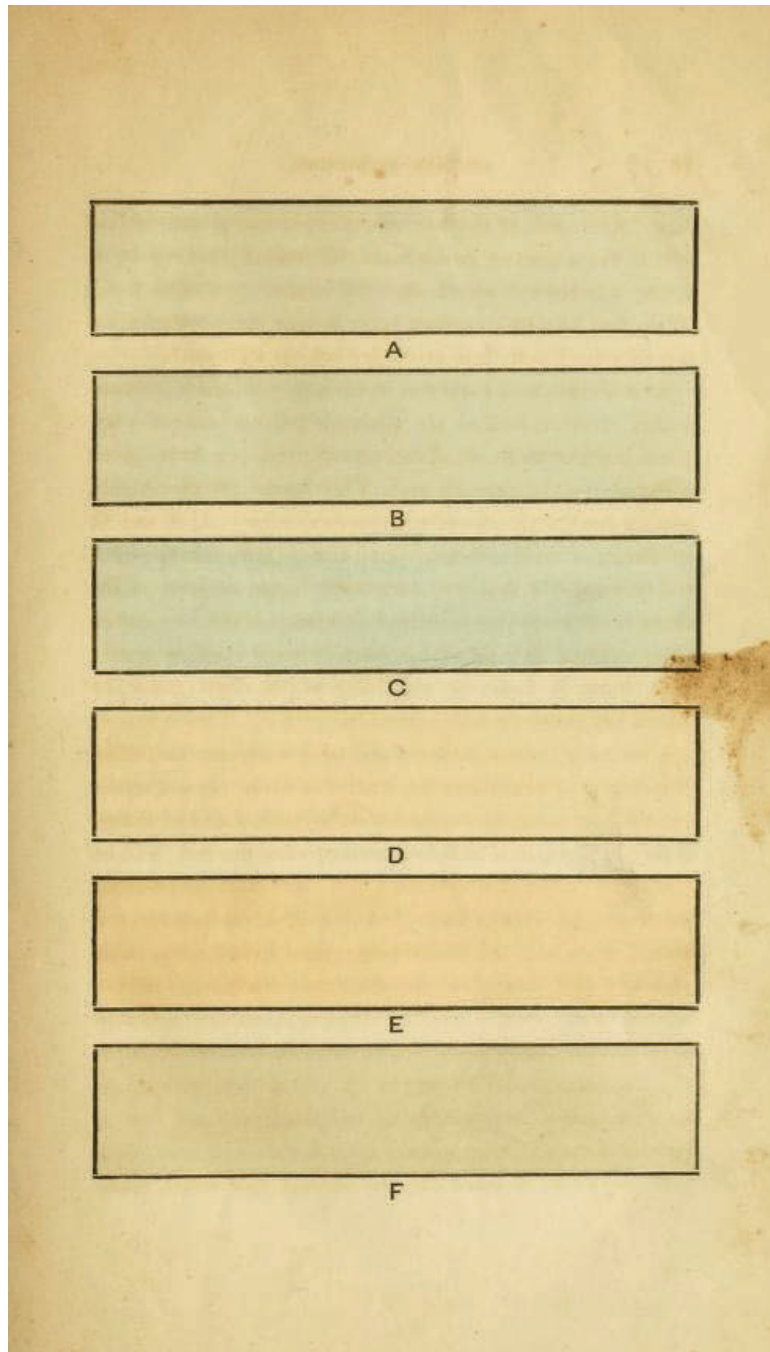


FIGURE 7 Color specimens for architectural exteriors from Andrew Jackson Downing's *Cottage Residences*, 1847 (Downing 1847, 17).

EXTERIOR COLOR AS AN ELEMENT OF BUILDING ASSESSMENT

The idea that older, historic buildings can be sustainable is directly related to the process of reuse. Existing structures in the urban landscape cannot be considered useful unless they can provide an opportunity for an owner to generate income or provide a basic need, such as shelter. While buildings can provide the public with a number of values, both tangible and intangible (as illustrated in FIGURE 1), in the process of commercial corridor revitalization, economic value is prioritized, and the ability to attract new business and retain existing businesses is weighed more heavily than other factors.

Perhaps the most important initial step of adaptive reuse projects is that of comprehensive building assessment. Basic assessments provide a building owner and a city with information about the most fundamental features of a structure: size, materials, condition, and property valuation and tax rates. More in-depth assessments, such as historic structures reports and detailed building analysis can provide a greater depth of knowledge of building materials and stability, as well as the important historical information that influences structural character, individual and collective views of place, and other intangible values. What is often overlooked in these assessments is how closely the tangible and intangible aspects of a building are tied. Put simply, a structure is physically nothing more than a series of mass and void, forms, shapes, and colors. Architect and academic Robert G. Hershberger has suggested that the “forms, spaces, colors, etc., of buildings do not contain meaning. Architects intend meaning for what they design; laymen attribute meaning to what they experience. In either case the meaning of particular forms and spaces depends upon the interpreter's previous experience with them or similar forms and spaces” (Hershberger 1970, 39). Studies and experiments by Lois Swirnoff suggest that

color combines with form in the discipline of design, thereby serving as an attribute of an object's dimensionality. "In dealing with the problem of integrating color into the environment," Swirnoff considers "that color must be thought of as an aspect of form at the outset of the design process. If color is to be used rationally, its influence on the perception of form and space should be studied by means of controlled experiments" (Swirnoff 1976, 191).

As color then becomes both a form and a function to which meaning is attributed in building evaluation processes, it becomes all but impossible to separate color from our perception of the built environment. And because color is so multifaceted and attached to any number of social and cultural associations, it is inherently linked to the values of those who see it. Hershberger suggests:

Values can be expressed in architecture both relative to the forms themselves, the use and purpose of the forms, and independently of either. With regard first to the symbolizing of forms, which are valued of themselves, we look both to those forms which are most often employed, and to those forms on which the most attention is lavished. Every period of history seems to have had its favorite forms, just as most architects seem to have theirs. It is even likely that our representations reflect our own formal values. If we appreciate triangles, we will probably see them in more objects than will people who do not appreciate them (Hershberger 1970, 52).

In situations of adaptive reuse and rehabilitation of buildings, exterior changes to color can play a pivotal role in urban communities. When the environment changes, so too does the interpretation of that environment, and thus the experiences of those in it. Educational consultant Eileen Adams has suggested that humans "are continually involved in a process of interpretation to give meaning to the sense of impressions derived from our experience of the environment" (Adams 1991, 20). As environmental psychologists have long suggested (Bell and Sundstrom 1997; Drew 1971; Ittelson 1977; Valdez and Mehrabian 1994; among others), colors precipitate strong and consistent effects on emotions. Because

of this emotional effect, fundamental behavior changes are also possible and even likely. Thus, changes in color in urban environments affect experiences, interpretations, emotions and behaviors. Hershberger suggests that “all responses to the environment, whether internal or external, are dependent to a large extent on a person's experience: his memories, purposes, and values...we attribute qualities or referents to external objects or events which, based on experience, are relevant to our condition” (Hershberger 1970, 43).

COLOR, PERCEPTION & ENVIRONMENTAL EXPERIENCE

In their fundamental review of color and human perception, *Color: Communication in Architectural Space* (2007), Gerhard Meerwein, Bettina Rodeck and Frank H. Mahnke consider colors as the “fundamental elements of our visual perception and environmental experience; they are the substance of how we experience the environment” (Meerwein et al 2007, 16). This perception and the full spectrum of sensual impression, meaning, and action as experienced in the environment are illustrated (after Meerwein et al) in FIGURE 8.

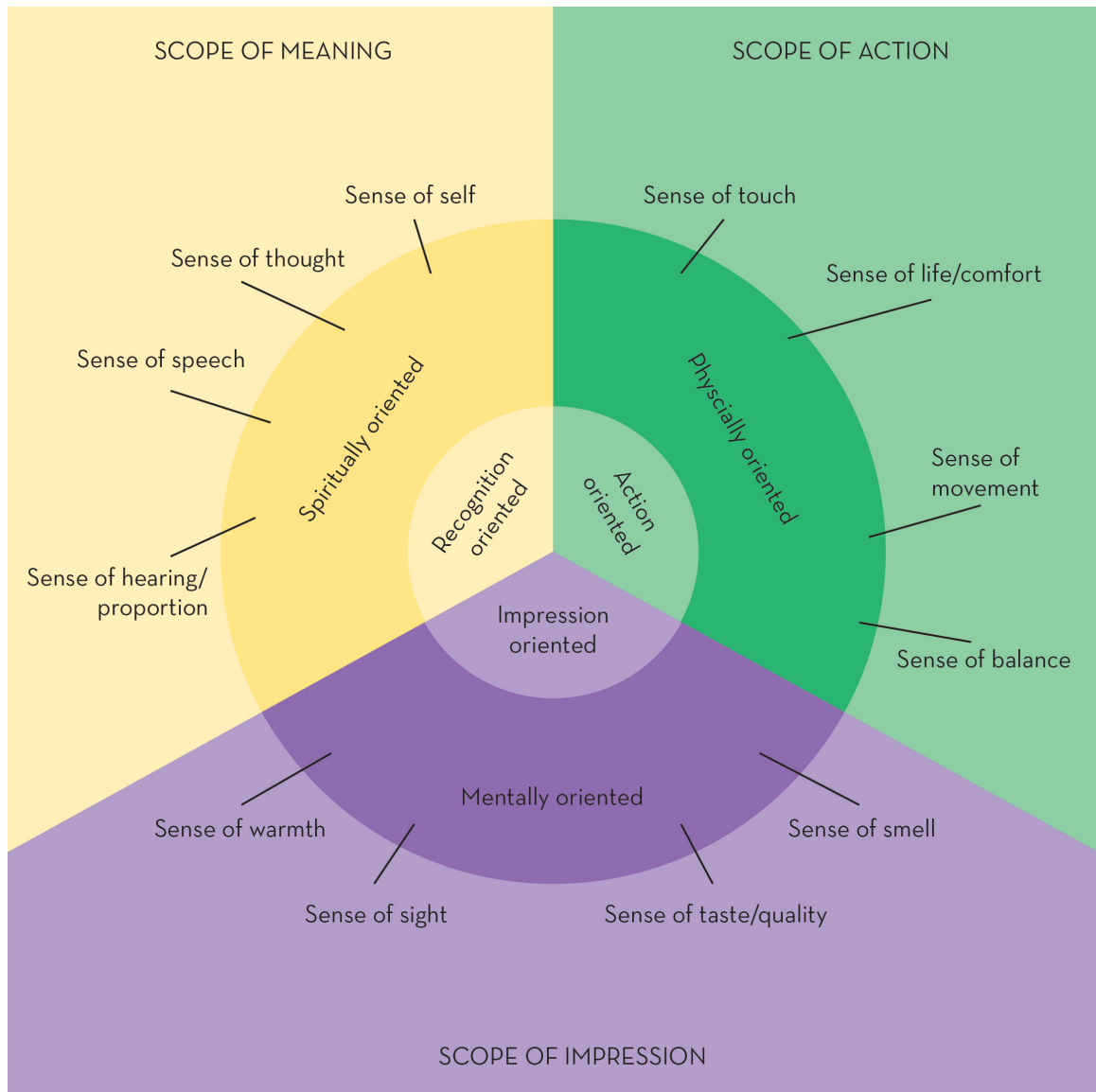


FIGURE 8 *Spectrum of the Senses*, based on scopes of impression, action, and meaning (Meerwein et al 2007, 12).

Accordingly, in the urban environment, color is of critical significance and serves a variety of functions. Of these functions, perhaps some of the most important pertain to the built environment. Colors communicate symbolic messages, contribute to order and differentiation, and indicate special functions. As demonstrated earlier, they provide

geographic, ethnic, and cultural attributes and serve as markers of personal and group identity. Most importantly, Meerwein et al. suggest that color crucially influences “the statement, effect, and acceptance of objects and space” (2007, 16). Hershberger suggests, “both the use and the enjoyment of architecture are to a very large extent based on meanings—in terms of form, status, use, purpose, and value” (Hershberger 1970, 55). Accordingly, these meanings are attributed to sensory experiences, the most prominent of which is visual in regards to the public space and the urban environment. According to Adams, “The built environment is infinitely varied in opportunities for aesthetic experience. It is a rich and easily accessible source of reference and a valuable resource for learning and teaching. It can provide a focus, a setting, and a subject for study” (Adams 1991, 19). Swirnoff cites the increasing concern of artists and educators with the prevalence of “visual incoherence and sterility” in the qualities of the contemporary urban environment: “Both are the result of a lack in the organization of light, color and form, rather than of their absence, in the environment” (1976, 191).

The history of architectural color demonstrates connectivity between the interiors and exteriors of individual buildings—material, locality, place, form, function, and meaning—and these forms, uses, and meanings have evolved over centuries. Integral to understanding and appreciating these historic connections is acknowledgement of the role of color in contemporary building assessment, both as a part of structural form and as means to convey a sense of place, history, and sets of cultural and economic values. Color and meaning are intrinsically tied to experience, and all have an impact on how humans interact within their urban environments. The tangible and intangible aspects of these

connections are intensely connected, especially in the shared urban realms of public space. These connections will be more closely considered in the following chapter.

CHAPTER 3: PUBLIC SPACE & THE URBAN ENVIRONMENT

As modernization and industrialization began to fundamentally change the way cities were planned and built in the late nineteenth century, Viennese architect and city planner Camillo Sitte emerged as a strong proponent for the past in the practices of urban planning. Sitte argued for a return to the human scale in architecture and bemoaned the loss of public spaces in cities. In *City Planning According to Artistic Principles*, his treatise published in 1898, he lamented “how in recent times the history of the art of city building has failed to synchronize with the history of architecture and with that of other creative arts” (Sitte 2007, 36). Even more than a century later, his argument for finding a balance between art and function is even more fundamentally valid, and his call for an “artistic renaissance” in the building of cities more important.

PUBLIC SPACE

A versatile city life depends largely on the physical qualities of public space. In *Cities for People*, Danish architect and planner Jan Gehl notes, "Planning and design can be used to influence the extent and character of outdoor activities. Invitations to do something outdoors other than just walking should include protection, security, reasonable space, furniture and visual quality" (Gehl 2010, 21). Neighborhood and business improvement districts (NIDs and BIDs), as well as Community Development Corporations (CDCs) exist almost solely for the purpose of maintaining the cleanliness and quality of public spaces to discourage crime and increase safety. Citywide programs such as Rebuilding

Together Philadelphia (although primarily focused on providing interior home improvements) have reported that exterior upgrades and block beautification projects in northwest Philadelphia neighborhoods have contributed to a decrease in crime in depressed urban neighborhoods. This grassroots approach to changing environmental conditions has a profound effect on residents in low-income urban neighborhoods. As of March 2013, the organization's website asserts:

Exterior work to homes, street beautification, and stormwater management projects are central to [Rebuilding Together Philadelphia]'s work to revitalize communities. Streetscaping, community greening and lot clean ups are opportunities for large groups of volunteers to see tangible progress at the end of a day. Block residents love the visual transformation, and often take on the responsibility for ongoing street maintenance after [the rehabilitation processes and volunteer days have ended].

Urban improvements implemented in public spaces have the potential to dramatically impact an entire city. Research conducted by the School of Architecture, Royal Danish Academy of Fine Arts analyzed the affect of such urban improvements in Copenhagen over a nearly 40-year period and documented a significant increase in pedestrian traffic. "The many whole-hearted invitations to walk, stand, and sit in the city's common space had resulted in a remarkable new urban pattern: many more people walk and stay in the city" (Gehl 2010, 13). In Melbourne, similar public space improvements in the decade between 1994 and 2004 have led to a 39% increase in pedestrian traffic during the day throughout the entire city (Gehl 2010, 16). While these urban improvements in Copenhagen and Melbourne involved a greater investment and more dramatic changes than those referenced in this thesis, it is important to note that almost any contribution or improvements to overlooked public spaces can lead to positive social impacts and neighborhood interactions, including increased pedestrian traffic and neighborhood safety.

Studies by the research group The Street Life Project have discovered that what attracts people most to public spaces and plazas is, surprisingly, other people. William H. Whyte chronicles this phenomenon in *The Social Life of Small Urban Spaces* (Whyte 2007, 353-354). Jan Gehl has also noted this tendency for self-congestion abroad in *Cities for People*, and in her seminal book *The Death and Life of Great American Cities*, writer and activist Jane Jacobs called for a return to mixed-use development and density in mid-twentieth century city planning, arguing that the then-current policies of urban renewal separated and sterilized formerly vibrant neighborhoods, causing the way residents interacted with their urban environment, and subsequently their neighbors, to change drastically. Jacobs recognized that these processes led to increasingly isolated and artificial urban spaces, which in turn failed to attract more people (Jacobs 1961).

NEIGHBORHOOD CHARACTER & SENSE OF PLACE

Neighborhood public spaces often provide a central focus for their residents, creating a sense of identity and a physical place associated with what Tyler refers to as “a common sense of purpose. Without this focus on local culture, residents do not feel they belong to a community, and it becomes difficult to raise support for local projects and activities. The need for a place with which to identify is increasingly important in a mobile society” (Tyler 2000, 170). The character of individual urban neighborhoods is tied to these public spaces in appearance, care, and use. With the loss or decay of these unique attributes comes the loss and decay of the surrounding communities, as Gehl has also suggested: “Social activities include all types of communications between people in city space and require the presence of other people. If there is life and activity in city space, there are also many social exchanges. If city space is desolate and empty, nothing happens” (Gehl 2010, 22).

As building exteriors are major contributors to this sense of place and the activities that take place within the public spaces of cities, their appearances and levels of upkeep are an essential aspect of perception of place within an urban environment. This perception is perhaps most strongly attached to appearance; although Adams has also argued “a sense of place is engendered through promoting feelings of attachment and belonging” (Adams 1991, 28). As Allan Jacobs and Donald Appleyard proclaimed in “Toward an Urban Design Manifesto” in 1987, connectedness to a place is tied to care, responsibility, and feelings of individual and collective ownership or stewardship:

“People should feel that some part of the environment belongs to them, individually and collectively, some part for which they care and are ever responsible, whether they own it or not. The urban environment should be an environment that encourages people to express themselves, to become involved, to decide what they want and act on it... Urban design has too often assumed that new is better than old. But the new is justified only if it is better than what exists. Conservation encourages identity and control and, usually, a better sense of community, since old environments are more usually part of a common heritage” (Jacobs and Appleyard 2007, 523).

Beyond the day-to-day role these public spaces play in individual and collective identity are important ties to a shared past. Hayden suggests, “Because the urban landscape stimulates visual memory, it is an important but underutilized resource for public history” (Hayden 2007, 196).

UBIQUITY OF CONNECTIONS TO PLACE

Because many of these ideas of character and identity are connected to more qualitative conditions than quantitative, it is difficult to both measure and interpret the relationship between the conditions of public spaces (the “life between buildings,” according to Gehl) and the impact of these conditions on urban life. The following series of short vignettes are presented in an attempt to make sense of this relationship and argue its importance and

necessity for recognition in the urban landscape. Despite slight differences in each short example, each narrative shares a common thread: that color, appearances, and upkeep influence not only character and a sense of place, but that even the smallest upgrades or improvements signify change, and thus have the potential for a far greater impact. In addition, this phenomenon is not limited to only one region or area of any city, country or globe, but has global ubiquity.

NEW YORK CITY TRANSIT SYSTEM

In his 2000 book *The Tipping Point: How Little Things Make a Big Difference*, author Malcolm Gladwell traces a variety of epidemics throughout recent history. Gladwell suggests that epidemics have small, seemingly insignificant triggers, or “tipping points” that have fundamentally changed the course of events. He most notably describes the subway phenomena of New York City in the 1980s and early 1990s. During these decades, the city’s transit system was ill managed and crime-ridden. Gladwell describes subway conditions as “chaotic”: platforms were dimly lit, stations were dark, damp, and dirty, with walls covered in graffiti. The subway trains themselves were also filthy: the floors were littered with trash, and entire interiors were filled with graffiti. Tracks were badly damaged, service was incredibly slow, and crime was so pervasive that by the end of the 1980s, there were more than 20,000 felonies a year on the system.

The crime epidemic of New York City during the 1980s and early 1990s was also one of the worst in the city’s history. In 1982, social scientists, James Q. Wilson and George L. Kelling, first introduced the “Broken Windows theory” in *The Atlantic Monthly*. Wilson and Kelling argue that at a community level, “disorder and crime are usually inextricable linked, in a kind of developmental sequence”:

Social psychologists and police officers tend to agree that if a window in a building is broken and is left unrepaired, all the rest of the windows will soon be broken. This is as true in nice neighborhoods as in run-down ones. Window-breaking does not necessarily occur on a large scale because some areas are inhabited by determined window-breakers whereas others are populated by window-lovers; rather, one unrepaired broken window is a signal that no one cares, and so breaking more windows costs nothing (Kelling and Wilson 1982).

Kelling challenged this idea that “no one cares” on the New York City subway system when he was hired as a consultant to the New York City Transit System in the mid-1980s. In *The Tipping Point*, Gladwell cites a number of occurrences that could have led to the nationwide decline in violent crime during the last decade of the twentieth century, many of which probably contributed to the decrease of crime throughout the city. He suggests that the tipping point for an epidemic such as citywide crime is something physical: “The impetus to engage in a certain kind of behavior is not coming from a certain person but from a feature of the environment” (Gladwell 2000, 140). Thus, one broken window leads to many, and one piece of trash on the sidewalk leads to a street full of litter. At Kelling’s urging, the New York Transit Authority initiated into practice the Broken Windows theory. Rather than focusing on the much larger issues of crime and reliability on the system, the subway director at the time, David Gunn, viewed the graffiti on the trains as “symbolic of the collapse of the system” and began the process of cleaning the system train-by-train. Graffiti was removed or painted over, and subway cars were gradually reclaimed, sending an “unambiguous message” to the vandals that the city was approaching regaining the transit system from the bottom up, car-by-car.

Other law enforcement methods were similarly applied using this strategy. Rather than attempting to penalize only more serious subway crimes, the transit police cracked down on fare-beating, viewing it as “a small expression of disorder that invited much more

serious crime” (Gladwell 2000, 143). When employed together, processes that would have seemed only to focus on superficial problems had a profound affect on crime, both on the transit system and throughout the entire city. The application of paint over graffiti on subway cars was simply a tipping point for the decrease of New York City crime; a visible proclamation that someone cared. It is proof that “an epidemic can be reversed, can be tipped, by tinkering with the smallest details of the immediate environment” (Gladwell 2000, 145).

COLLABORATIVE PROJECT IN THE HISTORIC CENTER OF QUITO, ECUADOR

In 1993, the Getty Conservation Institute collaborated with the municipality of San Francisco de Quito, Ecuador on a project in the city’s historic center. The cultural resources and buildings within the historic center all required care and conservation, and all rehabilitation also had to meet the needs and concerns of continued habitation and daily urban life within the historic core. While these joint conservation efforts addressed more than simply exterior improvements (building rehabilitation, environmental matters, and other planning processes were also carried out during the project), the collaborators understood that restoration processes of historic complexes act as catalysts for improvement of the greater urban environment: “the merits of expanding conservation projects that radiate from a single building into its immediate environment...could have immediate results of improving the urban environment and the quality of life of the local population considerably” (Getty Conservation Institute 1994, 5).

Specific building conservation support was carried out along Calle García Moreno in the historic center. The pilot project (which, as of 2013, has not yet been evaluated) documented external facades using photogrammetric processes to determine the colonial

and nineteenth century building, while also investigating the structural needs for rehabilitation in order to propose interventions. Thus, external improvements and changes to exterior colors were not only based on historical data and research, but were also combined with structural rehabilitation.

Not only were the buildings along Calle García Moreno a part of Quito's historic center, they also represented decades of neglect and urban decay. The buildings had deteriorated to the point that they had become, according to the Getty report, "sanitary, accident, and fire hazards," with little upkeep and few repairs (1994, 8). Given this, the collaborators realized that "a sympathetic approach to the human factor with its socio-economic implications and demographic projections" was fundamental to the undertaking: "residents and users who enjoy a better quality of life will in turn enhance the conditions and dignity of the urban environment of the historic center" (Getty Conservation Institute 1994, 9).

The color changes proposed for each individual building were based on stratigraphic data gathered by the researchers. The historic colors selected for restoration were chosen from the nineteenth century sampling data. Architects and preservation professionals involved in the process stressed the need for preservation of the original architectural fabric and its "esthetic, historic, social, and cultural values," and "the importance of defining what [was] 'original' was viewed as essential" (Getty Conservation Institute 1994, 14). Surveys conducted during the process ascertained that a majority of the residents viewed the rehabilitation processes with a positive attitude. Nearly 90% of those surveyed believed that the project would prompt increased participation in the community, including clean-up and public awareness of the historic center's importance (Getty Conservation Institute 1994, 19).

This unique and collaborative project between the Getty Conservation Institute and the city of Quito is exemplary of the difficulty of the process of “reversing the decline in physical fabric, social conditions, and economic viability in an historic center.” Implementation requires sensitivity to the needs of diverse populations, as well as constant consultation and collaboration between specialists of all fields and disciplines (Getty Conservation Institute 1994, 25). The project is a testament to the necessity of structural rehabilitation in building improvements, but it is also yet another example of the impact that the change of environment can have on the quality of life in urban neighborhoods and historic centers [FIGURE 9].



FIGURE 9 Diverse architectural colors along a historic street in Quito, Ecuador.
Photograph by Eduardo Rojas, 2012.

COLORS IN TIRANA, ALBANIA

In a recent TEDX Talk in Thessaloniki, politician Edi Rama (the former mayor of Tirana, Albania) shared with his audience the joy color can give to lives and communities when art is intertwined with politics. As the mayor of Tirana for eleven years (2000–2011), Rama advocated for the role of color in the betterment of the experience of public urban spaces. During his administration, dozens of building facades and exteriors were painted brilliant

colors—a drastic change from the dull, cement grey landscape of the city. Rama used changes in architectural color to revive a hope that had been lost in the city, and considered the use of color not just an artistic act, but a form of political action. During his talk at TED, Rama described the crowds of people and the traffic jams that occurred after the painting of the first building in Tirana from a depressed grey to a brilliant orange:

The rehabilitation of public spaces revived the feeling of belonging to a city that people lost. The pride of people about their own place of living, and there were feelings that had been buried deep for years under the fury of the illegal, barbaric constructions that sprang up in the public space. And when colors came out everywhere, a mood of change started transforming the spirit of people. Big noise raised up: “What is this? What is happening? What are colors doing to us?”

Rama cited a decrease in litter, a decline in crime throughout the city, and an increase in taxpaying after his administration began changing the color of building exteriors and facades. People “started to feel something they had forgotten, and beauty was acting as a guardsman where municipal police, or the state itself, were missing.” Rama attributed other positive impacts throughout the city to the changing architectural colors. Waterways and riverbanks were cleaned up, and illegal buildings and constructions were demolished. Over 50,000 trees and bushes were planted throughout the city, and a green tax was established that was accepted and paid by almost all citizens. More young people were recruited into the political administration, leading to the creation of “a de-politicized public institution” where both men and women were equally represented. “The paint on the walls did not feed children,” Rama conceded, “nor did it tend the sick or educate the ignorant, but it gave hope and light, and helped to make people see there could be a different way of doing things, a different spirit, a different feel to our lives, and that if we brought the same energy and hope to our politics, we could build a better life for each other and for our country” (Rama 2013).

AESTHETIC CONNECTEDNESS

The narratives presented in this chapter represent only a small sampling of the ways in which changes in the urban landscape can have a profound impact on the relationship between humans and their environment. Gehl has argued in *Cities for People*:

Not surprisingly, the close connection between people's use of city space, the quality of city space and degree of concern for the human dimension is a general pattern that can be shown at all levels. Just as cities can invite city life, there are many examples of how the renovation of a single space or even change in furniture or details can invite people to a totally new pattern of use (Gehl 2010, 16).

In a *New York Times* article from February 2013 (“Why We Love Beautiful Things”), author Lance Hosey presents recent scientific research on the developing field of neuroaesthetics: “Brain scan studies reveal that the sight of an attractive product can trigger the part of the motor cerebellum that governs hand movement. Instinctively, we reach out for attractive things; beauty literally moves us.” Mural arts programs and beautification programs in cities throughout the United States and abroad continue to support and emphasize this statement. The 2006 Favela Painting project in the slums of Rio de Janeiro by the Dutch artist duo Haas&Hahn is one such example of the power of community-driven art interventions in struggling urban neighborhoods. The Favela Painting project educated and employed local youth and residents, offering alternatives to lifestyles of crime and drug trafficking in Vila Cruzeiro. The project was such a success in Brazil that the Haas&Hahn are replicating it in the Germantown neighborhood of Philadelphia in collaboration with the City’s Mural Arts Program [FIGURE 10].



FIGURE 10 “Philly Painting” by Haas&Hahn (Jeroen Koolhaas and Dre Urahn), 2500–2800 Germantown Avenue, Philadelphia. Photograph courtesy of the City of Philadelphia Mural Arts Program, 2012.

As Hayden suggests: “Public history, architectural preservation, environmental protection, and public art can take on a special evocative role in helping to define a city’s history if, and only if, they are complemented by a strong community process that establishes the context of social memory” (Hayden 2007, 199). Her sentiments offer a solution to the problems Camillo Sitte faced in 1898:

Today nobody is concerned with city planning as an art—only as a technical problem. When, as a result, the artistic effect in no way lives up to our expectations, we are left bewildered and helpless; nevertheless, in dealing with the next project it is again treated wholly from the technical point of view, as if it were the layout of a railroad in which artistic questions are not involved (Sitte 2007, 36).

In urban neighborhoods especially, a shared sense of identity among residents is the result of shared spaces, cultural activities, and experiences. The character and quality of public spaces are largely dependent on public involvement and investment. Government support (financial and otherwise) in the care and maintenance of privately owned building facades that contribute to urban character may contribute to the overall attractiveness of a neighborhood. This, in turn, influences things like quality of life. Thus, visual improvements often lead to other beneficial attributes that are more difficult to quantify. The following chapters present five such neighborhoods in Philadelphia and examine those attributes or effects of façade improvements that *are* measurable in determining to what extent the changes in the built environment impact cities.

CHAPTER 4: COMMERCIAL CORRIDOR REVITALIZATION

In *Fixing Broken Cities: The Implementation of Urban Development Strategies* (2009), John Kromer (a Senior Consultant for the University of Pennsylvania's Fels Institute of Local Government) describes urban repopulation strategies from origin to execution to impact. Repopulation and redevelopment strategies are designed to attract residents, businesses, jobs and visitors to urban areas that have experienced decades of decline and abandonment. In short, these strategies are executed in an attempt to make cities livable. Part of Kromer's research chronicles the role of Philadelphia's Center City District in revitalizing downtown Philadelphia through a series of initiatives that focused on streetscape beautification and security: intensive street cleaning and public space planning, hiring of security personnel, and implementation of promotional campaigns. The combination of these activities helped reduce crime in Center City and sparked a high volume of residential development—the results of which can be seen throughout Philadelphia's Center City neighborhoods.

COMMERCIAL CORRIDOR REVITALIZATION

Urban commercial corridor revitalization projects are similar in many ways to the redevelopment strategies Kromer profiles in *Fixing Broken Cities*. Commercial corridors are most generally defined as major city streets lined with commercial activities: a mixture of retail establishments, office buildings, restaurants, occasional residential buildings, and parking facilities. (Philadelphia's commercial corridors are also often host to vacant lots.) In *Close-Up: How to Read the American City* (1973), Grady Clay (a city planner and urban

affairs specialist) argued that commercial corridors represented typical landscapes in American cities in the mid-twentieth century, as these are the areas where city residents are participants in urban life—where they work, shop, travel to and from, and occasionally live (Clay, 1973). Dr. Anastasia Loukaitou-Sideris, Associate Dean of Academic Affairs and Urban Planning Professor at the Luskin School of Public Affairs at University of California, Los Angeles, has suggested:

[Commercial corridors] cut across different urban sections, serving as access routes and travel corridors. Prior to the construction of freeways they were the principal traffic arteries of the city, and they still carry a significant share of vehicular traffic. Inner-city commercial strips can be characterised as the 'in-between' spaces of the city. They connect centres with sub-centres, and the latter with one another, in the multi-centred urban expanse that is typical of the post-industrial American city (Loukaitou-Sideris 1997, 1).

Loukaitou-Sideris has chronicled the compelling history of commercial corridors from their mostly successful and lucrative beginnings, and has suggested that changes to the urban landscape in the later half of the twentieth century have created a problematic environment in commercial corridors in American cities. Freeways established other means by which urban residents were connected to goods and services, and trends of suburbanization in the post-war years have led to decades of disinvestment, contributing to arbitrary development, haphazard planning practices, and high crime rates in urban commercial corridors. Combined, these elements have resulted in poor connections to surrounding residential neighborhoods, and created a problematic environment for business and property owners in commercial corridors—as well as unsafe and unwelcoming destinations for shoppers and patrons.

In Loukaitou-Sideris' study of three commercial corridors in Los Angeles, she cites the “dilapidated appearance of the streetscape” as highly ranked among people's perceived problems in the neighborhood: “Many complained about the deteriorating buildings, the

eyesore of billboards, the rubbish, dirt, graffiti, and the lack of greenery” (1997, 15). After conducting resident surveys, Loukaitou-Sideris reported “more than half of the respondents expressed their frustration with the quality and limited number of retail establishments, lack of open space, landscaping, and the inadequacy of security, cleanliness and community services.” When expressing their desires for change, users of these commercial strips responded with suggestions for safe street environments, better aesthetics, and cleanliness. Loukaitou-Sideris writes that more specific suggestions included facelifts for existing buildings, addition of greenery and planting of street trees, and the elimination of large billboards—all aesthetic changes to the exterior appearances of the streetscape and neighborhood (1997, 17).

ENVIRONMENT AND URBAN DEVELOPMENT

Similar to the 1997 Los Angeles study, a recent Temple University study published in the November/December 2012 volume of the journal *Landscape and Urban Planning* presented research that analyzed the association of vegetation with crime using Philadelphia as a case study. The study, “Does Vegetation Encourage or Suppress Urban Crime?” examined rates of assaults, robberies, burglaries, and thefts in relation to remotely sensed vegetation abundance at the Census tract level, and the results indicated that an abundance of vegetation is significantly associated with lower rates of all of the crimes listed above, with the exception of theft. This suggests that urban planning policies must incorporate sustainable methods of crime prevention that involve environmental changes into city planning (Wolfe and Mennis 2012).

In March of 2013, *The Philadelphia Inquirer* published an article to their website titled “A New Excitement about Philly.” The article, written by journalist Larry Eichel,

suggests that alternative ideas of urban development as tested in Philadelphia may be the key to the dynamism of urban futures. Urban analysts argue “that quality of life has become more crucial to a city's prospects, because young adults demand it, and many jobs no longer have to be in a particular place. Establish an attractive setting, this theory says, and talented people will come; sooner or later, the jobs will, too.” Many of Philadelphia’s neighborhoods have helped establish the city as a “vibrant urban landscape” in recent years, leading to an influx of young adults and population growth (Eichel 2013).

COMMERCIAL CORRIDORS IN PHILADELPHIA

A 2009 report by Econsult Corporation, “Commercial Corridors: A Strategic Investment Framework for Philadelphia,” refers to Philadelphia as “largely a city of commercial corridors.” The report suggests that these corridors “anchor the residential neighborhoods that surround them, further intensifying the importance of understanding how are they are performing.” During the mid-twentieth century, the shift in a landscape oriented toward automobile travel and suburban life dramatically contributed to the hollowing out the city’s urban core, “putting additional competitive pressure on traditional commercial corridors.” For the communities and neighborhoods around them, these commercial corridors represent not only areas that support the immediate economy and provide employment, but also important and convenient retail destination. Deteriorating retail activity along these commercial corridors adversely and disproportionately impacts low-income neighborhoods (Econsult Corporation 2009, 1). As suggested in the example studies mentioned earlier in this chapter (Kromer 2009; Loukaitou-Sideris 1997), struggling commercial corridors are now most often associated with low-income residents and located on the fringes of the city. In the Philadelphia case studies presented in this

thesis, the commercial corridors are rife with the problems associated with urban poverty. However, as DiPasquale and Wheaton have argued, perhaps the most powerful effect on individual properties within a neighborhood is the combination of two microeconomic factors: physical change itself *and* a change in consumer or resident valuation (1996, 22-34).

CITY OF PHILADELPHIA FAÇADE IMPROVEMENT PROGRAMS

Through the Department of Commerce, the City of Philadelphia offers financial assistance in the form of grants to business and commercial property owners throughout the city. These programs provide funding for visual exterior upgrades and public space beautification only; structural rehabilitation and other neighborhood improvement services (such as increased security measures) are not included in the scope of these programs. This is an especially important aspect to consider when evaluating these programs, as through these programs it is possible to isolate façade improvements from other interventions and examine the effects on the well being of the population. With no other contributions to change or large collective investments made in the commercial corridors where these programs are conducted, significant changes can be attributed to the success or failure of the programs. The three programs supported by the City of Philadelphia are described below. While they vary slightly, they each complement one another and are sometimes used concurrently to maximize their impact on the commercial corridors.

- *Storefront Improvement Program*

The Storefront Improvement Program is a broad city initiative that encourages businesses and property owners within eligible neighborhood commercial corridors to improve their storefronts. The program is promoted as a way to make these areas more attractive to shoppers and to

increase their vitality and economic performance. The program reimburses owners of commercial buildings and businesses for eligible storefront improvements.

- *ReStore Philadelphia Corridors*

ReStore Philadelphia Corridors is a city initiative aimed at revitalizing neighborhood commercial corridors to “re-establish their historic roles as central places to shop, to work and to meet neighbors,” according to the City of Philadelphia website. The majority of strategies in this program are focused on streetscape enhancement, beautification and façade improvement.

- *The Targeted Blocks Façade Grant Program*

The Targeted Blocks Façade Grant Program is a 2009 initiative that provided five \$200,000 grants (\$1 million total) to five separate and key commercial corridors across the City. Grant funds were dispersed to individual community development corporations (CDCs) within each corridor, with the intention to be used to help businesses make external improvements to their buildings, including painting and signage upgrades. These changes were expected to improve the aesthetics and overall business climate along the corridors. Funding for this initiative came from bonds issued in 2007 and not the City’s General Fund. This one-time program is the focus of this thesis and will be analyzed in the following chapter.

Philadelphia Mayor Michael Nutter has advocated that façade upgrades will improve the aesthetics and overall business climate along existing and potential commercial corridors in the city. This substantial public investment suggests that immediate visual results in depressed urban neighborhoods may jumpstart economic growth, but it does not require property owners or businesses to continue to invest in the structural rehabilitation of their buildings after façade upgrades have been completed. Exterior changes, however, most often signify changes on the interiors of buildings as well. A new coat of paint on a

building's exterior and upgraded signage may symbolize new or adaptive reuses on the interior. As suggested earlier, color and design in architecture convey meaning. When environmental changes occur that symbolize monetary investment, positive economic results often follow, as shown in the following chapter.

RESEARCH METHODOLOGY

The research for this thesis has been approached from a very broad perspective. As demonstrated in the literature review in Chapter 1, the field of historic preservation is quite interdisciplinary. It must first be understood and accepted that the existing building stock of historic cities should be viewed as an economic asset, and that the preservation and reuse of these buildings (whether they are deemed “historically significant” or not) is the most sustainable action a city, community, or individual can undertake. Thus, while this research is not focused on “preservation” in the academic or historic sense, it is still built upon the knowledge and understanding that the built environment creates and supports the heritage infrastructures responsible for the continuation of social and cultural traditions.

As suggested in Chapter 2, architectural color also has a varied and interdisciplinary history, as decorative elements and ornamentation of the interiors of public buildings evolved to become an integral part of their form and function. Geography and material played a crucial role in the color of ancient architecture, as did the location of cities relative to the rays of the sun. Overtime, color has become integrated into the forms of buildings, and evokes and suggests cultural values and meanings. It is perhaps the most vivid signifier of change in an urban landscape when combined with economic development, adaptive reuse, and revitalization projects. Historically, color has been linked with architecture for centuries, and has continued to play an important role, from the Alhambra to pattern

books of the nineteenth century. In more recent decades, environmental psychologists have discovered that color can have a direct impact on emotion and behavior, suggesting that color can be integrated into environmental design to enhance moods and encourage positive behaviors.

At a greater scale, conditions of the urban environment also impact the way people use and experience cities, as outlined in Chapter 3. As a part of the public space realm, building exteriors are crucial to a perception of place and attachment to urban neighborhoods. As shown in a wide range of vignettes about public spaces, exterior appearances are just as—if not more—important to the human experience of the urban landscape and the economic and social success of cities as development programs.

In 2009, Brian Mikelbank (Director of the Center for Housing Research and Policy at Cleveland State University) published the report “Does Preservation Pay? Assessing Cleveland Restoration Society’s Home Improvement Program.” Mikelbank asserts, “Historic preservation investments are meant to save and protect a community’s architectural past. However, they may also come with financial benefits for today and the future.” Mikelbank’s study evaluated the impact of the Cleveland Restoration Society’s (CRS) Neighborhood Historic Preservation Program, and project that provided low-interest home improvement and rehabilitation loans to owners of historic homes throughout Cleveland. Mikelbank discovered that not only did participants in the CRS program experience a higher rate of appreciation on their homes in the six-year study period, but that nearby homeowners that did not participate “also tended to see greater appreciation in sales prices and market values than those that were not near CRS-participating properties.” In other words, Mikelbank argues, “the historic preservation

loans appear to benefit homeowners and the surrounding neighborhood as well” (Mikelbank 2009, 2).

The following chapter presents data from the following case studies in Philadelphia. These five commercial corridors were selected as recipients of Philadelphia’s Targeted Blocks Façade Grant Program in 2009, and received funding from the city in the amount of \$200,000, presented to each community development corporation.¹ The funds were then dispersed to business and property owners (through the CDCs) throughout the target blocks to make external improvements to their buildings. As the amounts granted to each individual building or property were fairly insignificant, the upgrades were limited to painting and signage upgrades. The corridors are listed below, along with their respective CDCs:

- 3900 & 4000 Blocks of Lancaster Avenue
(CDC: People’s Emergency Center)
- 6700, 6800, 7100, 7200 Blocks of Germantown Avenue
(CDC: Mt Airy USA)
- Ridge Avenue from Green Lane to Leverington Avenue
(CDC: Roxborough Development Corporation)

¹ It is important to note that these community development corporations play a large role in contributing to the vitality of their respective communities. Their goals are often aligned with meeting the needs of the existing community demographics, and the programs and services these CDCs offer are tailored toward residents of their neighborhoods. These organizations are crucial to the success of the economic and social programs offered by the city—especially in the example of the Targeted Blocks program, as the CDCs were responsible for distributing funding and working with business and property owners throughout all phases of the design and execution process for façade improvements. They are mentioned here because of their role in this process and because each commercial corridor neighborhood is representative of different racial demographics, and it is possible to contribute some population growth to the efforts of each individual CDC. The People’s Emergency Center, for example, serves a neighborhood with a historically Black population in West Philadelphia, and works primarily with homeless families that consist of single mothers and young children. Their main goals include providing housing opportunities and stimulating economic development to improve quality of life for these residents. The Korean Community Development Services Center, however, serves an entirely different population, and although shares similar goals of promoting the economy and improving quality of life, does so for a primarily Asian population in Northeast Philadelphia. While specific neighborhood demographic changes are not taken into account in the population analysis in the following chapter, the data is available in Appendix B.

- 5600 Block of North Fifth Street
(CDC: Korean Community Development Services Center)
- 2700, 2800 & 2900 Blocks of North Fifth Street
(CDC: HACE [Hispanic Association of Contractors and Enterprises]
Commercial Development Corporation)

To evaluate the quantifiable impact of the Targeted Blocks program on these five commercial corridors, statistics from the 2000 and 2010 Censuses were evaluated and compared. The data analyzed includes: population changes in these neighborhoods between 2000 and 2010 and changes in residential vacancy rates in the neighborhoods between 2000 and 2010. Each data set was then compared with those of the city of Philadelphia overall. In addition, the property values of the individual buildings in three of the five commercial corridors that received funds for façade improvements were evaluated over a 13-year period (2000–2013). It must be noted that the market values and property taxes analyzed in Chapter 5 are those assessed by and available from the City of Philadelphia’s Office of Property Assessment, and thus are dependent on governmental decisions and the Office’s capacity to assess, report, and update.

Population growth, demographic changes, and residential vacancy rates are indicative of more intensive use of these corridors, and increased property values would suggest more productive usage of the buildings. In combination, these variables represent improved living conditions and economic growth in neighborhoods in which architectural colors are changed as façade improvements are made. DiPasquale and Wheaton present strong statistic relationships that “exist throughout the housing market between prices and many structural or location attributes...Retail space rents vary systematically with the expected pedestrian traffic on downtown streets, and office space rents are higher around mass transit lines” (DiPasquale and Wheaton 1996, 27). They argue that shifts in property

prices can be attributed to changes of a property: “Changes in locational or neighborhood characteristics may also dramatically impact property prices” (1996, 30).

“Residents perceive commercial strips as mirrors of their communities,” Loukaitou-Sideris argues. “Consequently they are aggravated by their 'ugly appearance', the dirty pavements, the deteriorating building stock” (1997, 20). When studying residential streets in San Francisco, urban designer and theorist Donald Appleyard found:

The appearance of the street is a reflection of ourselves to the visitor. Living on littered streets reflects poorly on our own ability to take care of our home, or implies a lack of competence, efficiency, and social status. The concept of dirt and pollution is also bound up with its opposite, cleanliness and our vision of order. (Appleyard 1981, 64)

There are no simple answers or one-size-fits all solutions for addressing and reversing the effects of urban decay. However, Kromer suggests that the implementation of revitalization strategies can produce benefits for all members of these depressed and often lower-income neighborhoods, in addition to the city as whole. The following chapter evaluates measureable data as indicators of potential beneficial effects of the 2009 Targeted Blocks program on their respective neighborhoods. If these results indicate that the impacts of this program are indeed beneficial, then a more in-depth analysis of the program and the effectiveness of this type of public investment must be undertaken.

CHAPTER 5: PHILADELPHIA CASE STUDIES

This chapter presents the research data on Philadelphia's 2009 Targeted Blocks Façade Grant Program in the five commercial corridors identified in the methodology in Chapter 4. Using Census data provided by the web-based mapping application SimplyMap was key to understanding the changes to the population and residential vacancy rates as indicative of the dynamic conditions of the City of Philadelphia and of the five geographic areas examined in this thesis. The census tracts of each Targeted Block that received funding through the program were identified and compared to both one other and to the data available on the city as a whole.

Three of the five Targeted Blocks were also evaluated using publically accessible data from the City of Philadelphia Office of Property Assessment (OPA) online property search. The market values and property taxes for each building within three of the five geographic areas that received grant funding for façade improvements was evaluated from the years 2007 to 2013.² Cooperation of the three local CDCs was essential for the provision of individual property information necessary to find the appropriate data. The locations of the five commercial corridors in relationship to the City of Philadelphia are illustrated in FIGURE 11.

² Despite several attempts to contact the OPA directly through City Hall, there was difficulty in accessing any data records prior to 2007, and thus earlier records are not included in the analysis. Due to time constraints and other variables, this thesis also does not take into account recent market transactions of any of the individual properties evaluated.



FIGURE 11 2009 Targeted Blocks Grant program commercial corridors in Philadelphia.
Map created by the author.

POPULATION DEMOGRAPHICS

The first data set examined was that of changes to the population in the census tract of each commercial corridor between 2000 and 2010 and in the City of Philadelphia. All variables compared in this examination of population demographics are presented from Census data. As noted in Chapter 4, this is an important variable, as a growing population indicates a more desirable place to live, a characteristic often dependent on high quality of life. FIGURE 12 illustrates that overall, the population of the city declined between 2000 and 2010, and this is reflected in three of the five commercial corridors. However, the percentage of population decline in these three corridors is less than that of the City overall, and in two of the corridors, the percentage of population growth was almost 2% or higher (in the 2700, 2800 & 2900 Blocks of North Fifth Street and 6700, 6800, 7100, 7200 Blocks of Germantown Avenue).

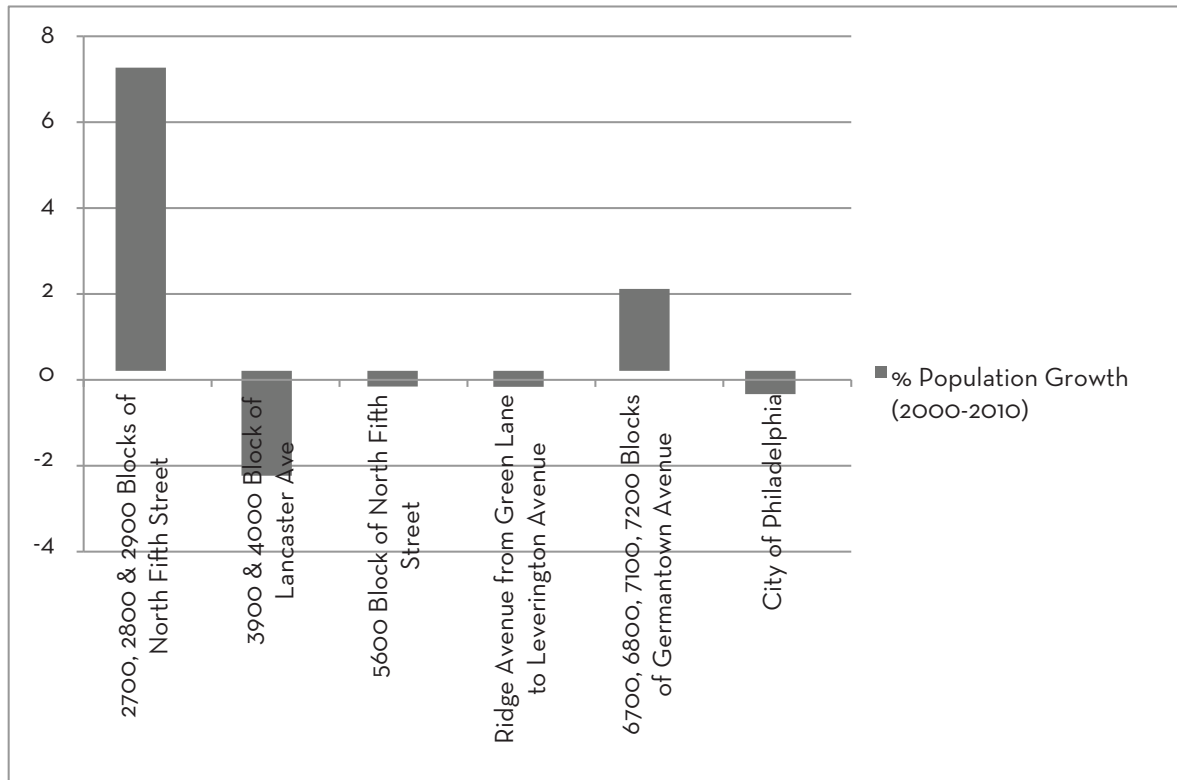


FIGURE 12 Percentage of population growth in each commercial corridor from 2000—2010, as compared to the City of Philadelphia.

RESIDENTIAL VACANCY RATES

Residential vacancy rates as reported in the 2000 and 2010 Censuses were also compared as a part of this study. Between 2000 and 2010, the percentage of vacant housing in the entire city of Philadelphia decreased, and thus the percentage of occupied housing units increased, from 88.8% in 2000 to 91.4% in 2010 [FIGURE 13]. In the Census tracts of each of the five commercial corridors in the Targeted Blocks program, residential vacancy rates also declined, although at a more significant rate than the City in two of the five corridors. The differences in vacant housing units in each corridor between 2000 and 2010 as compared to the City are illustrated in FIGURE 14. In each corridor, the percentage of

occupied housing units increased, with the most significant decreases (more than 4%) found in the 2700–2900 blocks of North 5th Street and the 3900–4000 block of Lancaster Avenue.

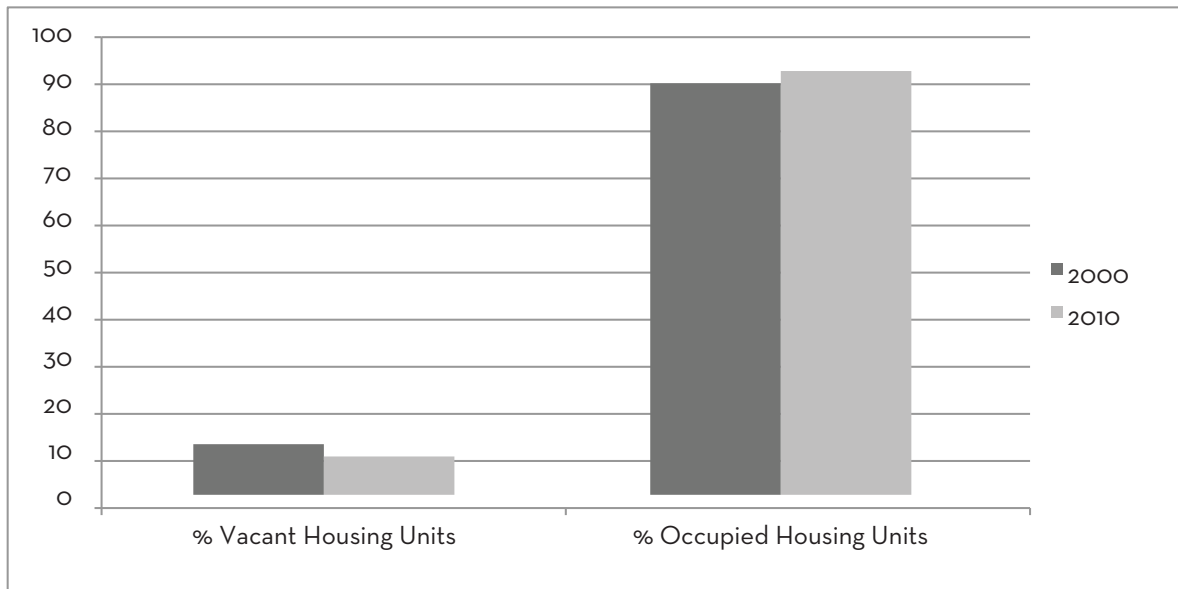


FIGURE 13 Changes in Philadelphia vacant and occupied housing units between 2000 and 2010, according to census data.

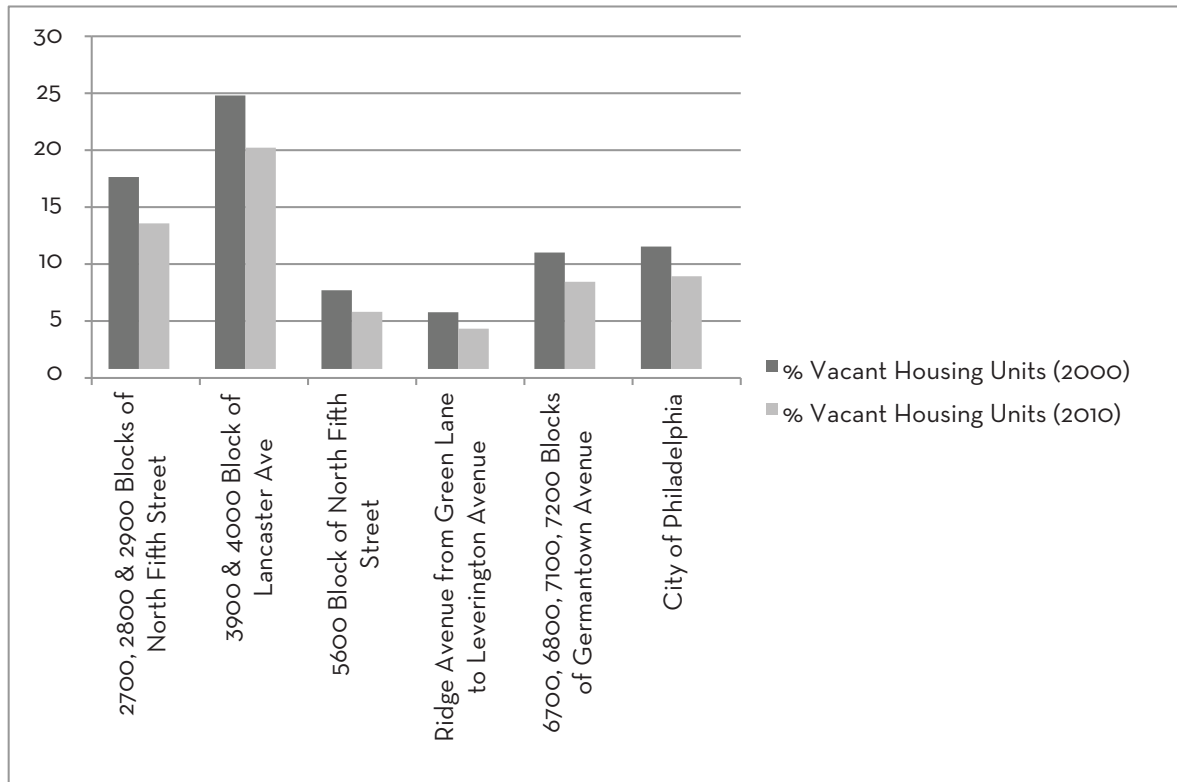


FIGURE 14 Changes in vacant housing units in the Targeted Blocks commercial corridors between 2000 and 2010, according to census data.

POPULATION DEMOGRAPHICS & RESIDENTIAL VACANCY RATES ANALYSIS

While the percentage of occupied housing units has increased throughout the city between 2000 and 2010, Census data shows both significant population increases in two of the areas in which the Targeted Blocks program was undertaken, and less significant percentages of population decline when compared to the City in the remaining commercial corridors.³ Additionally, although vacancy rates decreased in the city as a whole from 2000 to 2010, this decrease is much more strongly seen overall in the five commercial corridors case studies. This suggests that these areas provide an improved quality of life (theoretically, a

³ More specific demographic and racial population shifts as illustrated by the data found in the Appendix can most likely be attributed to the actions of the local CDCs of each commercial corridor, which are often established for and by prevalent demographic groups in such neighborhoods.

better environment means that more people want to live in a certain area), and are thus linked to the observed increase in individual and collective property values. Both evaluations suggest that the program contributed to make the beneficiary neighborhoods more attractive, and thus played a part in either a growing population, or lessened the population decline. Similarly, it may also suggest that businesses benefited from the improvements economically, and were then able to provide more goods, better services, and employment—encouraging continued growth in the population of the commercial corridor.

PROPERTY VALUES

Market values and property taxes were the final data types evaluated in this study. This section presented the most challenges and difficulties, as it required receiving the property information from each of the five Community Development Corporations on every individual property that received funding through the Targeted Blocks program. Only three of the five CDCs participated in this study, and thus only those three Targeted Blocks are represented in the following charts. Additionally, because of the inability to access property data prior to 2007 and the time constraints that limited accessibility to market transactions, it is difficult to ascertain whether changes in the market values and property taxes are exemplary of long-term trends. Data was available for each individual property in the participating commercial corridors for the years 2007—2013.⁴ These years include the period *after* the implementation of the facade improvement investments, and are thus indicative of changes in economic activity in the commercial corridors. Per DiPasquale and Wheaton, physical changes to a property often impact property price.

⁴ In 2013, the City of Philadelphia changed its process for property appraisal and tax assessment. These changes are not reflected in the data used for this study.

Collectively, these changes in a number of properties in an area can shift neighborhood characteristics and “dramatically” impact property prices (DiPasquale and Wheaton 1996, 30).

The first area evaluated for individual property market values and taxes was the 3900 & 4000 Block of Lancaster Avenue, which is supported by the CDC People’s Emergency Center. Over the six-year period between 2007 and 2013, the average and median market values of the properties (collectively) remained stable, with no changes [FIGURE 15]. Property taxes rose slightly in 2010, but the average and median difference was less than \$200, and this suggests a change in City tax policy rather than being connected to market values [FIGURE 16]. Additionally, because the market values in other commercial districts in this study changed between 2009 and 2010, it is possible that the City simply was not reevaluating all of its commercial properties at the same rate.

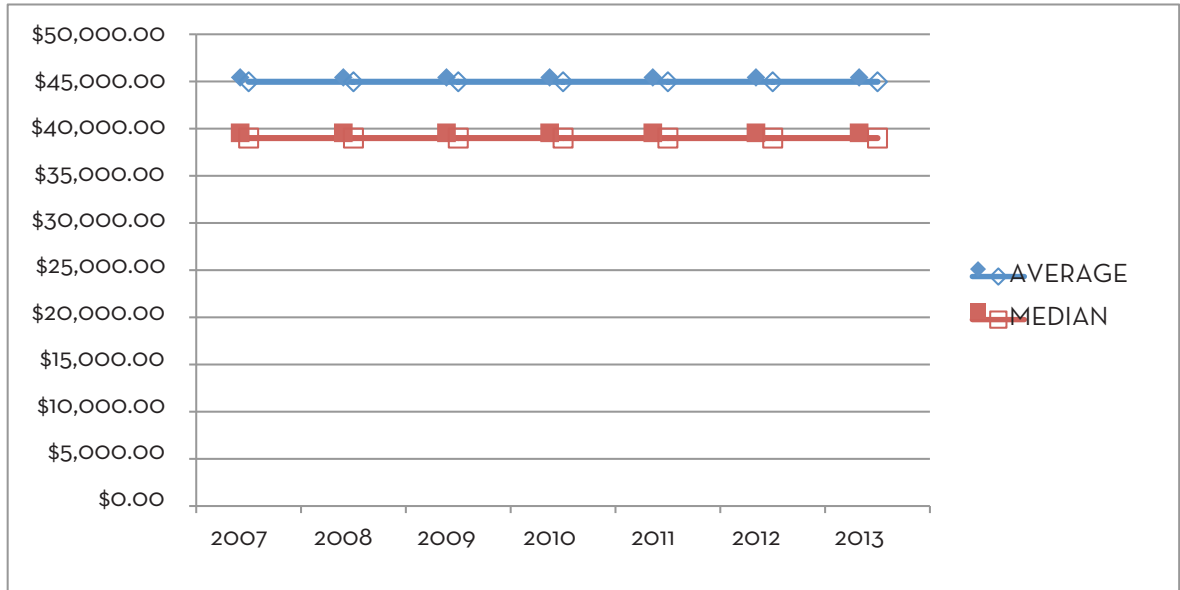


FIGURE 15 Average and median market values for commercial properties that received funding from the 2009 Targeted Blocks program in the commercial corridor of 3900 & 4000 Block of Lancaster Avenue between 2007-2013.

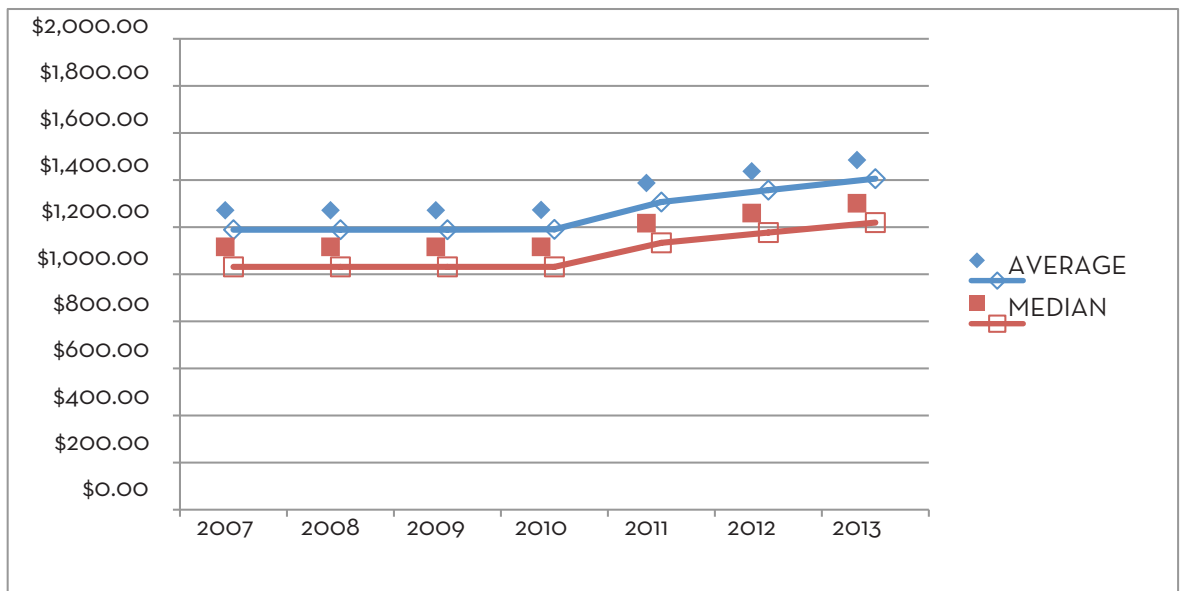


FIGURE 16 Average and median property taxes of commercial properties that received funding from the 2009 Targeted Blocks program in the commercial corridor of 3900 & 4000 Block of Lancaster Avenue between 2007-2013.

The second commercial corridor evaluated for market values and property taxes was the Targeted Block of Ridge Avenue from Green Lane to Leverington Avenue. Average property values remained relatively stable over the six-year period, rising slightly between 2009 and 2010, suggesting a possible relationship between the façade improvements and property values. Median market values remained steady from 2007-2013 [Figure 17]. Property taxes in this commercial corridor also rose, but again this can be mostly contributed to City tax policy and not a significant change in market values [Figure 18].

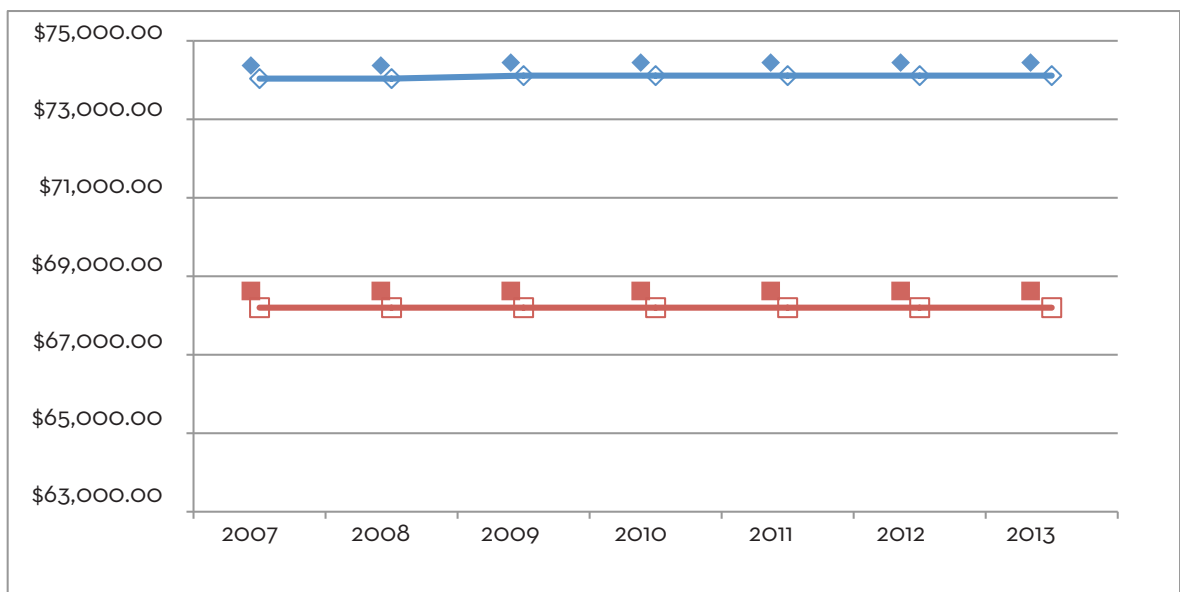


FIGURE 17 Average and median market values of commercial properties that received funding from the 2009 Targeted Blocks program in the commercial corridor of Ridge Avenue from Green Lane to Leverington Avenue between 2007-2013.

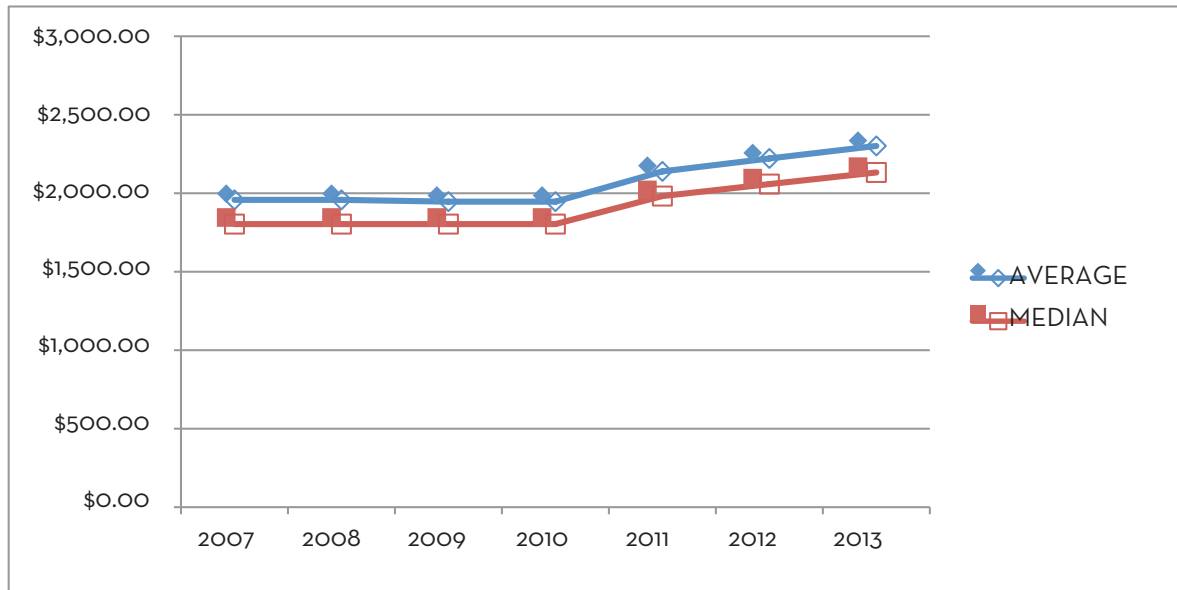


FIGURE 18 Average and median property taxes of commercial properties that received funding from the 2009 Targeted Blocks program in the commercial corridor of Ridge Avenue from Green Lane to Leverington Avenue between 2007-2013.

Finally, data from the third commercial corridor, the 5600 Block of North Fifth Street, was evaluated.⁵ Although this sample size was slightly smaller in this dataset than in the two previous, in this instance, average and median property values rose between 2009 and 2010, when properties had received funding and business and property owners had made exterior improvements [FIGURE 19]. This is the strongest suggestion that changes to the building exteriors have an impact on quantifiable values and the potential to provide economic incentives for business and property owners. Similarly, average and median property values rose steadily between 2009 and 2011, after which there was a decrease in 2012 [FIGURE 20]. However, no change to property values after 2010 may also be attributed to City tax policy and evaluation schedules.

⁵ It is important to note that these market values were already considerably higher than those of properties in other commercial corridors in this study.

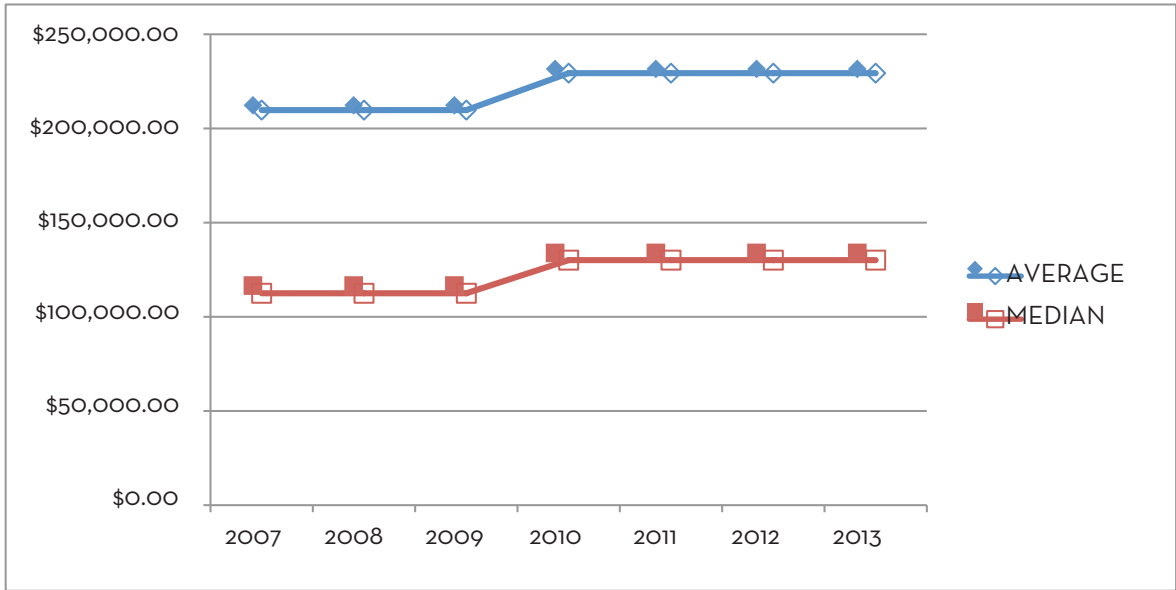


FIGURE 19 Average and median market values of commercial properties that received funding from the 2009 Targeted Blocks program in the commercial corridor of 5600 Block of North Fifth Street between 2007-2013.



FIGURE 20 Average and median property taxes of commercial properties that received funding from the 2009 Targeted Blocks program in the commercial corridor of 5600 Block of North Fifth Street between 2007-2013.

PROPERTY VALUES ANALYSIS

Analysis of assessed market values and property taxes (as estimated by the City) for structures within these commercial corridors has the potential to provide the strongest economic argument for continuation of façade improvement programs in cities. Although the results of this study were mixed, the data suggests that property values were not negatively affected by exterior changes. In the case of the properties in the commercial corridor of the 5600 Block of North Fifth Street, property values actually rose in the period immediately after façade improvements took place. This, in conjunction with Mikelbank's 2009 study, suggests that exterior changes, when made in such a way as to improve the already-built environment, can have a positive economic effect on market values in urban neighborhoods. The following chapter provides a discussion of additional benefits of the program beyond population growth and property values, as well as recommendations for continued programmatic evaluation for façade improvement programs in Philadelphia.

CHAPTER 6: QUALITATIVE IMPACTS & RECOMMENDATIONS

Although the data evaluated in Chapter 5 represents only a small sampling of the potential effect of the Targeted Blocks Façade Grant Program over a short period of time, the results suggest that there is a connection between exterior improvements and changes to building facades to other quantitative factors in the urban environment such as population growth, decreased vacancy rates, and increased assessed market values. This has the potential to play an important role in future neighborhood and community development projects in Philadelphia and in cities around the world, as it demonstrates that the already existing built environment does not have to be demolished or even drastically altered in order to effect change in cities. Historic structures and older neighborhoods should be viewed as assets to their communities, but they must also continually be allowed to change in order to improve both the urban environment and the experience of residents. This chapter presents a the qualitative data associated with this program not found in Chapter 5 and also includes considerations of other qualitative elements that contribute to the economic development of depressed urban neighborhoods.

QUALITATIVE ASPECTS OF FAÇADE IMPROVEMENT PROGRAMS

Because so much of our understanding of property is tied to economics and finances, it is not as difficult to analyze sets of numbers tied to a building as it is to understand and examine the qualitative factors that weigh so heavily in the experiences of urban life. The term “quality of life” references the general well-being of individuals and societies, and

because each individual and society values certain things over others, it is difficult to evaluate the factors that contribute to happiness and well-being. Standard indicators of one's quality of life include wealth and employment, and also the conditions of built environment, physical and mental health, education, recreation and leisure time, and social belonging. As suggested in Chapter 3, our surroundings play a definitive role in our experience of the world around us. It is strongly recommended that a more in-depth quality of life study be done in order to evaluate the social impact of façade improvement programs in Philadelphia.

FAÇADE IMPROVEMENT, COMMUNITY DEVELOPMENT & HISTORIC PRESERVATION

Perhaps the most compelling argument for façade improvement programs should come from preservation professionals, and not economists, neuroscientists or psychologists. As presented in Chapter 1, the built environment provides endless opportunity for cultural experiences and social connectedness. From a global sustainability perspective, reuse of our existing resources will be necessary in the coming years. Not only does this research then provide an argument for the continued use of old buildings, but also for their rehabilitation, maintenance, and improvement.

The properties and commercial corridors discussed in this thesis have not been identified as “historically” significant at any level, despite the fact that most of them are older buildings in neighborhoods with rich histories in the City of Philadelphia. For this reason, the changes and improvements made to the buildings may not have been historically accurate or sensitive [FIGURES 21 and 22]. However, what is important in this and other examples cited in this thesis is the change that these improvements represent to community residents and visitors, and the potential for additional investment. According

to the website for the Roxborough Development Corporation, the façade and color changes made with funding from the 2009 Target Blocks program improved 37 storefronts along the commercial corridor of Ridge Avenue from Green Lane to Leverington Avenue, yielding \$317,000 in improvements to the business façades over the course of the entire project (only \$200,000 of which came from the City of Philadelphia).



Before



After

FIGURE 21 Before and after photographs of façade improvements at Nicken’s Agency, 6747 Germantown Avenue. Image courtesy of Mt. Airy USA Community Development Corporation.

From a broader perspective, the umbrella initiative of the Storefront Improvement Program in Philadelphia (of which Targeted Blocks is a part) has been incredibly successful. According to Andy Frishkoff, Director of the Office of Neighborhood and Economic

Development for the City of Philadelphia, \$300,000 in City funding had been matched by \$1.4 million dollars in private funding during the first two years of the program (2008—2010). As of 2010, the grants had restored or renovated 85 storefront facades and created 277 permanent jobs. Anecdotally, according to the website for Philadelphia-based Community Design Collaborative, “storeowners say that business has improved as people want to shop, work, and meet their neighbors at these more attractive businesses.”



Before



After

FIGURE 22 Before and after photographs of façade improvements at Johnson's Barber Shop, 7128 Germantown Avenue. Image courtesy of Mt. Airy USA Community Development Corporation.

From a community standpoint, representatives from local CDCs involved in this program commented that the process of having multiple façade improvement projects happening concurrently allowed the CDC to have “a strong, visible impact in a short time period.” One community leader also commented that the program structure created an administrative flexibility that allowed their individual CDC to work with building and property owners to have improvements made to their buildings that otherwise would probably never have happened. Unfortunately (although not surprisingly), it was also noted that working with the Philadelphia Historical Commission during these projects was often difficult, as the Commission was unhelpful and less-than-easy to work with. Should the City of Philadelphia wish to provide funding to continue similar projects in neighborhoods or on buildings that are officially designated as historic, better means of communication and a more streamlined process with the Commission will be absolutely necessary.

RECOMMENDATIONS

Given several limiting factors, the data evaluated in this study represents only a small sample of the possible quantitative aspects of urban real estate and economics. It is recommended that a wider and more thorough study of the façade improvement programs sponsored by the City of Philadelphia Department of Commerce should be conducted to evaluate the relationships and possible correlations between exterior architectural changes that improve the appearances of existing buildings and the economic effect of these changes. This could include a comparison of market value changes of commercial buildings in targeted corridors versus those in non-targeted areas over a longer period of time to assess the impact of initial investment for façade improvements.

The impact of this program on commercial properties may also be as, if not more, successful for residential property owners, as it would include another layer of social accountability and other qualitative aspects that are more difficult to evaluate. Mikelbank's Cleveland study examined the benefits of what he refers to as "spillover" of the benefits of exterior improvements into surrounding neighborhoods: "Certainly, part of a home's value is determined by its surroundings, particularly when it comes to how well neighbors keep up their properties. Neighborhood investments not only play a role in improving the quality of the housing stock, but they may signal that residents are committed to keeping up the neighborhood" (Mikelbank 2009, 3).

CONCLUSION

Heritage is the product of shared senses of identity and character. It is therefore networked, and can help make connections between diffuse or underused assets, meshing them together in ways that enable new uses and through which common sense of meaning can develop.

—Samuel Jones and Melissa Mean
Resilient Places (2010, 62)

In *Resilient Places*, the authors suggest: “Character of place is central to resilience. An important part of ‘making the cities we want’ lies in using what is already there” (Jones and Mean 2010, 65). Character is essential to creating a sense of place, and that character is most often defined by our surroundings. Adams suggests that “emotional engagement is important in developing a sense of place. A place is part of the environment that has been claimed by feelings” (Adams 1991, 28). Knowledge of the physical world is concerned with every facet of how people feel about their environments, how they relate to them, how they are affected by their surroundings, and how they affect their surroundings. Meerwein et al argue:

Humans are the center of concern in the design of the architectural environment. In order to design an environment that is tailored to people’s needs, human beings must be seen holistically. It is also important to understand the phases of life and development, the different areas of people’s lives, and the environmental requirements that these entail. Humanistic psychology’s fundamental anthropological positions are concerned with humans as a holistic concept, according to which a person is a physical-psychological-intellectual being, closely connected with the material and immaterial components of his or her world. “World” refers here to the entirety of the human condition. It is synonymous with the human environment, in the sense that it is a holistic habitat containing essential biological, physical, physiological, psychological, social, and aesthetic elements (Meerwein et al 2007, 10).

The history of color in architecture has evolved over centuries from geographic and materials-based origins to a complex discipline of design and subjectivity. This change increasingly marks the growing trend of environmental awareness and the aesthetic appreciation for the built environment, as discussed in Chapter 2. Within the realm of public space, the appearances of building exteriors plays a huge role in contributing to the character of cities, and the way humans identify with their surroundings. As demonstrated through several narratives in Chapter 3, the way our surroundings look plays a crucial role in how we both understand and interact with our surroundings and with one another. Chapter 4 introduced commercial corridors and urban revitalization programs, suggesting the need for an understanding of how human interactions with spaces are negotiated when investing in the rehabilitation of depressed urban neighborhoods. The importance of the appearances of the environment is seen through human actions and interactions across time. Chapter 5 evaluated the measurable impact of façade improvement programs through demographic and population changes, vacancy rates, and market values and property taxes. While the examples offered represent only five commercial corridors in Philadelphia in which a façade improvement program was implemented, the data suggests that there is a relationship between changes to color on building exteriors in the urban environment and the important quantifiable elements of city life, such as population growth and assessed property values, as identified by Dipasquale and Wheaton (1996).

Continued reinvestment into these long-neglected urban neighborhoods (both in Philadelphia and in cities worldwide) is essential to the long-term success and dynamism of cities in the future. In regards to public investment, Rojas suggests:

Communities are increasingly demanding that governments take responsibility for preserving the public good component of urban heritage, mostly its sociocultural values. Revealing and protecting these non-use

values is essentially a political issue, because most of them—existence, bequest, aesthetic, spiritual, social, historic, and symbolic values—are of interest to the whole community and their importance is usually made explicit through political processes involving elected officials and citizen participation in the allocation of public resource to preservation. Moreover, the government is the only actor capable of mitigating the bias of private philanthropy whose interests may not coincide with those of the local communities (Rojas 2013).

The conditions and appearances of architectural exteriors and public spaces contribute extensively to the “public good component of urban heritage,” and in addition to the economic and social benefits that come with improved environmental conditions, Loukaitou-Sideris argues:

There are additional reasons why public policy should seek to enhance and retrofit inner-city commercial strips. These streets are at the heart of poverty-ridden inner cities that desperately need more housing, jobs and services. The extremely high densities of the neighborhoods abutting these streets suggest that their successful rejuvenation will have positive impacts on whole communities. The high level of transit use along strips, the potential for even higher use because of their strategic locations in between employment centers, and their current underdevelopment that allows for infill and intensification, all provide good reasons for promoting their physical and economic improvement (Loukaitou-Sideris 1997, 19).

Color impacts human perception of the environment. Changes in exterior color in the built environment through façade improvement programs signify change, and can be powerfully motivating in depressed urban communities. This is manifested through quantifiable effects, such as population growth, decreased vacancy rates, and property valuation, which can in turn have a positive effect on economic growth throughout the city. DiPasquale and Wheaton have proven empirically that, in some situations, “the supply or price of real estate can actually exert an influence on the area’s overall economic development” (1996, 33). Change as communicated through color and façade improvement programs also has the potential to impact other qualitative elements that can significantly improve quality of

life. Market values may change when “consumer valuations of particular physical or locational attributes change” (DiPasquale and Wheaton 1996, 30). As quality of life improves (because of quantitative factors that can impact other qualitative factors), and a neighborhood becomes a more attractive place for people to live, work, and shop, consumer valuation also changes.

However, it is often not enough to simply repaint a building or improve a business’s signage. While these actions can jumpstart economic growth and improve social behaviors and community pride, as suggested by leaders of Philadelphia community development corporations in Chapter 6, older and historic buildings alike often require extensive rehabilitation and continued maintenance, especially if they have been neglected for decades. Color, however, can be a defining part of how this change occurs. Façade improvements are generally inexpensive, yet have the potential to be extremely powerful in conveying the message that “someone cares.” In some instances, this may be enough to stimulate individuals and communities into continually reinvesting in their neighborhood assets.

BIBLIOGRAPHY

- Adams, Eileen. 1991. "Back to Basics: Aesthetic Experience." *Children's Environments Quarterly* 8.2: 19-29. Accessed January 23, 2013. <http://www.jstor.org/stable/41514777>.
- Andersen, Dennis A., and Katheryn H. Krafft. 1994. "Plan and Pattern Books: Shaping Early Seattle Architecture." *The Pacific Northwest Quarterly* 85.4: 150-158. Accessed January 23, 2013. <http://www.jstor.org/stable/40491583>.
- Appleyard, Donald. 1981. *Livable Streets*. Berkeley: University of California Press.
- Bell, Paul A. and Eric D. Sundstrom. 1997. "Environmental Psychology." In *States of Mind: American and Post-Soviet Perspectives on Contemporary Issues in Psychology*, edited by Diane F. Halpern and Alexander E. Voiskounsky, 373-390. Oxford: Oxford University Press.
- Birren, Faber. 1945. *Selling with Color*. New York: McGraw-Hill Book Company.
- Blaszczyk, Regina Lee. 2012. *The Color Revolution*. Cambridge: MIT Press.
- Clay, Grady. 1973. *Close-Up: How to Read the American City*. Chicago: The University of Chicago Press.
- Community Design Collaborative. "Community Design Collaborative Blog." Last updated April 2013. <http://blog.cdesignc.org/>.
- DiPasquale, Denise, and William C. Wheaton. 1996. *Urban Economics and Real Estate Markets*. Ann Arbor: University of Michigan Press.
- Downing, Andrew Jackson. 1850. *The Architecture of Country Houses: Including Designs for Cottages, Farm Houses, and Villas, with Remarks on Interiors, Furniture, and the Best Modes of Warming and Ventilating*. New York: D. Appleton & Co.
- . 1847. *Cottage Residences; or, A Series of Designs for Rural Cottages and Cottage Villas and their Gardens of Grounds*. New York: Wiley and Putnam.
- Drew, Clifford J. 1971. "Research on the Psychological-Behavioral Effects of the Physical Environment." *Review of Educational Research* 41.5: 447-465.

- Econsult Corporation. 2009. "Commercial Corridors: A Strategic Investment Framework for Philadelphia." Report submitted to Philadelphia LISC.
- Eichel, Larry. 2012. "A New Excitement About Philly." *Philadelphia Inquirer*, March 24, 2013. Accessed April 1, 2013.
http://www.philly.com/philly/news/20130324_Philadelphia_may_build_comeback_on_quality_of_life.html
- Gehl, Jan. 2010. *Cities for People*. Washington, D.C.: Island Press.
- The Getty Conservation Institute. 1994. "Summary Report of the Collaborative Project in the Historic Center of Quito." Presented to the Municipality of Quito, June 1994.
- Giurgola, Romaldo. 1961. "Reflections." *Perspecta* 7.
- Gladwell, Malcolm. 2000. *The Tipping Point*. New York: Little, Brown & Co.
- Goury, Jules, Owen Jones, and Pascual de Gayangos. 1842. *Plans, Sections, Elevations and Details of the Alhambra*. London: Owen Jones.
- Gratz, Roberta Brandes. 1994. *The Living City: How America's Cities are Being Revitalized by Thinking Small in a Big Way*. New York: John Wiley and Sons.
- Hall, Herbert C. 1928. "Color—Is It a Fad?" *Magazine of Business* 54: 245-282.
- Hayden, Delores. 2007. "Place Memory and Urban Preservation." In *The Urban Design Reader*, edited by Michael Larice and Elizabeth Macdonald, 194-203. New York: Routledge.
- Hershberger, Robert G. 1970. "Architecture and Meaning." *Journal of Aesthetic Education* 4.4: 37-55. Accessed January 23, 2013. <http://www.jstor.org/stable/3331285>.
- Hosey, Lance. 2013. "Why We Love Beautiful Things." *The New York Times*, February 15. Accessed March 3, 2013.
<http://www.nytimes.com/2013/02/17/opinion/sunday/why-we-love-beautiful-things.html>.
- Ittelson, William H. 1977. *An Introduction to Environmental Psychology*. Ann Arbor: University of Michigan.
- Jacobs, Allan B., and Donald Appleyard. 2007. "Toward an Urban Design Manifesto" (from *Journal of the American Planning Association*, 1987). In *The Urban Design Reader*, edited by Michael Larice and Elizabeth Macdonald, 98-108. New York: Routledge, 2007.
- Jacobs, Jane. 1961. *The Death and Life of Great American Cities*. New York: Random House.

- Jones, Samuel, and Melissa Mean. 2010. *Resilient Places: Character and Community in Everyday Heritage*. London: Demos.
- Karlen, Mark. 1983. "An Historical Survey of the Use of Exterior Color in Western Architecture." PhD dissertation, The Union Institute.
- Kelling, George L., and James Q. Wilson. 1982. "Broken Windows: The Police and Neighborhood Safety." *The Atlantic Monthly*, March 1. Accessed January 21, 2013. <http://www.theatlantic.com/magazine/archive/1982/03/broken-windows/304465/>.
- Klamer, Arjo. 1996. *The Value of Culture: On the Relationship Between Economics and the Arts*. Amsterdam: Amsterdam University Press.
- Kromer, John. 2009. *Fixing Broken Cities: The Implementation of Urban Development Strategies*. New York and London: Routledge.
- Loukaitou-Sideris, Anastasia. 1997. "Inner-City Commercial Strips: Evolution, Decay—Retrofit?" *The Town Planning Review* 68.1: 1-29. Accessed March 29, 2013. <http://www.jstor.org/stable/40113438>.
- Meerwein, Gerhard, Bettina Rodeck, and Frank H. Mahnke. 2007. *Color: Communication in Architectural Space*. Translated by Laura L. Bruce, and Matthew D. Gaskins. Basel: Birkhäuser Verlag AG.
- Mikelbank, Brian. 2009. "Does Preservation Pay? Assessing Cleveland Restoration Society's Home Improvement Program." Cleveland: Cleveland State University. Accessed March 19, 2013. http://www.clevelandrestoration.org/assets/pdf_files/heritage_pdf/CRS_CSU_Study.pdf.
- Portland, Maine Economic Development Department. "Façade Improvement Program." Accessed March 2013. <http://www.portlandmaine.gov/citymanagers/facade.asp>.
- Rama, Edi. 2013. "Take Back Your City with Paint." TEDX video. Filmed May 2012, 15:43. Posted February 2013. Accessed March 12, 2013. http://www.ted.com/talks/edi_rama_take_back_your_city_with_paint.html.
- Rebuilding Together Philadelphia. 2013. "What We Do." Accessed March 19. <http://www.rebuildingphilly.org/whatwedo.htm>.
- Rojas, Eduardo. "The Public Sector in the Preservation of Urban Heritage Sites: Lessons from Four Cities in Latin America." In *Handbook on the Economics of Cultural Heritage*, edited by Ilde Rizzo and Anna Mignosa. Forthcoming 2013.

- Roxborough Development Corporation. "Explore Roxborough." Last modified April 2013. <http://www.roxborough.us/>.
- Rypkema, Donovan. 1998. *The Economic Benefits of Historic Preservation: A Community Leader's Guide*. Washington, D.C.: National Trust for Historic Preservation.
- Shipley, Robert, Steve Utz, and Michael Parsons. 2008. "Does Adaptive Reuse Pay? A Study of the Business of Building Renovation in Ontario, Canada." *International Journal of Heritage Studies* 12.6: 505-520.
- Sitte, Camillo. 2007. "The Meager and Unimaginative Character of Modern City Plans" and "Artistic Limitations of Modern City Planning" (originally published in *City Planning According to Artistic Principles*, 1898). In *The Urban Design Reader*, edited by Michael Larice and Elizabeth Macdonald, 35-42. New York: Routledge.
- Spivack, Mayer. 1974. "The Exceptional Environment: Strategies for Design." *The School Review* 82.4: 647-665. Accessed January 23, 2013. <http://www.jstor.org/stable/1084011>.
- Stas, Nart. 2007. "The Economics of Adaptive Reuse of Old Buildings: A Financial Feasibility Study & Analysis." Masters thesis, University of Waterloo, Canada.
- Swirnow, Lois. 2000. *The Color of Cities: An International Perspective*. New York: McGraw-Hill.
- . 1976. "Experiments on the Interaction of Color and Form." *Leonardo* 9.3: 191-195. Accessed January 1, 2013. <http://www.jstor.org/stable/1573552>.
- Throsby, David. 2002. "Cultural Capital and Sustainability Concepts in the Economics of Cultural Heritage." In *Assessing the Values of Cultural Heritage: Research Report*, edited by Marta De la Torre, 101-117. Los Angeles: Getty Conservation Institute.
- . 2001. *Economics and Culture*. Cambridge: Cambridge University Press.
- . 2010. *The Economics of Cultural Policy*. Cambridge: Cambridge University Press.
- Tyler, Norman. 2000. *Historic Preservation: An Introduction to its History, Principles, and Practice*. New York: W.W. Norton & Company.
- Valdez, Patricia and Albert Mehrabian. 1994. "Effects of Color on Emotions." *Journal of Experimental Psychology* 123.4: 394-409.
- Whyte, William H. 2007. "Introduction," "Life of Plazas," "Sitting Space," and "Sun, Wind, Trees, and Water" (from *The Social Life of Small Urban Spaces*, 1980). In *The Urban Design Reader*, edited by Michael Larice and Elizabeth Macdonald, 348-363. New York: Routledge.

- Wilber, Donald N. 1942. "The Role of Color in Architecture." *The Journal of the American Society of Architectural Historians* 2.1: 17-22. Accessed January 23, 2013, <http://www.jstor.org/stable/901200>.
- Wolfe, Mary K., and Jeremy Mennis. 2012. "Does Vegetation Encourage or Suppress Urban Crime? Evidence from Philadelphia, PA." *Landscape and Urban Planning* 108.2-4: 112-122. Accessed April 5, 2013. doi: 10.1016/j.landurbplan.2012.08.006.
- Wolfgang von Goethe, Johann. 1840. *Goethe's Theory of Colours*. Translated by Charles Lock Eastlake. London: John Murray.

APPENDIX A: POPULATION, VACANCY RATES, AND PROPERTY DATA

	% Population Growth (2000-2010)
2700, 2800 & 2900 Blocks of North Fifth Street	7.1722755
3900 & 4000 Block of Lancaster Ave	-2.481483
5600 Block of North Fifth Street	-0.3720025
Ridge Avenue from Green Lane to Leverington Avenue	-0.3783018
6700, 6800, 7100, 7200 Blocks of Germantown Avenue	1.93771
City of Philadelphia	-0.55105302

TABLE 2 Percentage of population growth in each commercial corridor from 2000—2010, as compared to the City of Philadelphia.

PHILADELPHIA VACANCY	2000	2010
% Vacant Housing Units	10.91921866	8.268778277
% Occupied Housing Units	88.78404441	91.43448506

TABLE 3 Changes in Philadelphia vacant and occupied housing units between 2000 and 2010, according to census data.

COMMERCIAL CORRIDOR	% Vacant Housing Units (2000)	% Vacant Housing Units (2010)
2700, 2800 & 2900 Blocks of North Fifth Street	17.12238333	12.98635333
3900 & 4000 Block of Lancaster Ave	24.3968	19.7394
5600 Block of North Fifth Street	7.0204975	5.095865
Ridge Avenue from Green Lane to Leverington Avenue	5.059078	3.592826
6700, 6800, 7100, 7200 Blocks of Germantown Avenue	10.38612	7.7761625

TABLE 4 Changes in vacant housing units in the Targeted Blocks commercial corridors between 2000 and 2010, according to census data.

COMMERCIAL CORRIDOR	% Occupied Housing Units (2000)	% Occupied Housing Units (2010)
2700, 2800 & 2900 Blocks of North Fifth Street	82.87761667	87.01365
3900 & 4000 Block of Lancaster Ave	75.6032	80.2606
5600 Block of North Fifth Street	92.9795	94.904125
Ridge Avenue from Green Lane to Leverington Avenue	94.94092	96.40716
6700, 6800, 7100, 7200 Blocks of Germantown Avenue	89.6139	92.223825

TABLE 5 Changes in occupied housing units in the Targeted Blocks commercial corridors between 2000 and 2010, according to census data.

MARKET VALUE	3900 & 4000 Block of Lancaster Avenue	
	AVERAGE	MEDIAN
2007	\$44,966.67	\$39,000.00
2008	\$44,966.67	\$39,000.00
2009	\$44,966.67	\$39,000.00
2010	\$44,966.67	\$39,000.00
2011	\$44,966.67	\$39,000.00
2012	\$44,966.67	\$39,000.00
2013	\$44,966.67	\$39,000.00

TABLE 6 Average and median market values for commercial properties that received funding from the 2009 Targeted Blocks program in the commercial corridor of the 3900 & 4000 Block of Lancaster Avenue between 2007-2013.

PROPERTY TAX	3900 & 4000 Block of Lancaster Avenue	
	AVERAGE	MEDIAN
2007	\$1,189.13	\$1,031.35
2008	\$1,189.13	\$1,031.35
2009	\$1,189.13	\$1,031.35
2010	\$1,190.64	\$1,031.35
2011	\$1,306.84	\$1,133.43
2012	\$1,357.20	\$1,177.11
2013	\$1,405.98	\$1,219.42

TABLE 7 Average and median property taxes of commercial properties that received funding from the 2009 Targeted Blocks program in the commercial corridor of the 3900 & 4000 Block of Lancaster Avenue between 2007-2013.

MARKET VALUE	Ridge Avenue from Green Lane to Leverington Avenue	
	AVERAGE	MEDIAN
2007	\$74,037.50	\$68,200.00
2008	\$74,037.50	\$68,200.00
2009	\$73,606.25	\$68,200.00
2010	\$73,606.25	\$68,200.00
2011	\$73,606.25	\$68,200.00
2012	\$73,606.25	\$68,200.00
2013	\$73,606.25	\$68,200.00

TABLE 8 Average and median market values of commercial properties that received funding from the 2009 Targeted Blocks program in the commercial corridor of Ridge Avenue from Green Lane to Leverington Avenue between 2007-2013.

PROPERTY TAX	Ridge Avenue from Green Lane to Leverington Avenue	
	AVERAGE	MEDIAN
2007	\$1,957.91	\$1,803.54
2008	\$1,957.91	\$1,803.54
2009	\$1,946.51	\$1,803.54
2010	\$1,946.51	\$1,803.54
2011	\$2,139.17	\$1,982.06
2012	\$2,221.61	\$2,058.44
2013	\$2,301.46	\$2,132.42

TABLE 9 Average and median property taxes of commercial properties that received funding from the 2009 Targeted Blocks program in the commercial corridor of Ridge Avenue from Green Lane to Leverington Avenue between 2007-2013.

MARKET VALUE	5600 Block of North Fifth Street	
2007	\$209,750.00	\$112,500.00
2008	\$209,750.00	\$112,500.00
2009	\$209,750.00	\$112,500.00
2010	\$229,366.67	\$130,100.00
2011	\$229,366.67	\$130,100.00
2012	\$229,366.67	\$130,100.00
2013	\$229,366.67	\$130,100.00

TABLE 10 Average and median market values of commercial properties that received funding from the 2009 Targeted Blocks program in the commercial corridor of 5600 Block of North Fifth Street between 2007-2013.

PROPERTY TAX	5600 Block of North Fifth Street	
2007	\$5,546.80	\$2,975.04
2008	\$5,546.80	\$2,975.04
2009	\$5,546.80	\$2,975.04
2010	\$6,065.56	\$3,440.47
2011	\$7,563.20	\$5,382.36
2012	\$6,922.84	\$3,926.73
2013	\$7,171.65	\$4,067.87

TABLE 11 Average and median property taxes of commercial properties that received funding from the 2009 Targeted Blocks program in the commercial corridor of 5600 Block of North Fifth Street between 2007-2013.

APPENDIX B: DEMOGRAPHIC DATA

DEMOGRAPHIC	2000	2010
% Hispanic Population	7.8781	10.5973
% White Population	39.0187	35.2347
% Asian Population	3.3034	4.0378
% Black Population	50.3504	50.1297

TABLE 12 Philadelphia population demographics between 2000 and 2010, according to census data.

COMMERCIAL CORRIDOR	% Hispanic Population (2000)	% Hispanic Population (2010)
2700, 2800 & 2900 Blocks of North Fifth Street	68.7148	88.5944
3900 & 4000 Block of Lancaster Ave	0.2730	0.2976
5600 Block of North Fifth Street	10.9443	15.5364
Ridge Avenue from Green Lane to Leverington Avenue	1.6514	2.9293
6700, 6800, 7100, 7200 Blocks of Germantown Avenue	2.5678	3.8072

TABLE 13 Changes in Hispanic population between 2000 and 2010 in census blocks located in areas in which the 2009 Targeted Blocks Façade Grant Program was implemented, according to census data.

COMMERCIAL CORRIDOR	% White Population (2000)	% White Population (2010)
2700, 2800 & 2900 Blocks of North Fifth Street	19.0888	12.1104
3900 & 4000 Block of Lancaster Ave	1.8525	1.8887
5600 Block of North Fifth Street	18.9458	14.1913
Ridge Avenue from Green Lane to Leverington Avenue	90.5818	87.6779
6700, 6800, 7100, 7200 Blocks of Germantown Avenue	22.4633	18.5195

TABLE 14 Changes in White population between 2000 and 2010 in census blocks located in areas in which the 2009 Targeted Blocks Façade Grant Program was implemented, according to census data.

COMMERCIAL CORRIDOR	% Asian Population (2000)	% Asian Population (2010)
2700, 2800 & 2900 Blocks of North Fifth Street	0.7217	0.6685
3900 & 4000 Block of Lancaster Ave	0.1365	0.1488
5600 Block of North Fifth Street	14.2890	16.4002
Ridge Avenue from Green Lane to Leverington Avenue	0.9126	1.3230
6700, 6800, 7100, 7200 Blocks of Germantown Avenue	0.6763	0.9578

TABLE 15 Changes in Asian population between 2000 and 2010 in census blocks located in areas in which the 2009 Targeted Blocks Façade Grant Program was implemented, according to census data.

COMMERCIAL CORRIDOR	% Black Population (2000)	% Black Population (2010)
2700, 2800 & 2900 Blocks of North Fifth Street	33.0367	27.3609
3900 & 4000 Block of Lancaster Ave	94.1755	91.6209
5600 Block of North Fifth Street	56.9788	54.6579
Ridge Avenue from Green Lane to Leverington Avenue	6.5674	7.4047
6700, 6800, 7100, 7200 Blocks of Germantown Avenue	72.6603	74.0474

TABLE 16 Changes in Black population between 2000 and 2010 in census blocks located in areas in which the 2009 Targeted Blocks Façade Grant Program was implemented, according to census data.

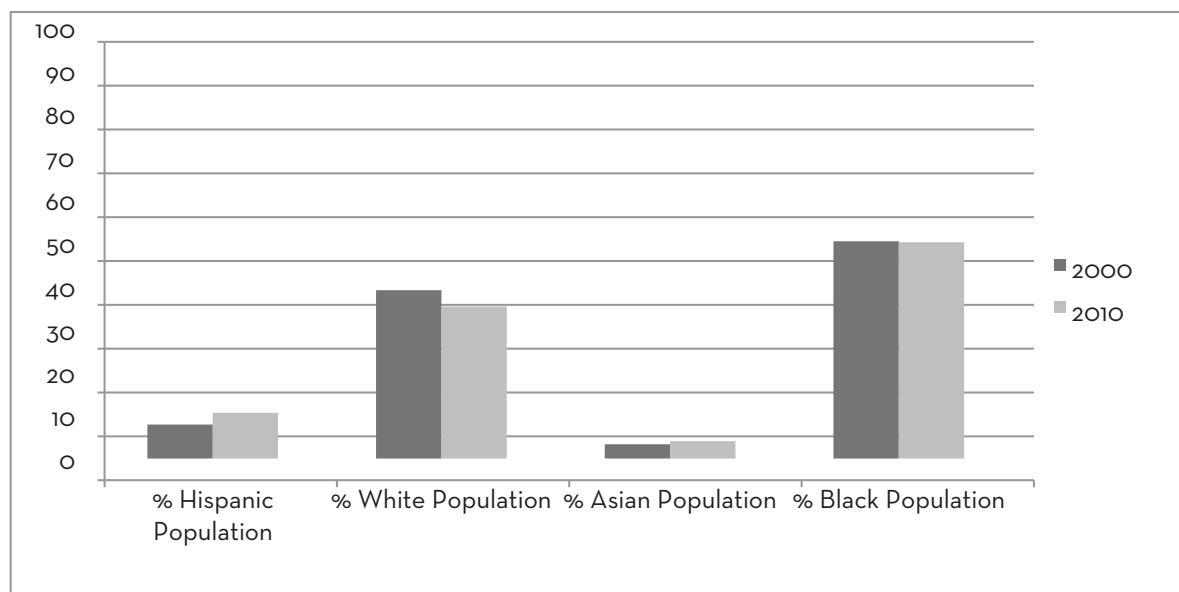


FIGURE 23 Changes in Philadelphia population demographics between 2000 and 2010, according to census data.

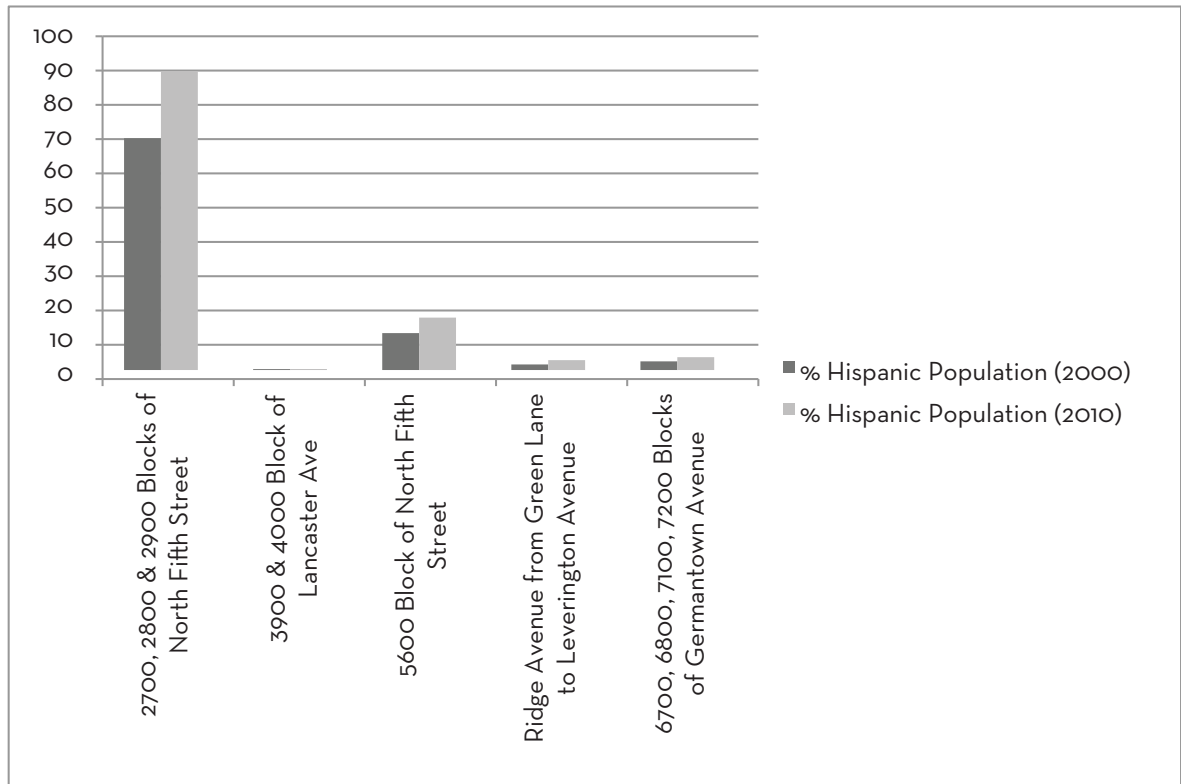


FIGURE 24 Changes in Hispanic population between 2000 and 2010 in census blocks located in areas in which the 2009 Targeted Blocks Façade Grant Program was implemented, according to census data.

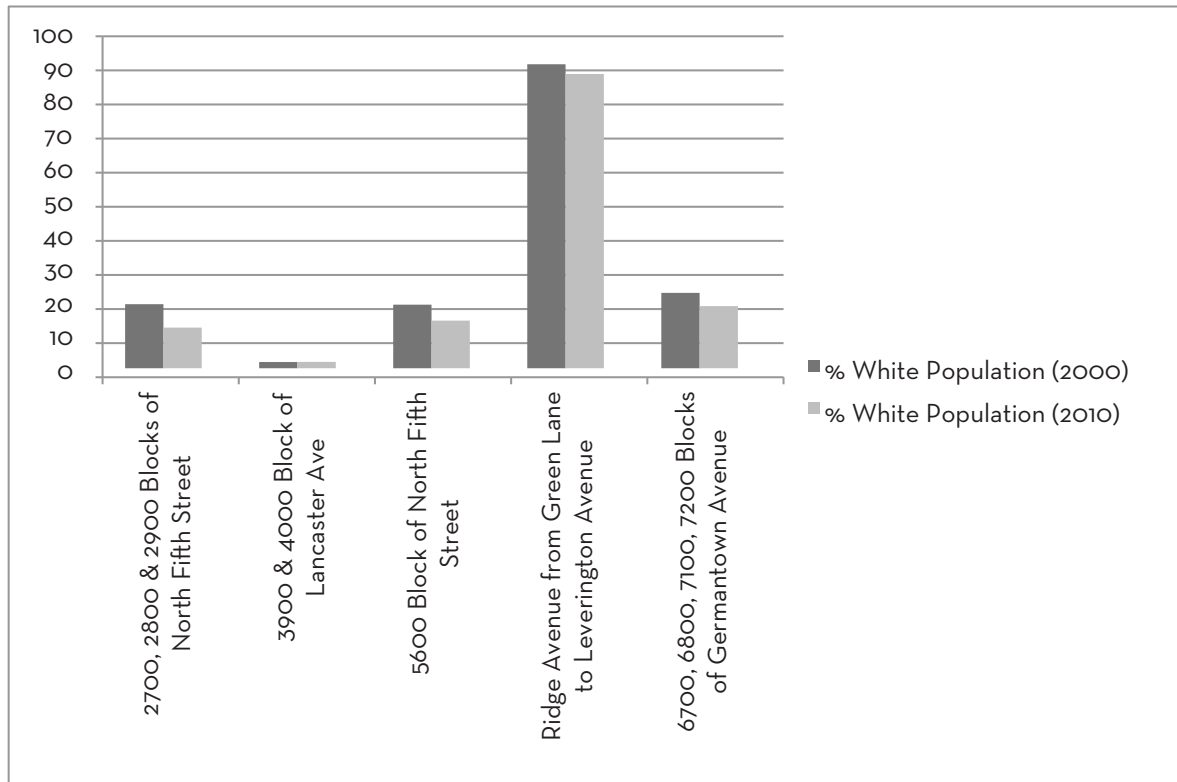


FIGURE 25 Changes in White population between 2000 and 2010 in census blocks located in areas in which the 2009 Targeted Blocks Façade Grant Program was implemented, according to census data.

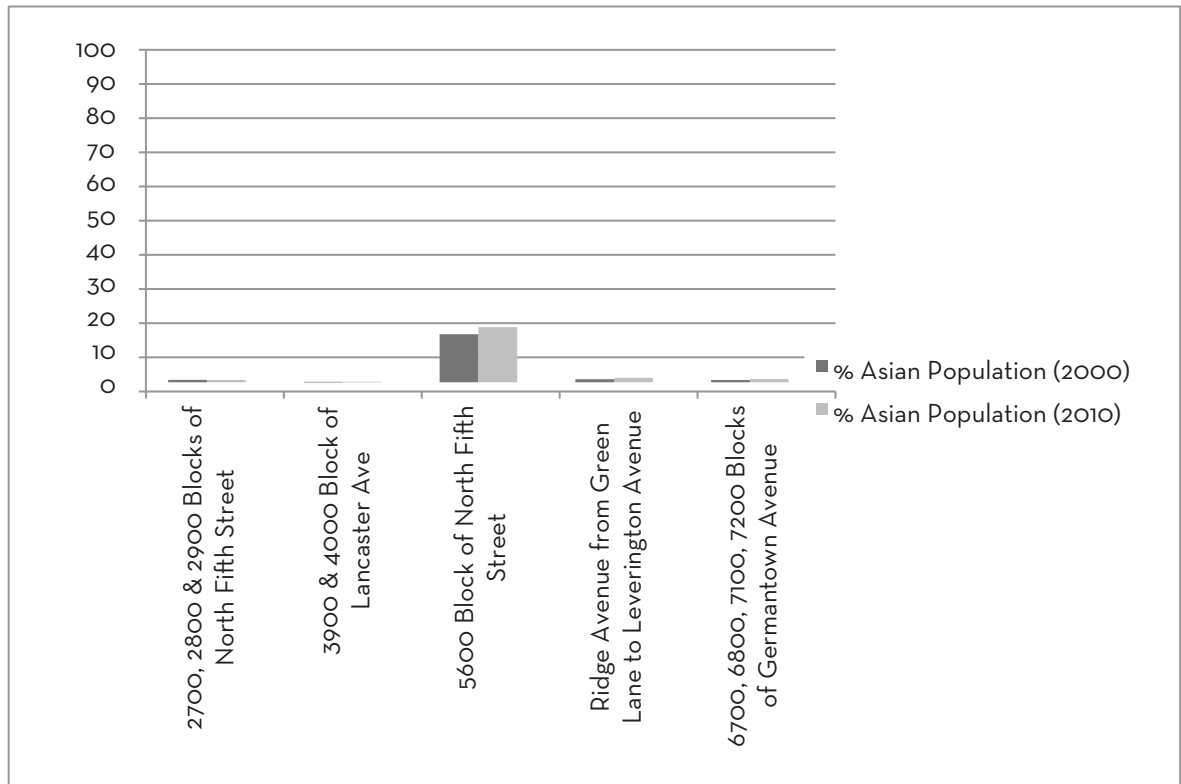


FIGURE 26 Changes in Asian population between 2000 and 2010 in census blocks located in areas in which the 2009 Targeted Blocks Façade Grant Program was implemented, according to census data.

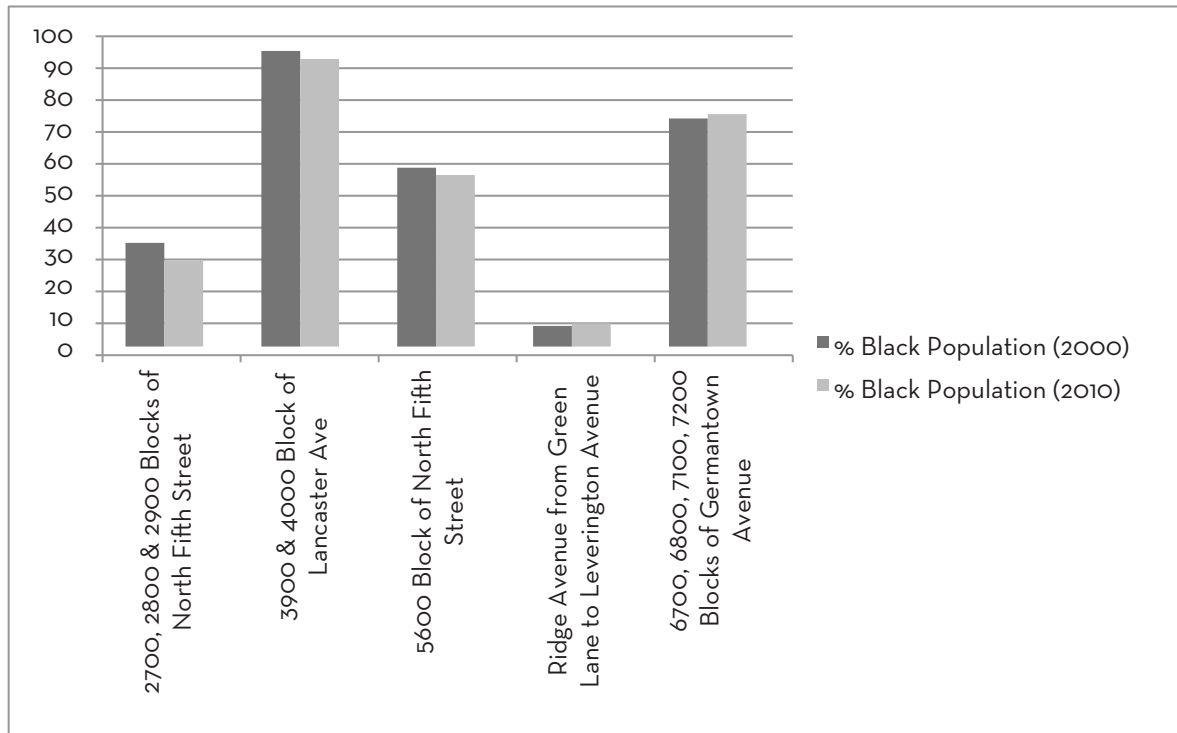


FIGURE 27 Changes in Black population between 2000 and 2010 in census blocks located in areas in which the 2009 Targeted Blocks Façade Grant Program was implemented, according to census data.

INDEX

- architectural color, vi, 1, 2, 3, 4, 5, 7, 17, 19, 22, 23, 24, 25, 36, 47, 48, 58, 61
- architecture, 1, 18, 21, 23, 24, 25, 26, 30, 33, 36, 38, 58, 83
- benefits, 10, 11, 13, 59, 62, 75, 81, 84
- building exteriors, 2, 4, 5, 41, 48, 59, 73, 83
- built environment, 1, 4, 10, 11, 12, 13, 15, 18, 19, 22, 23, 24, 33, 35, 51, 58, 76, 77, 83, 84
- CDC, 60, 61, 70, 80
- change, 2, 3, 5, 10, 14, 15, 23, 38, 40, 42, 46, 48, 49, 54, 56, 58, 70, 72, 73, 76, 77, 83, 84, 85
- cities, 2, 3, 5, 11, 12, 16, 24, 25, 38, 41, 49, 51, 52, 53, 58, 59, 75, 76, 82, 83, 84
- city, iii, 1, 3, 4, 5, 6, 10, 11, 12, 13, 14, 16, 23, 32, 38, 39, 40, 42, 43, 44, 46, 48, 49, 50, 52, 53, 54, 55, 56, 57, 58, 60, 61, 62, 63, 65, 66, 68, 83, 84, 88
- cognition, 4
- color, vi, 1, 2, 3, 4, 5, 7, 17, 18, 19, 21, 22, 23, 24, 25, 26, 29, 30, 33, 34, 35, 36, 42, 45, 47, 48, 58, 78, 83, 84
- color history, 7
- commercial, vi, vii, viii, 1, 2, 3, 5, 6, 7, 8, 12, 16, 32, 52, 53, 55, 56, 57, 60, 61, 62, 63, 64, 65, 66, 68, 69, 70, 71, 72, 73, 74, 75, 77, 80, 81, 83, 84, 91, 92, 93, 94, 95
- community development corporations, iii, 57, 60, 85
- culture, 7, 14, 15, 40
- development, iii, 2, 4, 5, 7, 10, 11, 12, 13, 14, 23, 40, 52, 53, 55, 57, 58, 59, 60, 76, 82, 84, 85
- economic development, iii, 5, 7, 11, 14, 23, 58, 60, 76, 84
- economic growth, 2, 7, 57, 61, 84, 85
- environment, 1, 3, 4, 7, 11, 12, 13, 15, 16, 17, 18, 19, 23, 24, 33, 34, 36, 40, 41, 43, 44, 45, 46, 49, 51, 53, 58, 59, 69, 75, 76, 77, 82, 83, 84
- exterior, 2, 3, 5, 6, 18, 22, 24, 25, 30, 33, 39, 44, 45, 54, 56, 58, 59, 73, 75, 76, 80, 81, 84
- exterior architectural color, 2, 3, 5, 22, 24, 25
- façade improvement program, 2, 3, 5, 6, 7, 15, 16, 23, 24, 75, 77, 80, 83, 84
- Gehl, Jan, 5, 38, 39, 40, 41, 49, 87
- heritage, 2, 10, 11, 12, 13, 14, 41, 58, 83, 84, 88
- historic fabric, 1, 4
- historic preservation, 2, 6, 7, 10, 11, 13, 16, 17, 23, 58, 59
- neighborhood, 4, 5, 10, 12, 16, 39, 49, 51, 53, 56, 57, 60, 62, 70, 76, 81, 85
- neuroaesthetics, 4, 49
- pattern books, 19, 29, 30, 59
- perception, 4, 17, 33, 34, 41, 59, 84
- Philadelphia, i, iii, iv, vi, vii, viii, 3, 4, 6, 7, 8, 24, 39, 49, 50, 51, 52, 54, 55, 56, 57, 60, 61, 63, 64, 65, 66, 67, 69, 75, 76, 77, 78, 80, 83, 85, 87, 88, 90, 91, 96, 98
- public investment, 6, 9, 57, 62, 83
- redevelopment, 12, 52
- rehabilitation, 2, 3, 6, 10, 33, 39, 44, 45, 46, 48, 56, 57, 59, 77, 83, 85
- reuse, 2, 3, 10, 12, 13, 32, 33, 58, 77
- revitalization, 2, 3, 5, 7, 10, 14, 15, 16, 32, 52, 58, 62, 83
- Rojas, Eduardo, i, iii, vi, viii, 11, 13, 47, 83, 84, 88
- Rypkema, Donovan, 11, 13, 89
- significant, 1, 2, 3, 4, 5, 7, 8, 10, 15, 17, 23, 39, 53, 56, 58, 66, 68, 72, 77
- socioeconomic, 4
- sustainability, 1, 3, 7, 12, 13, 14, 23, 77

Swirnoff, Lois, 22, 23, 25, 32, 36, 89

Targeted Blocks, vi, vii, viii, ix, 3, 7, 8, 57, 60, 61, 62, 63, 64, 66, 68, 69, 71, 72, 73, 74, 76, 78, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102

Throsby, David, viii, 10, 11, 14, 89

urban, iii, 1, 2, 3, 4, 5, 6, 7, 8, 10, 12, 13, 14, 15, 16, 17, 22, 23, 24, 25, 32, 33, 35, 36, 38, 39, 40, 41, 44, 45, 46, 47, 49, 51, 52, 53, 54, 55, 57, 58, 59, 62, 75, 76, 80, 83, 84

urban environment, 1, 3, 4, 7, 16, 17, 34, 35, 36, 40, 41, 44, 45, 59, 76, 83