PLANNING FORUM

JOURNAL OF COMMUNITY AND REGIONAL PLANNING

VOLUME 13/14   2009

UTSA

THE UNIVERSITY OF TEXAS AT AUSTIN
SCHOOL OF ARCHITECTURE

Planning Forum disseminates practical information and scholarly research related to the study of human communities and the interaction of social, political, built, and natural environments. Planning Forum encourages participation, promotes discussion and enhances the influence of research related to the planning discipline from a variety of academic areas and professional fields.

Although information herein is based on the editor's and author's extensive experience and knowledge, it is not intended to substitute for the services of qualified professionals.

FOREWORD

Dear Readers,

We are proud to present this double issue of *Planning Forum* that includes articles from Volumes 13 and 14. We have combined Volume 13 and 14 articles to make a cohesive issue. To pay tribute to the previous editors, you will see the Volume 13 editors' foreword following this one.

We begin with Point/Counterpoint, an exchange between academics and practitioners in planning related fields on a topic that are currently debated. The theme for this year's Point/Counterpoint is infrastructure. The articles in Volume 14 are also related to the theme of infrastructure.

There are many different ways to interpret infrastructure outside of its conventional understanding. Mueller and Ferguson's article, "Access to Affordable Housing in a Weak State Context," redefines social justice as a key piece of infrastructure in a municipality. In a similar spirit of social justice, Thomen and Strange discuss the role of mapping technology behind organizing the residents of an impoverished informal housing settlement in the Dominican Republic. From a more conventional perspective, Jessica Doyle examines the challenges the European Union faces in creating a more efficient and sustainable transit network.

The fragility of the global financial system often claims essential infrastructure as an unfortunate victim of budget cuts and reduced aid. This volume's pair of position pieces offer insightful critique regarding two aspects of environmental management infrastructure. Fadillah Putra addresses the many ill effects of under-funding in his analysis of crisis management in domestic and international natural disasters. Olivia Starr brings some ideas for change in pollution management via the Environmental Protection Agency's New Source Review Program.

We hope that this collection of articles, perspectives, and book reviews provides readers with insight and new perspectives about infrastructure and planning.

Sincerely,
Julienne Bautista, Catherine Jaramillo & Meng Qi
Senior Editors, Volume 14

FOREWORD

Dear Readers,

Over the past three years, the field of planning has experienced increased attention from individuals and communities across the country. Hurricanes Katrina and Rita, redevelopment efforts at the World Trade Center, and heightened attention to anthropomorphic effects on the environment have generated widespread attention on planning efforts in traditionally disenfranchised populations and public participation. In an effort to inform this discussion, the 2007 edition of *Planning Forum* looks at the outcomes of government-led planning programs in vulnerable communities and various methods to enhance public participation in planning decisions. We, the editors, believe the articles presented here provide an important contribution to the future direction of the planning profession.

As broad and multidimensional as the field of planning is, so are the contributions from this year's writers and photographers. Barbara Brown Wilson's article, "Coding Social Values into the Built Environment," examines how social movements are made physically manifest. We follow with Marisa Ballas's "The Transportation Barriers of the Women of Pudahuel, Santiago," which explores the titular subject in the context of Chile's successful economic development efforts. Urban renewal is revisited in Meghan McCarthy's "A History of Urban Renewal in San Antonio," an excellent companion to any of the recent examinations of urban renewal in the northeast United States. Suzanne Russo, Mariana Montoya, and Monica Bosquez present a firsthand analysis of community-university partnerships involving youth as research participants in "Service Learning through a Community-University Partnership, the East Austin Environmental Justice Project." This year the annual Point/Counterpoint examines the role of the public and private sectors in addressing global climate change. Martin Thomen and Chang Yi offer insightful reviews of two recent publications, *Planet of Slums* and *Zoned Out*. Finally, we are pleased to introduce a photo essay to *Planning Forum*. In what we hope will be the first of a continuing tradition, Sarah Morton chronicles with splendid visual style the transformation of a Chicago rail line into an urban nature trail.

We hope you find this collection of articles, reviews, and photographs as illuminating as we do. They contemplate our past, dissect our present, and wonder at our future. Perhaps they will, in some small way, inform your planning decisions.

Sincerely,
Suzanne Russo & Ryan Sullivan
Senior Editors, Volume 13

NOTE FROM FACULTY LIAISON
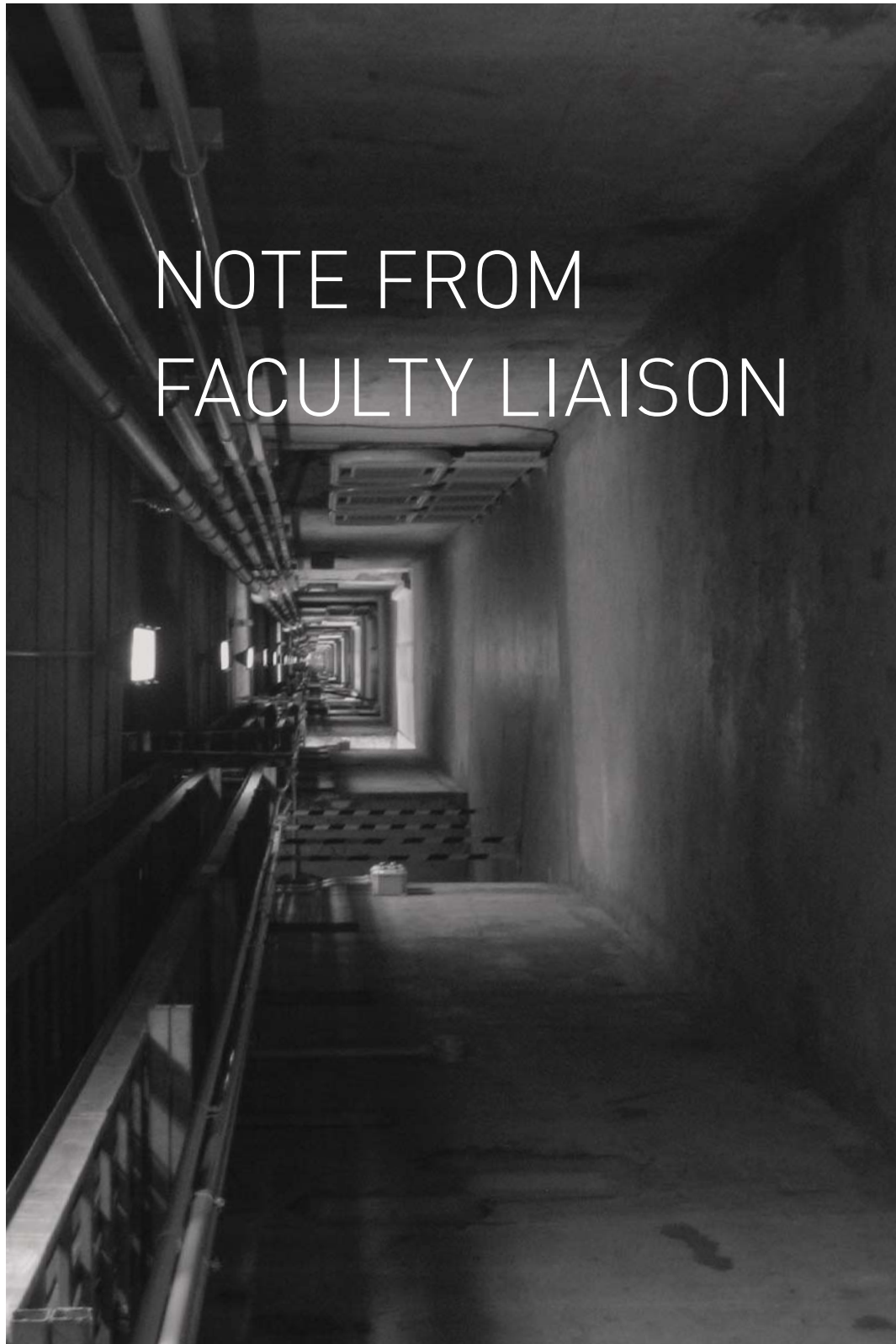
Dear Readers,

As the new faculty liaison of *Planning Forum*, I am pleased to introduce this special double issue. *Planning Forum*, the student edited and peer reviewed journal published by the Community and Regional Planning in the School of Architecture at the University of Texas at Austin, focuses on current issues in planning practice and research. This year's editors – Julienne Bautista, Catherine Jaramillo, and Meng Qi – have done an outstanding job of coordinating with authors, faculty reviewers, and administrators. *Planning Forum* is entering into a new phase. We will be providing digital access to this and all future issues. This double issue is also the first publication coming out of the School of Architecture with our new logo.

We anticipate that you will find these articles insightful and provocative.

Dr. Sarah Dooling
Faculty Liaison, *Planning Forum*

Point/Counterpoint
Sustainable Communities and Energy Policy in America

EDITED BY OMAR NASSER AND PETER ALMLIE

As the world population continues to increase, pressures on our natural resources have reached levels of demand never seen before. The very pillars upon which we depend for survival are quickly eroding before our eyes. As scholars and practitioners in community planning and regional development, we must develop interdisciplinary, sustainable approaches to maintain these vital natural resources.

One of the principal challenges we face today in a growing market economy is finding a balance between environmental conservation goals and economic growth. To address these challenges, it is necessary to devise well-defined, equitable, and long-term plans and guidelines for creating sustainable and healthy planning policies. These policies must integrate both micro- and macro-level approaches to these serious issues facing humankind.

In hopes of moving toward such a coherent vision, our staff has enlisted two esteemed planning professionals from the Texas region to provide insights into the topic of sustainable energy policy in the wake of global climate change and increased demand on our natural resources. We want to thank these respondents for their thoughtful and insightful contributions to *Planning Forum*, and we hope that our readers enjoy their responses to this year's Point/Counterpoint.

CONTRIBUTORS

JAMES NIETO received his MBA from St. Edward's University in 1989 and currently serves as the asset manager in the Portfolio Management Division at the Texas General Land Office in Austin, Texas. Prior to this position, James served as a planner in both the City of Austin Planning Department's Office of Land Development Services and the Texas Department of Public Safety's Division of Emergency Management. In addition to serving Texas's public agencies, James was elected to public office as the Southland Oaks Municipal Utility District's treasurer from 1995 to 1998.

W. BRIAN KEITH, AICP, AIA is the director of urban design and planning at James, Harwick & Partners in Dallas, Texas. A North Carolina native, Brian has practiced urban design, planning, and architecture in Texas for the past eleven years. His professional experience is centered on creating livable communities/neighborhoods through the integration of a variety of housing typologies and community uses. Brian's planning and design experience includes a wide range of project types, including residential and low-income housing, multifamily housing, mixed-use, retail, government, and institutional projects. In 1989 Brian gradu-

ated magna cum laude from North Carolina State University with a bachelor's of environmental design in architecture, and received his master's of carchitecture from the University of Texas at Austin in 1995.

INTERVIEW

How do you envision public policy and city planning responding to global climate change?

BRIAN It's a little cliché, but the axiom of "think globally but act locally" really holds true, I believe, in regards to public policy and city planning. Local municipalities and regional governing bodies [council of governments] are where the most direct impact is made through policy, regulations, and city planning efforts. It takes forward-thinking and visionary local planners, urban designers, and elected officials to think beyond their immediate needs or short-term demands to "look out for" the future generations and the larger global context in implementing sustainable policies and goals. Luckily, it seems the pendulum of change has started to swing and people do care about their greater environment and their children's future.

JAMES Thus far we are responding too slowly and gradually. I envision this as a growing priority that we may see as a driving force behind transit-oriented design and new urbanism. The pace may be picking up as more of our leading-edge jurisdictions incorporate energy conservation as a strategic planning objective.

The developments of technologies that bring alternative energy to a mass scale are important in reducing our dependence on petroleum. What role does/should the government play in developing and implementing these technologies?

BRIAN See above answers—of course "government" plays a huge role. Companies are stepping forward and need to do more—but sometimes the only entity that can implement such large, overwhelming changes and projects is a government body.

JAMES The government's role here is once again twofold, with a regulatory "push" side and an economic "pull" side. In city planning, our regulatory side is just starting to show positive results, but promises to grow exponentially. We should be reminded that the average European walks about one hundred times as far as the average American, on a daily basis. Is it any wonder that their cities look and feel so different from ours? There is a "pull" side in city planning too, as economic incentives are integrated into the new urban model.

How does your work incorporate the values of a sustainable energy policy?

BRIAN My urban planning studio's work is centered around mixed-use redevelopments, transit oriented developments [TOD], and as a strategy/overarching philosophy of creating through

whole community design. Our urban design work involves connecting people to their greater community: linking with transit, creating special places that have an enduring value and quality of life for people. Almost all our work involves some kind of brownfield redevelopment or infilling with strategically placed density that fundamentally encourages uses, residents, and activities closer to the cities' cores, thereby reducing traffic, emissions, infrastructure needs, etc. By encouraging/designing denser communities [appropriately placed density—remember "density" is not a four-letter word], our work promotes housing options/affordability, expands transit options, promotes "walkable" communities, protects the environment, and ultimately encourages/supports sustainable energy policies.

JAMES My work incorporates these values on a theoretical level, hopefully guiding my efforts in a positive direction. I am not presently employed in any capacity that normally includes active lobbying for better urban design policy, or energy policy, but I will definitely go to bat for these causes any time they are issues affecting my daily work.

PETER ALMLIE completed his BA in Latin American studies at San Diego State University, where he focused on housing issues in Mixtec communities in Oaxaca, Mexico. After extensive travels throughout Latin America, he worked for a nonprofit agency that focused on providing housing in the peripheral colonias of Tijuana. Seeking a greater understanding of the built environment, Peter entered the dual degree program at UT Austin, where he continues to study issues related to housing and development in Latin America. Upon completing his dual degree, Peter would like to continue his work in Latin American communities, either in Southern California or in Mexico.

OMAR NASSER is currently seeking his master's degree in city planning at the University of Texas at Austin School of Architecture. Focusing on land development and environmental issues, he hopes to pursue a career in planning for land development in ecologically sensitive areas.

Point/Counterpoint
Infrastructure in the U.S.

EDITED BY JULIENNE BAUTISTA, CATHERINE JARAMILLO AND MENG QI

This year, our Point/Counterpoint looks at the role of infrastructure in American urbanism and the effects our physical networks have on the more complex social fabric. The seemingly innocuous issue of infrastructure has continually struck chords of resentment and resistance in this country. This has been especially true during times of economic recession, which makes this topic especially relevant today. We asked our respondents, who come from differing backgrounds and hold widely differing perspectives, to discuss this relevance for planners. The editors thank the respondents for their insightful contributions.

Posed and answered before the electoral victory of Barack Obama, who raised public concern for the state of our national technological and transportation infrastructure during his presidential campaign, these questions were inspired by the controversial and tragic examples of infrastructural failure in New Orleans (August 2005) and Minneapolis (August 2007).

CONTRIBUTORS

RANDALL O'TOOLE is a Cato Institute Senior Fellow working on urban growth, public land, and transportation issues. O'Toole's research on national forest management, culminating in his 1988 book, *Reforming the Forest Service*, has had a major influence on Forest Service policy and on-the-ground management. His analysis of urban land-use and transportation issues, brought together in his 2001 book, *The Vanishing Automobile and Other Urban Myths*, has influenced decisions in cities across the country. In his most recent book, *The Best-Laid Plans,* O'Toole calls for repealing federal, state, and local planning laws and proposes reforms that can help solve social and environmental problems without heavy-handed government regulation. An Oregon native, O'Toole was educated in forestry at Oregon State University and in economics at the University of Oregon.

ANDY KARVONEN is a post-doctoral researcher at the Manchester Architecture Research Centre at the University of Manchester (UK) where he studies the relationships between humans, nature, and technology in urban contexts. He earned a PhD in Community and Regional Planning from the University of Texas at Austin and his dissertation research was on the politics of urban drainage in Austin and Seattle. In addition, he has over a decade of consulting experience in environmental engineering and sustainable building and is a licensed engineer in the state of Washington.

INTERVIEW

What are some of your thoughts for the main reasons behind the recent infrastructural failures (i.e., the bridge collapse in Minneapolis, the steam pipe explosion in NYC, overall deterioration of national highways) that have been taking place? How should we as planners go about finding solutions to these problems?

O'TOOLE The Minneapolis bridge collapse was apparently due to a design flaw, not poor maintenance. In general, the "infrastructure crisis" is overblown by government officials seeking larger budgets and special interest groups seeking government handouts. While there are problems, most of those problems can be solved by funding infrastructure out of user fees and letting managers use those fees in the ways they think best. There is no need to spend tax dollars on most infrastructure.

KARVONEN Infrastructure networks are frequently heralded as the epitome of societal progress. The great era of infrastructure development in the U.S., from the mid-nineteenth century to the 1960s, serves as a testament to the ingenuity and drive of humankind. But today, the triumph of these networks fails to resonate with the general public and they tend to serve as background elements to the urban condition, except when they fail spectacularly, as in the recent examples of Minneapolis, New York City, and New Orleans. Given our heavy reliance on these antiquated networks, some of which are over a hundred years old, I find it amazing that we haven't experienced more catastrophic failures.

The contemporary infrastructure crisis is often understood as a seemingly insurmountable governmental challenge and an enormous economic burden. But it can also be seen as an opportunity for planners and other practitioners of the built environment to update the public realm to reflect current (and future) conditions. Scholars are increasingly calling for the abandonment of single-use infrastructures in favor of multifaceted designs, as characterized by the transdisciplinary work of Frederick Law Olmsted in nineteenth-century landscape architecture and urban planning practice. Multifunctional infrastructure networks of the twenty-first century can simultaneously address economic development, environmental protection, and social equality, fulfilling the aspirations of sustainable development advocates. Furthermore, there is a trend toward conceiving of infrastructure not as permanent physical networks but as constantly evolving ribbons of connection between humans and their surroundings.

Planners have a particular role to play in the rebuilding of infrastructure networks, not only in providing design expertise and professional management, but also in engaging the public in the design, governance, and maintenance of these networks. The development of new infrastructure networks has the potential to bridge the physical and communicative planning approaches through collaboration on local infrastructure revitalization

projects founded on strongly democratic principles.

Wireless communication is now increasingly identified as an infrastructural necessity. In what ways should urban designers and planners consider this trend and accommodate this necessity when planning for the urban form?

O'TOOLE Planners should get out of the way and let the market work. Some cities have subsidized the installation of wireless Internet communications. This has almost always been a failure. The most government should do is impose design standards on cell towers in residential areas.

KARVONEN Wireless communication technologies exude an aura of progress, suggesting that infrastructure services can be unshackled from the limits of material distribution networks. And the ubiquitous nature of wireless communication is interpreted to be inherently democratic and freely available to all. But beyond the popular rhetoric, these networks have more in common with conventional infrastructure than typically acknowledged. Wireless technologies continue to be tied to physical distribution lines and can perpetuate or even create new forms of uneven service by providing limited access to specific populations. Furthermore, the wireless character of these services can lead to unanticipated problems, such as the rise in traffic accidents due to the use of cellular telephones by drivers.

The emergence of wireless communication technologies highlights the need for more democratic modes of technological development that can identify the advantages and pitfalls of new technologies before they are adopted by the public at large. Rather than blindly rolling out these technologies and then scrambling to develop legislation to limit their undesirable consequences, we need to develop new modes of public technology assessment to proactively address the potential positive and negative aspects of these technologies. And such an approach goes beyond wireless communications to address all novel and emerging forms of technology, such as genetically modified organisms, nanotechnology, human cloning, and nuclear energy.

Who should provide for infrastructural needs and other public services? Should it be publicly funded or be put into the control of private entities? Or should it be a combination of these two?

O'TOOLE Infrastructure should either be private or be provided by government agencies that are funded out of the revenues from that infrastructure. Government highway departments, sewer offices, and water bureaus can work reasonably well when they are funded out of user fees. When they are funded out of tax dollars, the way most transit agencies are, they quickly succumb to the pork-barreling demands to build megaprojects that often cost too much and do too little.

KARVONEN In the U.S., infrastructure provision continues to be a largely public endeavor, despite significant reductions in federal funding since the 1970s and the emergence of new forms of privatized services such as toll roads, gated communities, cable television, satellite radio, and telephone service. As a whole, these activities suggest that the boundary between public goods and private commodities are continually being negotiated, with varying results. I see the rise of public-private partnerships as one of the most interesting current trends in infrastructure service provision. Participation of private entities is not an inherently negative or threatening trend, as some have argued, but requires judicious forethought so the public good is not sacrificed for private profit. From my perspective, the most successful partnerships are those that maintain public ownership of the network while allowing for private management under strict government oversight. This allows for public control of these networks while taking advantage of the management efficiencies in the private sector.

How do you predict that federal fiscal policies will change in relation to new infrastructural needs? Do you think federal subsidies are crucial to the potential solution? If not, what are some financing strategies that planners can use?

O'TOOLE I don't think federal subsidies are a part of the solution, but it currently appears that this is the direction we are going. Many members of Congress seem intent on authorizing massive infrastructure subsidies so they can report to their constituents that they delivered pork-barrel projects to their states and districts. This is not going to solve the infrastructure problem; if anything, it will make it worse, as Congress has a history of preferring new construction over maintenance, so the projects they deliver are more likely to add to future infrastructure needs than to solve existing problems.

KARVONEN Federal investment will always be central to infrastructure development, due to the enormous costs associated with building and maintaining these systems as well as the widespread public benefits from robust and comprehensive networks. There is increasing discussion about the need for an updated New Deal to address the current economic crisis through domestic infrastructure development. With respect to energy, it is increasingly acknowledged that our reliance on fossil fuels has had unintended consequences such as climate change, international terrorism, and a rising national debt. Resolving these problems simultaneously will require a massive federal program to reinvent our energy infrastructure to be based on renewable sources. However, such an endeavor will face the wrath of fiscally conservative voters and politicians who advocate for smaller government. Personally, I don't see how we can make any appreciable changes to existing infrastructure services without an expanded role for the federal

government in financing both innovation and construction. While political, cultural, and economic conditions differ today from the Great Depression, the challenges we are facing require a similar level of commitment that can only be provided by a strong federal government.

How do infrastructural issues relate to social inequality? How can reconfiguring infrastructure be used as a tool to combat this inequality?
O'TOOLE Government action is often promoted as a way to reduce social inequality. Yet the sad truth is that the political power of the wealthy is disproportionate to their economic power. So when programs are devised to reduce social inequality, too often they end up primarily benefiting the wealthy. The best way to help low-income people is to rely on user fees.
KARVONEN The history of Austin's development provides vivid illustrations of how infrastructure services can be used to exacerbate social inequality. For example, the 1928 city plan called for the concentration of minority populations in East Austin to avoid the duplication of municipal services for white and black populations throughout the city. Municipal policy has changed dramatically in the ensuing years, but uneven infrastructure provision continues to exist in low-income areas of the city. And correcting the unevenness of these networks is often tied to economic redevelopment, resulting in relocation of low-income populations to other areas of substandard infrastructure service.

The challenge is to find ways to distribute a limited amount of government funds in an equitable manner, prioritizing projects that will provide the greatest public good rather than the greatest return on investment through property and sales tax revenue. Thus, there is a tension between managing a city as a business endeavor (the current mode of governance in Austin) versus an expansive perspective that supports and fosters an equitable public realm. This is not a call for socialist forms of governance but rather a suggestion to acknowledge that infrastructure provision has multiple consequences that cannot be addressed solely by applying the tenets of neoliberal capitalism.

How can planners help shift public policies that treat open space and urban green space as an optional amenity rather than a necessity for healthy public spaces?
O'TOOLE Why should they? The U.S. is 95 percent open space. Most urban areas have lots of parks. The stampede to protect open space has driven up housing prices, increased traffic congestion, and taken people's property rights without compensation.

In general, planners need to learn more economics so they can understand concepts such as cost efficiency, supply and demand, and marginal utility. Most planners don't realize—or claim they don't believe—that when you reduce the availability of land

for housing, housing prices go up. So they go to great efforts to preserve an abundant resource—open space—and end up making housing unaffordable for low- and moderate-income families.
KARVONEN Planners and other practitioners of the built environment face significant challenges with respect to open space and green space due to a widespread embrace of a Cartesian understanding of the built environment. The city is divvied up among increasingly specialized experts with building design relegated to architects, streets to transportation engineers, parks to landscape architects, and so on. This segmented view of the landscape fails to acknowledge the connections that bind the city into a whole.

Landscape architects have much to offer by identifying design opportunities that relate the common elements of the city, particularly with respect to parks and open space. Rather than interpreting these spaces as nonurban and unbuilt landscapes, we can see them as providing recreation, transportation, commercial, aesthetic, and ecological services. However, this requires collaborative planning efforts that involve built environment experts (architects, urban designers, planners, and landscape architects) as well as the users of these spaces.

JULIENNE BAUTISTA, a native of Los Angeles, California, received her B.A. in History from Loyola Marymount University. After extensive travel to Brazil and major cities worldwide, she decided to focus on Planning with an emphasis on Latin America. She chose the University of Texas for their widely available Latin American resources and interdisciplinary studies. Future goals include environmental development work in Latin America.

CATHERINE JARAMILLO completed her M.S. in Community and Regional Planning at the University of Texas at Austin in May 2009. Her interest in development and conservation issues in the Southwest emerged from working with so many educators and activists in Albuquerque throughout and shortly after her undergraduate work. She got her B.A. in Modern Languages from the University of New Mexico in 2005. She would like to pursue her work in sustainable economic development and agricultural policy, in addition to applying her linguistic interests to planning research abroad.

MENG QI graduated from the Community and Regional Planning program at the University of Texas at Austin in May 2009. During her studies at the University of Texas, she specialized in affordable housing, and completed her Professional Report on the design of mixed income communities in the UK and the U.S. After graduation, she plans to continue her work in housing through a focus on affordable housing policy and implementation of key programs in Austin, Texas. She received her B.A. in Biology from Reed College in 2005.

Coding Social Values into the Built Environment

BARBARA BROWN WILSON

Since the first known human settlements in Mesopotamia, building regulations have been enacted to protect the citizenry from potentially deleterious effects of the built environment. As crises arise and cultural practices change, regulatory institutions create new or amend old codes to reflect these societal shifts. The interests of the market, the state, and the collective will of citizens are rarely in healthy balance in a democratic society, but regulatory codes can serve to provide a voice for the public will in contrast to the louder and more seductive cries of market and government forces. Of the many institutions that impose regulations on a democratic community (the state, the market, the media, and others), our societal norms are the hardest to decipher. Stories allow us to climb in those crawl spaces, to see those partial perspectives that clear up the blind spots in our effort to "objectively" evaluate and contribute to community. These border spaces are where the regenerative change or balance in a community often occurs, and thus these stories are pivotal to an understanding of any healthy community and the ways in which it can be sustained, nourished, and improved.

A social movement, whose power then becomes harnessed and institutionalized in some sort of societal code, often marks or provokes these code-making paradigm shifts. Using social movements as a framework, this project considers codes and their relationships with social values to approach the question, "How does innovative change occur in the built environment?" Investigating a series of social movement case studies where the built environment was fundamentally altered as a result, and triangulating these cases with literature from science and technology studies and that of sustainable architecture, this project will test the boundaries of the relationship between regulation and social change. The case studies represent a spectrum of different societal concerns and related regulatory impulses—each one radically altering the way urban space was conceived. The public health movement's institutionalization of urban infrastructure exemplifies the emerging relationship between urban and human change at the dawn of the industrial era; the American disabilities movement used rights-based protest to gain equal access to physical spaces in the revolutionary fever coming out of the 1960s; and the creation and wide reception of the Leadership in Energy and Environmental Design (LEED) certification system redesigned the association between the most recent strain of the environmental movement and the building industry in the past decade. While these cases are admittedly myopic slices of temporal experience in American society, their comparison reveals a societal metanarrative produced through the evolution of codes for the built environment.

An Imbalanced Society: Theories of Civic Tension

"It appears increasingly likely that man is not going to make it. He has done too much that is self-destructive and too little to save himself. Although it is hardly consoling, there will be a certain justice in his extinction if it results from his thoughts and choices. But it would be an unpardonable irony if he were to destroy himself not because of what he thought, but because he thought what he thought made no difference." (Barber, 1971, 13)

If the interactions of regulatory bodies are intended to maintain a balance that sustains healthy communities, we must look further into the nature of these institutions and their relationships with each other. For physicist Fritjof Capra, these subsystems are the "processes of communication, which generate shared meaning, and rules of behavior (the network's culture), as well as a shared body of knowledge" (Capra, 2002, 91). But this is a bit too abstract. Geographer Richard Peet defines development as "improvement in a complex of linked natural, economic, social, cultural, and political conditions" (Peet, 1999, 1). Also turning to biology for his understanding of communities, Peet understands the functions of "the institutional subsystems of society" in accordance with those of any other organism (Peet, 14). Peet is disillusioned with democracy. Discussing the ways in which the subsystems of democracy exclude portions of its cellular citizenry from the balance process, Peet claims "the main problem with democracy is that it has never been achieved" (Peet, 197). Yet, Peet never explicitly describes these subsystems of democracy, or how they fail to properly regenerate.

Amartya Sen, in *Development as Freedom*, more clearly dissects the institutions that create the subsystems of democracy. Sen sees government, market and nonmarket organizations, civic and political entities, educational systems, and "opportunities for dialogue and debate" (including the media) as the driving institutions of society (Sen, 2000, 9). He sees freedom as the essence of democracy, and postulates that any society can be evaluated by its constituents' access to "substantive freedoms," or freedoms that, when withheld, prevent community members from making their own choices and inhibit their ability to maintain their part in the community's balance (Sen, 18). Without access to these substantive freedoms (health, education, safety, etc.), the cellular makeup of a democratic community cannot sustain itself.

And what of this democratic community? Have we become Max Weber's vision of the society without a soul? Political scientist Alan Wolfe argues that until the United States acknowledges freedom as an interdependent condition of modern society, we will remain unable to achieve the health to which we aspire (Wolfe, 1989, 2). Society is constantly searching for ethical codes to dictate its behavior, but "modernity displaces moral discourse into new—one is tempted to say modern—forms" (Wolfe, 6). For Wolfe, the three institutions that traditionally guided society were the market, the state, and civil society. Modernization distances the citizen from the effect her actions have on civil society. The system of accountability is no longer functional. The market and the state were never meant to operate without the balancing of the regulatory force of civil society (Wolfe, 19).

The built environment is an enormous petri dish on which we can observe the manifestations of these regulatory tensions. Maintaining a balance of the market, state, and societal interests is no small feat, although planners attempt to successfully pull off this magic trick everyday. In Scott Campbell's influential article "Green Cities, Growing Cities, Just Cities," he graphs out the tensions at play in the creation of the built environment in a model he calls the planner's triangle. Campbell's triangle graphs out what he sees as the three main priorities in the built environment—equity, environmental protection, and economic development—and the three dynamics produced through their juxtapositions with one another: the development conflict, the resource conflict, and the property conflict. Yet, Campbell goes on to show how interrelated all of these concepts are with one another, asserting that inequity and the ensuing lack of political power are often central motivating forces in conflicts manifest as primarily economic or environmental issues. Social equity is at the heart of disputes over the built environment more often than is recognized. This fact is especially disconcerting when understood in context of Wolfe's assertion that modernization makes the values of civil society irrelevant, if not nonexistent, in political decision making.

So how do we reinstitutionalize the values of civil society into the built environment and ensure that these freedoms are properly provided to community members? The more common discourses surrounding this issue discuss it in terms of economics—access to varying sorts of capital that allow the provision of these resources. Obviously, this is not enough if large portions of the country continue to feel unheard and even alienated by conventional building practices. Using the more abstract terminology of development and economy, we can become distracted from our original goal of social equity. Capra cites neurophenomenology, the combination of complexity theory and first-person experience, as an approach to understanding the role civic consciousness plays in the creation of healthy social systems (Capra, 45–48). If we tell stories about lived experiences, while also understanding their connection to the ever-evolving network of organisms that constitute society, we can more clearly begin to see how a shift in cultural cognition might occur. But in a country so diverse, how do we get a sense of our collective consciousness? When do our societal values gain enough force in modern times to overpower the market and the state?

Civil Society Speaks: Social Movements as an Expression of Societal Values

I swear to the Lord;
I still can't see;
Why democracy means;
Everyone but me. (Hughes, 1943)

There have been critical moments in society when the people rose up and spoke for what they believed was right, moments where their values became more important than the money they might make, or than keeping the status quo. Societal uprisings such as the civil rights movement and the public health movement have redesigned our modes of regulation—both conceptual and physical. Sociotechnological theorists use a hybrid of historical and sociocultural approaches to argue for the revisioning of regulation systems through moral codes of civil society. For instance, Andrew Feenberg uses powerful examples, such as the eradication of the mid-nineteenth-century proclivity for child labor through a change in regulation heavily influenced by the emerging moral imperatives against such practices, charting the triumphs of ethical concerns over those of the market (Feenberg, 1992, 2). Feenberg's article argues for more democratic inclinations in all of our societal institutions that allow all processes of production to emerge from a larger societal perspective. But the task of engaging the people is an arduous one. Here is where we must ask the question, when has this been done before, and how?

"Differences arise on the margins of the homogenized realm, either in the form of resistances or in the form of externalities. . . . What is different is, to begin with, what is excluded: the edges of the city, shanty towns, the spaces of forbidden games, of guerilla war, of war. Sooner or later, however, the existing center and the forces of homogenization must seek to absorb all such differences, and they will succeed if these retain a defensive posture and no counterattack is mounted from their side. In the latter event, centrality and normality will be tested to the limits of their power to integrate, to recuperate, or to destroy whatever has transgressed" (Lefebvre, 1991, 373).

These margins that geographer/theorist Henri Lefebvre discusses in the quote above can be powerful places for change. Civil rights organizer Robert Moses refers to these places of difference

as "crawl spaces," or seemingly insignificant, tiny nooks in the political, spatial, or social realms where transformation can occur (Moses, 2001, 92). Peet uses Donna Haraway's concept of "situated knowledges" to capture this notion in development discourse (Peet, 175). He finds value in this concept of the partial perspective as a mode to truly see something objectively, or at least to break down the illusion of objectivity to allow for more relevant versions of reality to coexist. If, as Haraway claims, "objectivity is not about disengagement, but about mutual and usually unequal structuring, about taking risks in a world where 'we' are permanently mortal, that is not in final control," then the knowledge seeker must always acknowledge these inequalities and seek out those "situated knowledges" that provide rare and sometimes richer insights into that which they are trying to understand (Haraway, 1995, 190).

If the stories of social movements allow us to climb in those crawl spaces, to see those partial perspectives that perpetuate regenerative change or balance in a community, they might unlock one door onto the mysteries of modern cultural change. But before we get to these stories of societal uprising, we must understand the nature of "codes" and their power to institutionalize societal values into the built environment.

Regulatory Systems and Social Values: A Review of the Literature

Coding systems are as deeply embedded in our culture as the building processes they regulate. Many cite Article 229 of the Code of Hammurabi (Mesopotamia, 2250–1780 BCE) as the first building code, stating that "if a builder builds a house for someone, and does not construct it properly, and the house which he built falls in and kills its owner, then that builder shall be put to death" (Moore, 2005, 1). Theorists discussing this cultural scaffolding system argue that since the initiation of regulation, codes respond to shifts in a society's ethical framework (see Feenberg, 1995; Winner, 1995).

Architect and theorist Francis Ventre claims that only three major successes for cultural values can be found within the architecture world: historic preservation, ecological design, and zoning (Ventre, 1990, 57). He reconnects architectural regulation to value systems in his article "Regulation: A Realization of Social Ethics," asserting that "societies, usually acting through governments, preempt entire classes of design decisions, restricting and sometimes totally removing areas of design freedom, reserving those decisions to society as a whole, acting through regulatory institutions" (Ventre, 56). He challenges architects to consider social ethics' relationship to architecture and to reshape our built environment in the expression of the public's collective interest.

Yet some critics want to abolish regulation all together. William McDonough claims to have the keys to the "next industrial revolution," and his proposed system involves the abolition of restrictive regulatory codes in exchange for inherently superior design (McDonough and Braungart, 1998, 85). Their term, eco-effectiveness, which "leads to human energy that is regenerative rather than depletive," was coined by the architect/chemist partnership to express their reorganization of material production in a manner that removes the need for regulations with innovation-suppressing standards through superior design.

McDonough's system:
(1) removes the emission of hazardous materials into the environment;
(2) measures prosperity in terms of natural capital produced;
(3) evaluates efficiency in terms of employment rates;
(4) eradicates building codes to liberate innovation; and (5) encourages diversity.

Based on the regenerative nature of the tree, this system was applied to a Swiss fabric manufacturer to create an award-winning new type of fabric that reuses the scraps from previous fabric production. McDonough's value-driven system of production would not work in our current system, he argues, because regulation creates a system of mediocrity with low, obscure standards perpetuated by the market. For McDonough, certification systems lack specificity, flexibility, and thus contextual application. However, these systems of coding are still the regulatory backbone of our culture's building practices. McDonough never explicitly describes how this eco-effective ethic of superior design will be implemented, what would happen to the sorts of ills currently regulated for the protection of humankind, or what it might entail for the society that forces its industries to adopt it.

Alternatively, proposals exist for new sorts of society-driven coding systems. Michael Sorkin's *Local Code: The Constitution of a City at 42 Degrees N Latitude* is an influential example of this sort of work. Written in a codelike format, Sorkin organizes this essay into a bill of rights, principles, and elements of design. Based in induction, Sorkin attempts to make a point about the reductive nature of codes through a focus on "the particular" (Sorkin, 1993, 11). Proclaiming broad statements like, "every Hab (meaning home) shall have a view of the moon," Sorkin makes the point that regulation should not limit the nature of a community, but rather enhance it through a thoughtful, responsive, and locally based code (Sorkin, 30). This push for regulatory revision implies a large-scale dissatisfaction with the current system.

Looking outside of the field of architecture, we find more promising proposals for revisioning regulation. Environmental philosopher Andrew Light proposes a political restructuring of the community to encourage what he calls "urban ecological citizenship" (Light, 2003, 1). Light claims that cities are inherently more sustainable because of their potential for shared energy

consumption, transportation, etc.; he argues that, if organized in the proper manner, cities can be the ideal place to reconnect communities and empower them toward social action. Light's system of urban ecological citizenship entails the organization of communities into *poleis*, or small, locally centered groups of citizenry that become empowered by the authority over their own area. In these *poleis*, not only do the city dwellers become more civically inclined to maintain their streetscapes through this newfound authority, but also they restore a sense of community and place to the area through their collective discussions concerning public good. This concept of participatory regulation is a way of institutionalizing social values into our systems of governance more holistically, instead of waiting for society to rise up against more powerful forces in response to great need. However, the mode in which these new patterns of societal regulation would be implemented and maintained is never made clear in his work—Light never leaves the philosophical realm to discuss grounded, pragmatic application.

Technological philosophers like Langdon Winner also see civic engagement as its own ethical imperative. In his article "Citizen Virtues in a Technological Order," Winner asserts that "the lack of any coherent identity for the 'public' or of well-organized, legitimate channels for public participation contributes to two distinctive features of contemporary policy debates about technology: 1) futile rituals of expert advice and 2) interminable disagreements about which choices are morally justified" (Winner, 1995, 75). The gap between the technical and the political has grown so vast that our culture lacks methods of regulation that express concern for the common good.

Social Movements: Theories and/or Histories

"The crisis of democracy is, then, a crisis of faith that—however well rooted in the real erosion of democracy's pluralistic prerequisites—has convinced the majority that it has nothing to fear from majoritarian tyranny and the minority that it has nothing to lose in making a revolution." (Barber, 1971, 108)

When political shifts do represent societal values, these shifts have often been associated with social movements. Political scientist Andrew McFarland inextricably links political processes with social movements and the values they embody, noting the power that the environmental and Christian movements have had over the liberal consensus through calls for the refinement of government regulation (McFarland, 1998).

Similarly, Sidney Tarrow notes the exceptionally strong connection between American social movements and the institutions they are critiquing; tracing the parallel development of social movements with the political institutions they sought to affect in Early America (Tarrow, 1998). Tarrow cites the temperance movement

FIGURE 1: The University of Texas at Austin's West Mall in 1960. The University of Texas at Austin Center for American History.

as setting the path for many following American social movements with "a cyclical trajectory of activism and quietism, responding to favorable opportunities with greater activism and to the pressure of broader issues by lying low (e.g., we seldom hear of temperance activity during the Civil War years)" (Tarrow, 31). From these antebellum examples, Tarrow traces this increasing association between American social movements and the political groups they critique to modern quasi-institutionalized activist organizations (like Greenpeace) that fuse protests, lobbying, and educational activities to influence policy. The connections between social movements and the political processes they encounter are certainly instructive in the search for an understanding of how values are institutionalized in the United States. These moments of civil disobedience seem to be the only examples of participatory or civic regulation. In the interest of understanding how this sort of change has occurred, this project will now look to three pivotal case

studies where social movements initiated new social codes in order to decipher some sort of pattern from these tales of resistance.

Resistant Geographies:
Battles Between Space and Its Citizenry

"You can never have a revolution in order to establish a democracy. You must have a democracy in order to have a revolution." (Chesterton, 1917, 20)

Before recounting successful tales of the institutionalization of social movements in the realm of the built environment, I must mention an important caveat. Social movements have not always led to spatial and political emancipation. For example, although tiny victories within the spatially related aspects of the student protests of the 1960s can be noted, the major physically oriented outcome of those activities was the implementation of physical barriers to prevent large-scale assembly in the main congregational areas of most campuses in the United States.

Most university campuses across the country have a relic of this phenomenon—a public space originally created for larger-scale congregation that was redesigned in the mid- to late 1960s to prevent massive student assembly. Frank Erwin commissioned the

relandscaping of the University of Texas at Austin's West Mall during this period to include large planters and a fountain, while also limiting space for demonstrations (figures 1 and 2). In *The Right to the City*, Don Mitchell tells the story of the uprisings in UC Berkeley's Sproul Plaza in the fall of 1964 that precipitated this widespread change in spatial control. After months of student protests against university regulations limiting their freedom of speech, the university's academic senate voted to allow political speech and advocacy on campus, while maintaining the university's rights to regulate the time, place, and manner of the speech (Mitchell, 2003). Yet, this small local victory for UC Berkeley students' place on campus arguably brought on the preemptive physical restriction of public spaces on other campuses across the United States.

Stories of Past Social Movements:
The Public Health, the Environmental,
and the Disability Rights Movements

When looking at the history of architectural regulation and its intersection with social movements, one must first acknowledge that any case study is highly context-specific. These case studies were chosen to represent pivotal moments in varying periods of the American industrial age when broad cognitive shifts perpetuated widespread spatial reorganization. And, although the recent institutionalization of LEED certification into the building industry is the most pure marriage between a social movement and relevant building codes, it only represents one very specific form of this association. However, when paired with more deeply embedded systems such as the public health movement's influence on U.S. urban infrastructure, and the more recent yet still influential disability rights movement, a pattern begins to emerge.

The public health movement The extensive water, wastewater, and solid waste disposal systems we now assume to be germane to our existence were not always accepted as essential to American cities. The expensive problem of public infrastructure had to reach a critical mass before institutionalization was possible. Beginning with the deeply rooted fear of disease, the problems of health precipitated by the massive waves of immigration in the late 1700s, and the growing European concern for sanitation, codes of public health emerged clearly from growing societal concerns instead of market- or state-related value systems. Physician and public health scholar George Rosen traces the roots of public health to the French and American revolutions of the late eighteenth century (Rosen, 1958, 131). He argues that the Industrial Revolution, in tandem with these major political revolutions, created more open systems of political discourse—change was happening so rapidly that even those in power were receptive to proposals for radical

structural revision. Architect and technological historian Steven Moore cites the succession of citywide fires and the typhus, yellow fever, and smallpox epidemics plaguing communities across the globe for the paradigm shift (Moore, 2005, 51). Historian Martin Melosi argues that Nuisance Law had been slowly developing around these issues for a century previously, and in response to these legal codifications, the first forms of such infrastructure began to develop with these coding systems. Nonetheless, it was not until Edwin Chadwick turned the issue of public health into a movement that the concept really became institutionalized.

In 1842 Chadwick completed his "Report on the Sanitary Condition of the Labouring Population of Great Britain" and revealed that the unsanitary conditions of the poor, instead of the will of God, were the cause of their health concerns. The report was widely disseminated and lead to the incorporation of the Sanitary

Act of 1848 in England, although Melosi argues that the "true consummation of the work of the sanitary movement was the Public Health Act of 1875" (Melosi, 49). These legislative acts are then tied to the development of several professions meant to inform this issue in the United States. Instead of radical demonstrations, it was the fear of widespread sickness that rallied the masses behind such a cause, once professionals in the field properly informed the middle- and upper-class citizenry of the ways in which they might also be affected.

The most important collective epiphany to motivate actual reform came decades after Chadwick's report, when Louis Pasteur and Robert Koch discovered the connection between filth and disease in the mid-1880s. Germ theory dispelled the old misconception that class ordained disease and liberated the poor from being relegated to indecent living quarters. Other players were influential as well. Dr. John Griscom, a New York City inspector, transported Chadwick's theories to the United States through a report entitled "The Sanitary Condition in 1842." Lemuel Shattuck conducted the first comprehensive urban census in 1845, further connecting disease to contagion in Boston (Melosi, 63). The Civil War did serve to disseminate these ideas further, while also diverting attention from the pure cause of public health reform. The first comprehensive U.S. public health code was ratified by New York City in 1866, many years after public health began taking precedence as a societal value in American society (Melosi, 21). A year later, the American Society of Civil Engineers incorporated and the institutionalization of public infrastructure began. Ground was unearthed, pipes laid, and health improved at a grand scale (figure 3).

Additionally, a Tenement House Commission estimated in 1894 that three-fifths of New York City's population lived in unsuitable housing (Hall, 1988, 35). In the interest of controlling/improving both the poverty-stricken masses and the space these masses shared with those in power, the field of city planning emerged. Reform efforts existed as early in American history as the Civil War's United States Sanitary Commission, the first secretary-general of which was Frederick Law Olmsted, who later became a major figure in city planning (Boyer, 1983, 19). Nonetheless, legislation did not consecrate such spatial sensibilities until the New York State Tenement Law of 1901, which served as the model for subsequent states. This law moved the supervisory duties of tenement conditions from the Public Health Department to the Building Department, a symbolic change signifying the spatial shift taken by those considering these sorts of social issues to separate the previously amalgamated fields of planning and public health (Boyer, 1983, 30). The first National Conference on City Planning was held in Washington in 1909, where Germany exposed American civic leaders to the possibilities of mapping land use and building height into city zones, a tool that would forever change the face of

FIGURE 4: The Pfluger bridge extension project is a great example of the heightened design standards still evolving from the influence of disability activists, as art is created from the necessity of a ramp off the pedestrian bridge.

the American city (Hall, 1988, 58). Innovative change came in fits and starts; guided by key thinkers and practitioners, the trajectory of the public health movement slowly left the realm of discourse to materialize into the sanitation systems we now consider to be hegemonic.

The Disability Rights Movement Acknowledging that people with disabilities were oppressed in a myriad of ways that denied them inalienable rights, the disability rights movement coalesced in order to make the issues public and regain these citizens' inviolable privileges as human beings. Historian Douglas Baynton argues that Americans have inherently discriminated against people with disabilities since the country's inception. Not only were people with disabilities treated unfairly, but labeling groups as "disabled" was also used as a tactic to discriminate against other minorities. Rights were held from women and African Americans under the guise of their perceived disabilities (Baynton, 2001, 37). Disabled people were kept out of public schools, out of the job markets, and in some cases even out of public spaces in general.

As early as 1907, war veterans were arguing for their rights in the political realm. These men incurred disabilities while fighting for the United States, and thus arguing for their worth as citizens was natural based on their allegiance to their country

(Scotch, 2001, 376). However, the public health movement brought with it the rise of asylums and other forms of oppressive institutionalization for those born with disabilities. Because of the condition's close relationship to the other tenets of the civil rights movement, some successes can be recognized within the civil rights legislation of the 1960s—certainly the foundation for later legislation was laid in this period of political progress. However, the first real victory for the movement was the federal Architectural Barriers Act (ABA) of 1968 (Longmore and Umansky, 2001, 10). ABA requires that buildings built with federal funds be accessible to persons with disabilities, but this only dealt with facility accessibility, not necessarily programmatic accessibility (Cannon, 1989, 10). Often, there was no way to regulate these buildings or provide their designers with assistance to ensure proper application of the act's requirements. Thus, in 1973, the legislature passed the Rehabilitation Act to fill in much of the ABA's gaps, including the creation of an Architectural and Transportation Barriers Compliance Board to ensure proper application of the myriad of laws regulating and equalizing space for the disabled.

But the issue of disability rights was still seen as a medical concern instead of a problem of rights. In response, New York activist Larry Allison and others began a group called the 504 Democratic Club in 1980, with the intention of engaging presidential candidates through political discourse about disabled people's rights. This group would hold disability forums where discussions of the problems and their pervasive nature would lead to jargon the political candidate could use as a platform in his race. At the height of the group's success, they won Jimmy Carter as a major political ally just before his presidential election (Allison, 2001).

Other associations developed across the country, each with a slightly different agenda. For instance, the Association for Retarded Citizens organized to fight for deinstitutionalization and public education, and many of the leaders of organizations such as this one were finally appointed to the new presidential advisory board, the National Council on Disability. In contrast, more militant groups such as ADAPT (American Disabled for Accessible Public Transit) took a more radical approach to the issues. In the 1980s, frustrated with the lack of accessibility of public transport, the group slid out of their wheelchairs to block buses in an act of civil disobedience that served to redesign the traditional city bus (Longmore and Umansky, 11).

So many groups emerged to participate in this movement that the critical mass of voters supporting these ideals gained power. By 1990, the movement gained enough momentum to pass major legislation under the conservative government of President George H. W. Bush. The Americans with Disabilities Act "prohibits discrimination in private employment, public accommodation, and telecommunications," and was considered a watershed political action at

its inception (Scotch, 384). The landscape of many cities has been drastically affected by this legislation, as programs to develop and maintain design standards such as curb ramps and sidewalks are now required in most public spaces (figure 4). Nonetheless, poor enforcement and limiting judicial decisions lessened its impacts. The movement still advocates for disability rights through both political lobbying and civic education to perpetuate the movement's resistance to forces of normative prejudice.

The environmental movement(s) The environmental movement's history can be thought of as many movements coalesced through time, beginning with the interest in land conservation (mostly for sport) and growing to include notions of environmental justice as the movement fused with tenets of the public health movement. Political scientists W. Douglas Costain and James P. Lester note the transitions in eco-political discourse from an elite democracy to a participatory one, and from a national to a local focus of government. They divide the movement into four periods: "the conservation-efficiency movement," stretching from 1890–1920; "the conservation-preservation movement, from 1920 to 1960; "the environmental movement" from 1960–1980; and finally, "the contemporary period of participatory environmentalism," observing the movement's evolution from an environmental science focus in the late 1800s to one of environmental ethics in the 1990s (Costain and Lester, 1998, 185).

The first movement was significant for its scientific proclivity, finding strong ties to the public health movement, as both were responding to industrialism and the emerging revelations in germ theory previously mentioned. The second movement developed out of desires for leisure by the rich—instead of fights over the industries and agriculture, this movement was characterized by elites such as Rockefeller fighting to preserve the land around his massive hotel. Conservation was privatized and localized. Additionally, the New Deal found places for environmentalism in job creation legislation and other less likely modes of ecological protection.

The third wave of the movement was the first time that public values, instead of purely elite expert culture, lead the cause. This iteration fused the prior two movements from a grassroots perspective that was characterized by its breadth. Its expansive support caught the interests of entrepreneurial politicians, which affected the true power of the legislation enacted—as so many supposed supporters were only really interested in the political clout associated with the cause.

Major political successes were the adoption of the National Environmental Policy Act of 1969, a federal statute establishing the first national policy for the environment, and the Council on Environmental Quality, and Agenda 21 in 1992, a global action plan set forth by the United Nations. But broad political actions do not

FIGURE 5: The new H-E-B grocery store in South Austin, Texas has pledged to achieve LEED certification.

always remedy the environmental problems they are meant to address, and often serve to placate activists more than protect the environment. Robert Brulle argues that the breadth of this version of the environmental movement was in some ways its downfall. The hundreds of groups forming to fight specific environmental battles found themselves battling against one another in order to gain political clout for their tiny version of environmental protection instead of joining forces for the larger cause (Brulle, 2000). These ineffective binaries have lead current revisionists to adopt the now popular phrase "think globally, act locally."

Political theorists argue that we have either moved into a "postenvironmentalism" characterized by a philosophical and environmental ethic that supports pollution prevention instead of abatement, or a phase of "participatory democracy" reminiscent of Light's civic environmentalism. This postenvironmentalism could be associated with William McDonough's eco-effective approach to sustainable design. However, participatory democracy has also caught the interests of citizens in communities around the country. Either version of the movement could take precedence over the others, but these factions should find ways to work in tandem to strengthen the project of the environmental movement.

The most influential outcome of these strands of environmentalism in the built environment is the rise of certification systems

meant to encourage "green design." Most are green building rating systems, such as LEED, that were created as "market driven stateg[ies] to accelerate the adoption of green building practices" (Gowri, 2004, 57). In 1990, the British Research Establishment developed LEED's predecessor, BREEAM (Building Research Establishment Environmental Assessment Method). But by 2000 the U.S. Green Building Council's (USGBC) second version of LEED achieved widespread popularity and began to dominate the building industry. Originally created to regulate new commercial construction, LEED has expanded its system to account for existing buildings, commercial interiors, and even residential structures. All the green building rating systems revolve around five main categories—site, water, energy, materials, and indoor environment—making some aspects of design prerequisites for certification (Gowri, 2004, 58). Postoccupancy performance is part of the LEED certification process, and there are roughly four thousand buildings working with the USGBC currently to achieve a LEED rating (figure 5). But many argue that this system has become too abstracted. Growing out of localized green building programs, LEED has become an international industry, asking buildings all over the world to conform to the same basic stipulations. These certification systems are best used as a basic ecological checklist, while one would imagine that to be truly responsive to the Earth, a more site-specific, performative evaluation system might better address the needs of each locale.

Lessons from the Margins:
Finding Patterns in Stories of Change

> "The future of justice, if it has a future, lies with and not against the majority. The revolution will be made democratically or not at all. America is beyond the ministrations of Superman. Its fate, for good or ill, rests with the common men." (Barber, 1971, 125)

The modes in which societal values balance the market and the state are varied and complex. Institutionalization of public concerns must come at once in physical, political, and cultural forms to equalize these predominant and opposing forces. The strongest forms of institutionalization, such as LEED's influence in the environmental movement, come when societal change fuses with market and/or government forces to truly drive innovation. Yet, these previously radical innovations, once institutionalized, must be constantly revisited and localized in order to ensure their efficacy in addressing the pertinent issues in practice. And, as the public health movement illustrated, the most important tool a polis can use to make this sort of system of accountability is its citizenry. The fusion of expert and local knowledge can lead to new ways of thinking that bring about positive change. People know more about the needs of their community than any regulation-producing expert,

and can often better inform the place-making process in its local dimensions. Societal transformation is a slow and arduous process, but when enough political force is put behind certain ideals, ethical standards can supersede the interests of the market and the state.

Politicians may not be as interested in the cause as they are in their own reelections. As a result, citizens must claim their power to affect positive change. And furthermore, this power, so rooted in the American citizenry, hinges on its capacity to mobilize, unite, and identify common goals. The disability rights movement has done a wonderful job of coalescing through networks of organizations working together on collective concerns. By doing so, they have literally redesigned the way space is produced and connected across the country. It is critical that emerging change-agents consider the power of joining forces as opposed to partitioning themselves from one another. Also critical is the importance of remaining active and receptive to new ideas, even as initial victories come to pass. Society must remain vigilant in the declaration and preservation of its principles—we are our greatest allies.

BARBARA BROWN WILSON is a Ph.D. student in the Community and Regional Planning Program at the University of Texas at Austin. Equipped with a background in architectural history, Barbara is investigating the relationship between social equity and the built environment and its institutional manifestations, using the emerging SEED (social/economic/environmental/design) Network as the analytical focal point for her doctoral research. As the first Luce Fellow associated with the Center for Sustainable Development at UT, she is working to foster relationships among the School of Architecture's service initiatives, local communities, and the budding Austin Community Design Center, while also engaging in the social architecture movement through her active participation in SEED.

Works Cited

Allison, Larry. *New York Activists and Leaders in the Disability Rights and Independent Living Movement.* Volume I, Regional Oral History Office, The Bancroft Library. University of California, Berkeley, 2004.

Barber, Benjamin. *Superman and Common Men: Freedom, Anarchy, and the Revolution.* New York: Praeger Publishers, 1971.

Baynton, Douglas C. *Disability and the Justification of Inequality in American History.* In The New Disability History. New York: New York University, 2001: 33–57.

Boyer, Christine M. *Dreaming the Rational City.* Cambridge, MA: MIT Press, 1983.

Brulle, Robert. *Agency, Democracy, and Nature: The U.S. Environmental Movement from a Critical Theory Perspective.* Cambridge, MA: MIT Press, 2000.

Campbell, Scott. *Green Cities, Growing Cities, Just Cities? Urban Planning and the Contradictions of Sustainable Development.* Journal of the American Planning Association (1996): 296-312.

Cannon, Dennis. *Design for all Persons: The Architectural Barriers Act and Public Transit.* Journal of Rehabilitation 55[2] (1989): 10–12.

Capra, Fritjof. *The Hidden Connections.* New York: Doubleday, 2002.

Chesterton, G.K. *Tremendous Trifles.* New York: Dodd Mead & Co., 1917.

Costain, W. Douglas, and James Lester. *The Environmental Movement and Congress.* In Social Movements and American Political Institutions. Oxford, England: Rowan and Littlefield Publishers, 1998: 185–198.

Feenberg, Andrew. *Subversive Rationalization: Technology, Power, and Democracy.* In Technology and the Politics of Knowledge. Bloomington, IN: Indiana University Press, 1995: 3–22.

Gowri, Chrishnan. *Green Building Rating Systems: An Overview.* ASHRAE Journal (November 2004): 56–60.

Hall, Peter. *Cities of Tomorrow: An Intellectual History of Urban Planning and Design in the Twentieth Century.* Cambridge, MA: Blackwell Publishing, 1988.

Haraway, Donna. *Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective.* In Technology and the Politics of Knowledge. Bloomington, IN: Indiana University Press, 1995: 175–191.

Hawken, Paul, Amory Lovins, and L. Hunter Lovins. *Natural Capitalism: Creating the Next Industrial Revolution.* New York: Little Brown Publishing, 1999.

Hughes, Langston. *The Black Man Speaks.* In Jim Crowe's Last Stand. Atlanta: Negro Publication Society of America, 1943.

Kelly, Christine. *Tangled Up in Red, White, and Blue: New Social Movements in America.* Lanham, Maryland: Rowman and Littlefield Publishers, Inc., 2001.

Lefebvre, Henri. *The Urban Revolution.* Paris: Gallimard, 1970.

The Production of Space. Oxford: Basil Blackwell Publishers, 1991.

Longmore, Paul, and Lauri Umansky. *Disability History: From the Margins to the Mainstream.* In The New Disability History. New York: New York University, 2001: 1–29.

Maantay, Juliana. *Public Health Matters: Zoning, Equity, and Public Health.* The American Journal of Public Health 91[7] (2001): 1033–1041.

McDonough, William, and Michael Braungart. *The Next Industrial Revolution.* Atlantic Monthly (October 1998): 82–92.

McFarland, Andrew. *Theories of American Politics.* In Social Movements and American Political Institutions. Oxford, England: Rowan and Littlefield Publishers, 1998: 7–19.

Melosi, Martin. *The Sanitary City.* Baltimore, Maryland: Johns Hopkins University Press, 2000.

Mitchell, Don. *The Right to the City: Social Justice and the Fight for Public Space.* New York: Guildford Press, 2003.

Moore, Steven. *Building Codes.* In Encyclopedia of Science, Technology, and Ethics. Detroit, MI: Macmillan Reference USA, 2005.

Moses, Robert Parris. *Radical Equations: Math Literacy and Civil Rights.* Boston: Beacon Press, 2001.

Peet, Richard, with Elaine Harwick. *Theories of Development.* New York: Guilford Press, 1999.

Rosen, George. *History of Public Health.* New York: MD Publications, Inc., 1958.

Scotch, Richard K. *American Disability Policy in the Twentieth Century.* In The New Disability History. New York: New York University, 2001: 375–392.

Sen, Amartya. *Development as Freedom.* New York: Anchor Books, 2000.

Shepard and Hayduk, eds. *From ACT UP to the WTO: Urban Protest and Community Building in the Era of Globalization.* London: Thomson Gale, 2002.

Soja, Edward. *Postmetropolis: Critical Studies of Cities and Regions.* Malden, MA: Blackwell Publishing, Ltd, 2000.

Sorkin, Michael. *Local Code: The Constitution of a City at 42 degrees N Latitude.* New York: Princeton Architectural Press, 1993.

See You in Disneyland. In Variations on a Theme Park. New York: Farrar, Straus and Giroux, 1992: 205–232.

Ventre, Francis. *Regulation, a Realization of Social Ethics.* VIA 10 (1990): 51–62.

Warren, Mark R. *Dry Bones Rattling: Community Building to Revitalize American Democracy.* Princeton, N.J.: Princeton University Press, 2001.

Winner, Langdon. *Citizen Virtues in a Technological Order.* In Technology and the Politics of Knowledge. Bloomington, IN: Indiana University Press, 1995: 65–84.

Wolfe, Alan. *Whose Keeper? Social Science and Moral Obligation.* Berkeley: University of California Press, 1989.

A History of Urban Renewal in San Antonio

MEGHAN MCCARTHY

The Federal Urban Renewal program was supposed to deliver a decent home and a suitable living environment for every American. However, the biggest critique of urban renewal is how it actually displaced millions of people nationwide and failed to rehouse them. In *Cities of Tomorrow*, Peter Hall documents several instances: in New York City, projects in Manhattan and the Bronx displaced one hundred thousand low-income people, 40 percent of them black and Hispanic, and displaced five thousand businesses, mainly mom-and-pop stores; in New Haven, Connecticut, a major, increasingly black slum area was demolished to build downtown offices, partially funded by federal highway dollars to build a distributor; in Pittsburgh, 5,400 low-income, principally black families were displaced by offices; and the director of the San Francisco Redevelopment Agency, Justin Herman, "stood for the sanitation of these areas, meaning the removal of their inhabitants" (Hall, 2002, 250–252). According to Hall, by "the end of 1965 renewal would evict one million people, most of whom paid very low rents" (253).

Very little is documented on urban renewal in Texas. In most major Texas cities, including Dallas, Fort Worth, and Houston, there was a "fear of creeping socialism along with protecting the rights of individuals," and urban renewal was rejected, seen as a tool of an expanding federal government to take away individual property rights (Fairbanks, 2002, 187). The conservative reluctance to give the government power was predominant in the Lone Star State. San Antonio, however, which was deeply aware of its slum problem and how it threatened the city's health and social welfare, was an exception to the Texas standard. The city embraced urban renewal immediately after national legislation was passed and encouraged state enabling legislation for urban renewal in Texas. And, like in other parts of the country, urban renewal in San Antonio suffered an abundance of criticism for focusing on economic development more than attaining its goal of a decent home and suitable living environment. It illustrates a classic example of urban renewal, resulting in displaced poor residents for new office buildings and commercial establishments while failing to rehouse those displaced.

However, urban renewal was not a complete failure in San Antonio, as the reaction to urban renewal resulted in a political reform of San Antonio to be more inclusive of the low-income and minority population. Response to urban renewal by the San Antonio Conservation Society also resulted in a shift from renewal to commercial and residential revitalization, leading to an architecturally and culturally preserved society. This report examines the urban renewal experience in San Antonio, how it broke away from the Texas norm, paralleled that of the national experience, evolved into a useful historic preservation tool in San Antonio, and ultimately brought about a society more inclusive of minorities and low-income residents.

History of Urban Renewal
From Slum Clearance to Housing Acts

While the urban renewal program began with the 1949 Housing Act, the history of urban renewal extends prior to that. Prior to and during the Great Depression, many slums were built: areas that were predominantly dilapidated housing lacking basic utilities such as plumbing and electricity. Following the Great Depression, the Roosevelt administration passed a number of housing acts to assist the low-income population in obtaining a home, either through low-income mortgage programs or federal assistance to public housing authorities to provide low-income housing.

The Wagner-Steagall Act was passed in 1937 to address public housing and initiate slum clearance. The primary factor of this act was that it required that for every slum dwelling that was demolished, a low-income housing unit would be provided. In addition, it set incomes to very low levels to assure that this housing would be reserved for the lowest-income families and provided financial assistance for housing. However, powerful interest groups who were against public housing, such as the National Association of Real Estate Boards and the Urban Land Institute, lobbied against public housing and for commercial redevelopment of blighted areas, resulting in the 1949 and 1954 Housing Acts.

The Housing Act of 1949 actually created the Urban Renewal Program, which promised a decent home and a suitable living environment for every American. According to Robert Lang and Rebecca Sohmer of the Fannie Mae Foundation, the 1949 Housing Act specified three titles that would help achieve this goal: "Title I financed slum clearance under urban redevelopment (later renewal) programs. Title II increased authorization for Federal Housing Administration (FHA) mortgage insurance. Title III committed the federal government to building 810,000 new public housing units" (Lang and Sohmer, 2000, 291). Title I also granted the power of eminent domain to cities for slum clearance.

The subsequent Housing Act of 1954 established certain requirements that cities had to meet in order to qualify for funds for urban renewal, called a "workable program." The workable program required:

(1) evidence of building codes and ordinances to prevent future blight;

(2) a comprehensive plan that could integrate urban renewal into the master plan;

(3) evidence of neighborhood analyses that located and determined seriousness of the slums;

(4) formation of an administrative organization for urban renewal;

(5) proof of financial capacity to bear its share of the net project cost;

(6) plans and administrative machinery to relocate families from project areas in decent and safe dwellings at prices they could afford to pay;

(7) evidence that urban renewal would be supported by groups and individuals and that the program would involve active citizen participation (Flack, 1964, 14–15).

In addition to ensuring the prevention of future slum and blight, the workable program criteria were "designed to assure sound city planning and prevention of future blight and deterioration" (Flack, 1964, 14).

Urban renewal in Texas Texas did not immediately embrace urban renewal after national legislation passed in 1949. In fact, it was not until 1957 that Texas finally passed enabling legislation to allow cities to receive federal assistance for urban renewal. Three attempts were made between 1951 and 1955 to pass enabling legislation, and three times it was blocked, most likely due to the "conservative nature of rural legislatures (who often chaired important committees) along with powerful influence of wealthy lobby groups" (Fairbanks, 2006). The first effort was thwarted by the Lumberman's Association of Texas, then in 1953 by the Texas Real Estate Board, and in 1955 by the Texas Association of Home Builders. Despite enactment, the state enabling act included barriers that could further hinder or even prevent urban renewal in Texas cities, including a requirement of a public hearing on proposals, citywide referendum before embarking on urban renewal, and forbiddance of public housing in the urban renewal area (Fairbanks, 2002, 189).

Despite early interests in urban renewal across the state, there was a growing opposition to urban renewal "due in part to a changing political discourse that emphasized the rights of the individual over the needs of the city" (Fairbanks, 2006).

> The delay would have dire consequences for many Texas cities since it halted implementation of the program in the state and allowed opponents of urban renewal to organize an effective lobby" (Fairbanks, 2002, 186).

In Dallas, Congressman Bruce Alger, who led the assault on urban renewal, "assailed the growing power of the federal government" and "targeted the . . . urban redevelopment program

as an example of encroaching big government" (Fairbanks, 2006, 3). Houston failed to meet the Workable Program requirements since voters rejected zoning and housing code ordinances. Citizens in other cities, such as Corpus Christi, Fort Worth, and Wichita Falls, defeated urban renewal in referenda (Fairbanks, 2002, 182). Generally, across the state there was a "perceived threat of the federal government's assault on individual freedoms" and, therefore, a reluctance to empower the local government (Fairbanks, 2006).

Texas law created further frustrations to urban renewal in the state and its ability to replace destroyed housing in urban renewal areas. In addition to prohibiting public housing in urban renewal project areas, the Texas Urban Renewal Law mandated that "all reconstruction resulting from the program of Urban Renewal will be done by private enterprise" (Flack, 12). Moreover, Texas law allowed "opponents of public housing to demand a referendum on public housing if they secured enough signatures on their petitions" (Fairbanks, 2002, 192).

In spite of opposition across the state of Texas and legislation that frustrated efforts to ensure affordable housing for those displaced by urban renewal, San Antonio embraced urban renewal and implemented several projects under the urban renewal program.

San Antonio's fight for urban renewal San Antonio was quite aware of its slum problem well before the Housing Act of 1949. The city had a significant amount of slum and blighted area, predominantly black and Hispanic. In 1937, the Texas Planning Board conducted a survey of low-income housing in San Antonio and found "extremely insanitary conditions prevailing in respect to the housing of Mexican and Negro families" (Wyatt and Terrell, 1937). Moreover, according to Heywood Sanders in Urban Texas, "of the 725 miles of city streets in 1933, only 298 miles were paved. The residential areas west of the downtown housed a largely Hispanic population in some of the worst physical conditions to be found in the United States. . . . The housing conditions of the Hispanic west side were paralleled in the predominantly black east side, although (at least, by 1939) that area possessed a much higher level of infrastructure and public facilities" (Sanders, 1990, 156).

Under the Wagner-Steagall Act, San Antonio completed five public housing projects: Alazan Courts, Apache Courts, Victoria Courts, Wheatley Courts, and Lincoln Height Courts. In all five endeavors, large slum areas were demolished and replaced with new low-income housing, which replaced all, if not more, than the slums that were removed. Table 1 shows the number of slum units removed and the number of new public housing units added for each of the public housing projects.

Unlike other Texas cities, San Antonio embraced urban renewal. Immediately following the passage of the Housing Act of 1949, "the city requested that the Housing and Home Finance Agency (HFFA)

reserve federal funds of $2.25 million for urban redevelopment" (Fairbanks, 2002, 183). Prior to state enabling legislation, San Antonians were busy preparing for urban renewal in the city, starting with an update of the master plan to meet the requirement of the 1949 Housing Act that it incorporate urban renewal into the comprehensive plan. The 1951 Master Plan, completed by Walter Lilly, included a "fifty-one-page chapter on slum clearance and urban redevelopment [that] identified nineteen suggested projects to be funded by federal urban development money" (Fairbanks, 2002, 185). The plan also prompted the city commission to authorize its first official planning commission. Additionally, in 1957 the City of San Antonio's Department of City Planning published a report on

slums and blighted areas to gain support for urban renewal. The report was based on a housing survey conducted in 1956 that found that a majority of a city's "ills" (i.e., tuberculosis cases and deaths, fires, police calls, assaults, homicide, and venereal deaths) occurred in slum and blighted areas. It created the analogy that blight and slum were like a disease in the city, spreading and costing the taxpayers money: "our slum and blighted areas cost $500,000 a year more to service than standard areas even though the substandard areas have fewer dwellings" (City of San Antonio Department of City Planning, 1957, 29). By 1956, San Antonio met all the federal requirements for urban renewal and was waiting for state legislation to allow the city to proceed. Following many years of effort to secure federal funds for slum clearance and seven months after state enabling legislation permitted urban renewal to happen, the citizens of San Antonio approved the city's participation in the urban renewal program by a margin of 2,645 to 663 (Fairbanks, 2002, 183).

Much of the success in passing urban renewal in San Antonio is owed to political reform. After the Wagner-Steagall Act, the city's leaders were eager to secure federal dollars for urban renewal projects; however, they had a local opponent to urban renewal: the white middle class and business elite residing on

the urban fringe. Prior to 1954, the local government was controlled by "a succession of politicos who arranged individual support with segments of the black and Hispanic communities" and "notably excluded the more affluent Anglo areas to the north of the core" (Sanders, 156). Between 1930 and 1935, several bond packages that sought to improve the street and drainage system in the

San Antonio Public Housing Projects: Slum Units Removed and New Housing Units Added		
Public Housing Project	Slum Units Removed	Public Housing Units Added
Alazan Courts	929	932
Apache Courts	192	248
Victoria Courts	428	796
Wheatley Courts	43	236
Lincoln Heights	82	342
Total	**1,674**	**2,554**

TABLE 1: 1940 annual report of the housing authority of the city of San Antonio, Texas.

urban core were thwarted by the white middle class residing north of the city core who did not want their tax dollars spent on improving conditions in the city center. Proponents of urban renewal realized it was this group's vote that was necessary to approve urban renewal in San Antonio.

Frustrated with the city's inability to implement the much-needed infrastructure and services, the Good Government League (GGL) was formed in 1954 and established control of the City Council in 1955. This group, headed up by local businesses and supported by the white, middle-class residents, eventually won urban renewal for San Antonio. The GGL, who "saw urban renewal as an important tool in its quest for a bigger and better San Antonio" rallied a wealth of support for urban renewal, emphasizing the needs of the city and the social and economic costs of the slums (Fairbanks, 2002, 188). Support eventually came from all directions, including the city's newspapers; civic, religious, and business organizations; chamber of commerce; home building industry; and real estate board (Fairbanks, 2002, 183). While other Texas cities experienced triumphant opposition to urban renewal, the election in San Antonio was characterized by the *San Antonio Express* (as reported by Fairbanks) as an "'extremely quiet election' with 'the apparent lack of any significant opposition'" (2002, 183).

Citizens Duped: Urban Renewal and Public Housing

The perceived understanding of urban renewal was that housing for low-income families (which was slums) would be improved through urban renewal. Citizens did not expect urban renewal to displace low-income families. Nonetheless, urban renewal became the tool by which city governments could wipe out slums and blighted areas and replace those areas with whatever the city saw fit, usually commercial development since it improved the economy of the city.

The 1949 Housing Act did not provide the necessary housing tools to replace housing for those who were displaced by slum clearance. Still, public housing proponents "went along with the idea of urban renewal in the hope that it too could achieve its objectives"; however, when urban renewal was put in the hands of

the Housing and Home Finance Agency, "they promptly worked to discourage low-rent housing and to encourage commercial redevelopment" (Hall, 248). In urban renewal project areas across the nation, the alternative housing for those displaced never materialized. This trend carried into the local definition of urban renewal as the Texas Urban Renewal Law prohibits the government from constructing public housing in the urban renewal project areas.

Additionally, a series of amendments and laws was passed over the years that changed the focus of urban renewal. In 2002, Mark Yessian gave a speech to the Alliance of Boston Neighborhoods on the life of the Federal Urban Renewal Program. Yessian is the regional inspector general for evaluation and inspections in the Office of Inspector General's Boston office, U.S. Department of Health and Human Services. According to Yessian, two more goals were added: "one for uplifting the economic position of cities, and the other of assembling land for public and semipublic uses" (Yessian, 2002). He also said that as the program evolved,

> there was great pressure to accommodate institutional expansion of hospitals and universities, museums, new city halls, etc., and renewal became a vehicle for accommodating those interests. . . . [T]here was a series of laws that incrementally changed the focus from housing to this kind of development. The proportion of expenditure required for housing, for example, dropped from 90 percent to 65 percent. There were changes in the rules by which localities had to meet their local noncash contribution requirements, changes that facilitated more non-residential uses. (Yessian, 2002)

Texas lawmakers did not make things any easier. As mentioned earlier, Texas law allowed opponents of public housing to demand a referendum on public housing. In 1959 opponents to public housing forced a referendum to block fifteen thousand proposed public housing units. The passage of the referendum "frustrated efforts to move those slum dwellers scheduled for clearance to better quarters and resulted in patterns associated with other cities—new problems of overcrowding and new slums engendered, in part, by urban renewal" (Fairbanks, 2002, 193). Urban renewal continued in San Antonio; however, efforts became more focused on rehabilitation and preservation, as discussed later.

Moreover, the GGL seemed to have aided this trend. The organization has been praised for being a "more coherent and focused civic leadership . . . that emphasized the importance of supporting urban improvement programs for the benefit of the city as a whole (Fairbanks, 2002, 185). However, it has also been criticized for "mobilizing the Anglo middle-class voters in election after election, effectively limiting the voting power of Hispanics and African Americans" (Wilson, Wong, and Sanders, 28). Because many of the supporters of the GGL did not support public housing, the issue was mute among the political leaders.

Through implementation of urban renewal projects, urban renewal's true colors began to show, and it became apparent that all levels of government set the stage for the reality of urban renewal: "the aim was not cheap housing, but commercial redevelopment of blighted areas at the edge of downtown" (Hall, 248). These realities did not bode well for public housing supporters, minority and low-income groups that supported urban renewal.

1.Industrial 2.Public 3.Commercial 4.Institutional

Evolution of urban renewal in San Antonio What was originally called the Urban Renewal Agency in San Antonio is now called the San Antonio Development Agency (SADA). The role of SADA is to coordinate urban renewal projects in San Antonio. According to their Web site, there have been ten major urban renewal projects and studies, including the Civic Center Project, HemisFair '68, San Antonio River extension, South Alamo Street and Durango Boulevard reconstruction, La Villita reconstruction, Market Square, and Neighborhood Development Program. Over time, urban renewal in San Antonio captured the attention of historic preservationists, and today historic preservation is an important tool utilized by SADA in its redevelopment efforts.

Discussed below are two of the early urban renewal projects undertaken by San Antonio: the Central West Area and HemisFair '68. These illustrate how urban renewal focused its efforts on commercial and economic redevelopment and failed to rehouse those displaced in the process. Additionally, the HemisFair '68 plan was extremely controversial on the historic preservation front, and it represents a transition in San Antonio urban renewal to incorporate historic preservation.

Central West Area 1 & 2 The Central West Area Project 1 was the first urban renewal project the city undertook. The sixty-eight-acre site is located immediately west of the central business district of downtown San Antonio. According to the Urban Renewal Agency, approximately 92 percent of the structures were substandard and not rehabitable; the project relocated 274 families, 223 individuals, and 131 businesses, and all but four structures were demolished. Redevelopment plans called for infrastructure improvements, and because the project was located at the edge of the business district and had access to a highway, development was restricted

MAP 2: Central West Project 2 Urban Re-
newal Agency, from cities are dynamic.

1.Industrial 2.Residential 3.Institutional 4.Commercial ▪ Parks

to commercial and light industrial (City of San Antonio Urban Renewal Agency, 1970, 1). Buildings erected in the Government Center Project, as it became known, included a city-county jail, police department building, and corporation court building.

Immediately northwest and adjacent to Project Area 1 are the Rosa Verde and Vista Verde project areas (Project Area 2). Rosa Verde is an eighty-two-acre site that was home to Santa Rosa Hospital, Market Square, and seventy acres of slum area. The project relocated 230 families, 114 individuals, and 281 businesses, and original plans called for reconstruction and expansion of Market Square, expansion of the hospital, construction of medical office buildings and care facilities, construction of high-rise housing and housing for the elderly, and rehabilitation of older commercial districts.

This urban renewal project exemplifies what Mark Yessian accuses urban renewal of doing: accommodating interests of institutional expansion. The plans called for housing, which was successfully built, but neither apartment complex, Towne Center and Soap Works Apartments, offer affordable or elderly housing. The 158 acres that make up Vista Verde are located on the west side of U.S. Interstate 35/10, immediately west of Rosa Verde. The project relocated 488 families, 343 individuals, and 154 businesses. Redevelopment plans included complete redevelopment of the residential areas, rehabilitation of commercial areas, expansion of industrial areas, expansion of a school and construction of another, and expansion of medical facilities. In Vista Verde, several rental complexes were constructed, two of which were affordable, of which one was elderly housing.

HemisFair '68 World's Fair One of the most commonly known urban renewal projects in San Antonio is the HemisFair '68 World's Fair urban renewal project. It introduced another challenge to the program other than the issue of public housing: that of historic preservation. Often local governments used urban renewal to remove "blighted" communities that often included buildings of historic value. Not only did neither the housing acts nor the urban renewal program address historic preservation, but the National Historic Preservation Act was not passed until 1966, nearly twenty years after urban renewal's launch.

In San Antonio, the preservation watchdog is the San Antonio Conservation Society (SACS). Formed in 1924 when flooding and

the city's government threatened to cover up the San Antonio River, the Conservation Society has been very active in urban renewal and how it affects historic preservation. San Antonio's first urban renewal projects concerned the Conservation Society very little. However, consistent failure to salvage historic buildings eventually captured the attention of SACS; things came to a head between the city and the Conservation Society with the urban renewal project of HemisFair. Their involvement has influenced the way San Antonio's urban renewal focuses on revitalization rather than slum clearance.

Even before the HemisFair site was picked, SACS "stressed the importance of having the fair's buildings reflect San Antonio's traditions" (Fisher, 298). Discussions of the fair began in 1959 by "local business leaders to celebrate the cultural heritage shared by San Antonio and its neighbor nations of Latin America" (COSA Planning Dept., 2004, 11). The theme was "The Confluence of Civilizations in the Americas" and was to be held in 1968 for the 250th anniversary of the founding of San Antonio. It would be the first fair to be held in the southern United States (Fisher, 1996, 297).

The appeal of this 147-acre site was its location immediately south of downtown and in proximity to the Riverwalk. It also had the potential of acquiring urban renewal funds, with which the city could build its "badly needed modern convention center" (Fisher, 1996, 297). Talk of the project created a ripple effect of discussions among neighboring areas regarding revitalization and "renewal" of their area. The prospect of the project gave the Chamber of Commerce reason to revitalize the Riverwalk, which had not been as successful as they anticipated since its completion in 1941, and they hired a consultant, Marco Engineering Co., to study the Riverwalk as a potential tourist attraction. In addition, the HemisFair urban renewal area abutted the La Villita area, and would "enable La Villita to expand and fill the remainder of the block south to Nueva Street after the fair" (Fisher, 1996, 298). Of the whole 147-acre site, only 92 acres were for the fair itself.

The project qualified for the Urban Renewal Program, and funds were secured. According to the HemisFair Park Area Master Plan 2004, the area, like most areas around the urban core, had deteriorated over time. During the mid-to-late nineteenth century, the area was predominantly German, yet was also inhabited by people of Polish, Mexican, and African American ethnicities. When the site was selected, the Conservation Society was "quick to declare that incorporating historic structures into the fairgrounds would give HemisFair uniqueness heretofore unmatched among world's fairs" (Fisher, 299). According to Fisher, the urban renewal project of the whole site (147 acres) would

> . . . force some 1,600 people to move away. Also affected would be manufacturing plants, shops, stores, warehouses, two schools, two parks, the Rodfei Sholom synagogue and four churches. Those included . . . the 1933 Gothic-style St. Michael's

Smith house, located on the hemis-fair site, was restored as part of the project. city of San Antonio Hemisfair master plan 2004.

Catholic Church, its congregation established in 1866 by Polish immigrants. (298)

As a result of increased historic preservation awareness, several buildings in and surrounding the HemisFair urban renewal area were restored. On the HemisFair World's Fair site itself, twenty-four historical structures survived (although the architect O'Neil Ford suggested preservation of 129), which included several houses and a few "commercial-style" buildings that were housed by various expositions during the World's Fair. Nearby historical structures preserved included the German-English School and St. Mary's University School of Law building.

Many buildings that were added to the site were built with the intention of creating a civic center and were oriented toward institutional uses, including the convention center, Tower of Americas, UTSA Institute of Texan Cultures building, and a federal courthouse. The HemisFair urban renewal project also saw the construction of a monorail for transportation of visitors to the fair.

It is questionable whether HemisFair can be deemed a success. The project actually lost money and cost the taxpayers $7.5 million (Duane, 2001). While it did attract 6.3 million visitors from around the world, that number was 800,000 below projections. However, the fair brought national and even international attention to San Antonio, and it was reported that "HemisFair was 'the most important travel stimulant' in the nation in 1968" by the National Association of Travel Organizations (Fisher, 1996, 314). It encouraged revitalization and renewal of the downtown area and stimulated the tourism that San Antonio's economy thrives off of today.

Response to Urban Renewal: The death and legacy of urban renewal

While urban renewal developments continued to ignore housing needs among the people the program was displacing, attempts were made to put the focus back on housing. In 1965, under President Johnson, the Department of Housing and Urban Development (HUD) was formed. The goals of HUD focused on housing, including increasing home ownership, supporting community development, and increasing access to affordable housing (HUD, 2003). Moreover, several acts were passed under Johnson to improve living standards among low-income families: 1966 saw the creation of the Model Cities program that tried to encourage public participation in community development, as well as emphasized low-income and minority communities in cities; in 1968 a new housing act called for twenty-six million subsidized housing units, hoping that oversaturating the housing market would drive prices down (Yessian, 2002); Ginnie Mae was established in 1968 to expand mortgage funds for moderate-income families.

Ultimately, President Nixon, with a movement toward a decentralized government, did away with the Urban Renewal Program by putting a moratorium on funds for urban renewal projects in 1973. However, the 1974 Housing Act established the Community Development Block Grant program (CDBG) under President Ford, a more flexible federal program that had the broad goal of "provid(ing) communities with resources to address a wide range of unique community development needs" (HUD). It allowed local governments the freedom of "choosing projects, spending priorities, and geographic distribution" that were limited under earlier federal renewal project grant programs.

San Antonio communities react In San Antonio, the most blatant and strongest response among communities against urban renewal and to have their needs addressed by the local government was by Communities Organized for Public Service (COPS). In 1973 COPS was established initially to "organize and mobilize San Antonio's West Side community" (Sanders, 1997, 40). The community-based organization has been successful in obtaining federal community development aid for low-income and minority communities in San Antonio. The GGL, as discussed earlier, "limited Hispanic participation and skewed public investment to non-minority neighborhoods" (Wilson, 4). COPS, however, captured public attention by "confronting public officials with unmet promises, packing city council meetings, and mobilizing community residents" (Wilson, 4). COPS is the success story of an organization advocating for minority groups and organizing low-income, minority neighborhoods to effectuate equal representation in the local government.

The organization has also had a particularly strong impact on the success of CDBG spending in San Antonio. While the rest of the country witnessed an abuse by local governments of this money, the city of San Antonio was held accountable for the distribution of CDBG funds. Early planning efforts of the CDBG program in San Antonio showed very little public involvement by COPS or any other community groups. Although the 1974 Housing Act required public involvement, the city was unclear how involved the public should be. To make things more complicated, a community development committee was formed to decide how to allocate the funds. The committee was made up of various department heads, each of whom had their own interests and agenda. The first proposed program included a botanical garden, nature trails, three new parks, a historic preservation project, and a parking garage downtown (Sanders, 1997, 43). COPS brought a different budget to the table: "a list of projects totaling some $125 million dominated by almost $75 million in drainage projects" (Sanders, 1997, 43). This is just one example of many instances where COPS pressured the local government in order to have their needs addressed. In addition, COPS was successful in getting voters to the polls. Table 2 shows how

Number of Votes Cast		
Election	*Predominantly Anglo Precincts*	*Predominantly Hispanic Precincts*
1974 Bond Election	16,257	13,243
1977 Charter Vote	16,311	17,438
1978 Bond Election	25,817	26,689

the number of votes increased in predominantly Hispanic precincts to eventually trump predominantly Anglo precincts. Eventually, minority precincts/districts were represented by council members in the local government, giving them a stronger voice. This translated over time to more federal community development funds allocated to COPS districts in order to improve low-income neighborhoods.

In addition to COPS, many community development corporations (CDCs) were formed in San Antonio in the 1960s and 1970s to address the needs of those crowded into central city minority neighborhoods, whose conditions were ignored by urban renewal.

Conclusion

Urban renewal has certainly influenced planning in the city of San Antonio, primarily in terms of public participation. The rise and fall of urban renewal opened the public's eyes to planning. Urban renewal not only threatened the property rights of some (particularly those who suffered displacement because of slum clearance), it also made apparent issues of equality in planning among minority and low-income populations. It is an unfortunate truth that dilapidated and blighted areas are usually inhabited by minorities and low-income families. Urban renewal therefore ended up targeting and affecting this demographic in a negative way. A few projects in San Antonio exemplified this inequality; in both the Central West Area Project and HemisFair, blighted areas inhabited by low-income families were cleared and "renewed" with economically enhancing developments, all without the clear tools of replacement housing for those displaced. Matters were further complicated by the large degree of resistance toward public housing and the fact that Texas law prohibited public housing in urban renewal project areas.

Many problems with urban renewal arose because of a lack of representation among minorities and low-income families. COPS successfully mobilized these groups and is continuing to work toward improved opportunities for low-income housing, public housing, and equal representation in the local government. Moreover, preservationists have influenced urban renewal practices in San Antonio to include more revitalization of existing structures rather than slum clearance. The fight against urban renewal by preservationists has succeeded in that CDBG considers revitalization an appropriate activity for federal community development aid, which has helped alleviate slum clearance issues in

low-income neighborhoods. Together these groups have shaped urban renewal practices in a way that preserves the history of the city and the Hispanic culture of its citizens.

MEGHAN MCCARTHY is a student at the University of Texas at Austin working toward a master's degree in Community and Regional Planning. She also obtained a B.A. in English from the University of Texas at Austin. For three years Meghan worked as a market analyst and GIS specialist for a real estate development consulting firm in Austin, where her interest in planning grew. She is currently interning with the city of Georgetown Texas Planning and Development Department, and aspires for a career in land use planning (2007).

Works Cited

Alamo Area Mutual Housing Association. *AAMHA.* 2006. <http://www.alamomha.com/> (29 October 2006).

City of San Antonio. *1940 Annual Report of the Housing Authority of the City of San Antonio, Texas.* San Antonio, Texas: City of San Antonio, 1940.

City of San Antonio Department of City Planning. *Our Slums and Blighted Areas: A Report to the People of San Antonio on Urban Renewal.* San Antonio, Texas: City of San Antonio, 1957.

City of San Antonio Housing and Community Development. *Department of Grants Monitoring and Administration.* <http://www.ci.sat.tx.us/hcd/> (29 November 2006).

City of San Antonio Parks and Recreational Department. *History of San Antonio's Market Square.* <http://www.sanantonio.gov/sapar/market square/history.asp?res=1280&ver=true> (20 November 2006).

City of San Antonio Planning Department. *Hemisfair Park Area: Master Plan 2004.* 2004. <http://www.sanantonio.gov/planning/hemisfair_plan.asp> (3 October 2006).

City of San Antonio Urban Renewal Agency. *Cities Are Dynamic.* San Antonio, Texas: The Agency, 2002.

Central West Area, Project 1, Fact Sheet. San Antonio, Texas: The Agency, 1970.

Communities Organized for Public Services. *Communities Organized for Public Services.* <http://www.iisd.org/50comm/commdb/desc/d19.htm> (21 November 2006).

Duane, F. *Hemisfair '68.* In Handbook of Texas Online. 6 June 2001. <http://www.tsha.utexas.edu/handbook/online/articles/HH/lkh1.html> (3 October 2006).

Fairbanks, R.B. *The Texas Exception: San Antonio and Urban Renewal, 1949-1965.* Journal of Planning History 1(2) (2002): 181-196.

The Failure of Urban Renewal in the Southwest: From City Needs to Individual Rights. The Western Historical Quarterly 37(3) (2006). <http://www.historycooperative.org.content.lib.utex-as.edu:2048/journals/whq/37.3/fairbanks.html> (18 November 2006).

Fisher, L.F. *Saving San Antonio: The Precarious Preservation of a Heritage.* Lubbock, Texas: Texas Tech University Press, 1996.

Flack, G. *An Analysis of the Economic Effects of Urban Renewal and Its Projected Influence on San Antonio, Texas.* San Antonio, Texas: Trinity University Press, 1968.

Hall, P.G. *Cities of Tomorrow: An Intellectual History of Urban Planning and Design in the Twentieth Century.* Oxford, UK: Blackwell Pub, 2002.

Lang, R.E., and R. R. Sohmer. *Editor's Introduction: Legacy of the Housing Act of 1949: The Past, Present, and Future of Federal Housing and Urban Policy.* Housing Policy Debate 11(2) (2000). <http://www.fanniemaefoundation.org/programs/hpd/pdf/hpd_1102_edintro.pdf> (20 November 2006).

Mexican American Unity Council. *Mexican American Unity Council.* 2006. <http://www.mauc.org/> (29 October 2006).

Neighborhood Housing Services of San Antonio. *Neighborhood Housing Services of San Antonio.* <http://www.nhsofsa.org/> (29 October 2006).

San Antonio Development Agency. *Historical Perspective: San Antonio Development Agency.* 2002. <http://www.sada.net/history.html> (20 November 2006).

San Antonio Light Collection, *Institute of Texan Cultures UTSA, L-1866-A.* Gift of the Hearst Corporation. General Cos house. [Photograph]. 25 June 1938. <http://uitclib.utsa.edu> (20 November 2006).

Institute of Texan Cultures UTSA, L-1866-A. Gift of the Hearst Corporation. Exterior view of Alazan Courts apartments. [Photograph].15 February 1942. <http://uitclib.utsa.edu> (20 November 2006).

Sanders, H. T. *Building a New Urban Infrastructure: The Creation of Postwar San Antonio.* In Urban Texas: Politics and Development. College Station, Texas: Texas A&M University Press, 1990: 154–173.

Communities Organized for Public Service and Neighborhood Revitalization in San Antonio. In Public Policy and Community:

Activisim and Governance in Texas. Austin, Texas: University of Texas Press, 1997: 36–68.

Texas Low Income Housing Information Services. *Texas Low Income Housing Information Services.* 2006. <http://www.texashousing.org/> (29 October 2006).

U.S. Department of Housing and Urban Development. *Homes & Communities: U.S. Department of Housing and Urban Development.* 2003. <http://www.hud.gov/> (18 November 2006).

Wilson, R.H. *Community Participation in State and Local Policymaking.* In Public Policy and Community: Activisim and Governance in Texas. Austin, Texas: University of Texas Press, 1997: 1–13.

Wilson, R. H., P. Wong, and H. T. Sanders. *The Place of Community in Public Policy.* In Public Policy and Community: Activisim and Governance in Texas.Austin, Texas: University of Texas Press, 1997: 14–32.

Wyatt, B. and T. Bartlett, T. *Low-Income Housing for Southern Texas Cities.* Austin, Texas: The Texas Planning Board, 1937.

Yessian, M. *The Birth, Transformation, Death, and Afterlife of the Federal Urban Renewal Program.* Speech at Alliance of Boston Neighborhoods meeting. 10 October 2002. <http://www.abn-boston.org/publications/2002/1010-urbanrenewal.html> (19 November 2006).

Access to the Agenda
Local housing politics in a weak state context

ELIZABETH J. MUELLER AND TOMMI L. FERGUSON

Introduction

State governments shape the priority placed locally on meeting affordable housing needs through the resources they provide to cities and through the laws guiding local planning that they enact. State law provides a central legal framework for urban planning that can facilitate or constrain local efforts to address affordable housing needs and enact local solutions. State comprehensive planning laws that mandate local housing needs assessments, concordance between needs and zoning practices, or laws that require communities to shoulder their "fair share" of affordable housing all provide a strong basis for local advocacy.[1] Local advocates can rely on the reporting requirements that come with such mandates for information on housing needs and agency performance.[2] Conversely, states lacking such requirements, or legally barring the use of specific housing remedies, give local advocates little to work with. Local advocates in such states will need to compile their own information on needs and how local policies respond to them to push for creation of local goals in the absence of statewide ones. Yet only five states require housing plans as part of a broader comprehensive planning requirement (Pendall, 2006).

More common is the experience of states like Texas, where no state planning mandates exist, and significant impediments to planning for affordable housing are found in state law. The state lacks any growth management or land development program at the state level (Parmenter and Oden, 2004). In terms of specific tools often used in housing policy, the overall picture is especially bleak. The Texas legislature is well known for intervening on behalf of developers to overturn local ordinances regulating development or acting to preempt progressive local initiatives. In the last regular legislative session, in response merely to early discussions of policy changes in the city of Austin, a law was enacted that effectively prohibited mandatory inclusionary zoning.[3] Advocates have been most successful in creating pilot programs for use in one city, in the hopes that they can build on evidence of success in future, broader legislation. To date, such pilot programs have included a land bank in Dallas (successfully implemented and later replicated in Houston), and a "homestead preservation district" designed for Austin.

This specific planning framework leads us to ask how local housing advocates can effectively operate. How will they institutionalize progress absent state requirements for housing planning? In this article we examine one strategy for action in the absence of state mandates for housing planning. We chronicle the progress of a participatory action research project[4] aimed at providing local advocates with information on housing needs and tracking progress on measures linked to underlying theories about points of leverage in local housing politics. Texas City Housing Report Cards were designed to do what comprehensive planning mandates do elsewhere—provide information on citywide housing needs and focus attention on city policy and progress. We begin with a discussion of what we know about local politics, particularly the factors that have facilitated the rise of local housing movements in cities around the country. Drawing upon the lessons of these past experiences, we present our starting hypotheses about housing politics in Texas cities and the role that report cards might play in facilitating public discussion of housing needs and strategies. Finally, we describe the political context for housing policy and our experience partnering with local housing advocates in San Antonio and Dallas.

The Problem: Building Support for affordable housing at the City Level

Urban political theories Contemporary urban political theorists have focused on explaining the dominance of specific groups within the local political arena, why particular coalitions or regimes remain dominant for long periods of time and on the different paths to influence across cities (Logan and Molotch, 1987; Stone, 1989; Ferman, 1996; Stone, Orr, and Imbroscio, 1991). To a lesser extent, theorists have focused on examining cases where progressive coalitions, with interests counter to the dominant regime, are able to take power and pursue an alternative agenda (Ferman, 1996; Turner, 1992). In this section, we outline the main lessons of this literature for local housing politics, consider the rise of housing movements in two cities in light of this literature, and present our own approach to stimulating housing movements in Texas cities.

Emphasis on identifying the particular interests of different groups within cities builds on observations made by sociologist Harvey Molotch in his seminal article "The City as a Growth Machine," on the central role of growth as a motivator for local politics:

> I speculate that the political and economic essence of virtually any given locality, in the present American context, is growth. I further argue that the desire for growth provides the key operative motivation toward consensus for members of politically mobilized local elites, however split they might be on other issues, and that a common interest in growth is the overriding commonality among important people in a given locale—at least insofar as they have any important

local goals at all. Further, this growth imperative is the most important constraint upon available options for local initiative in social and economic reform. It is thus that I argue that the very essence of a locality is its operation as a growth machine. (Molotch, 1976, 309–310)

In *Urban Fortunes*, Molotch and coauthor John Logan develop this into a fuller argument, emphasizing the central role of local actors whose interests are tied to local land prices. The growth machine includes within it developers, real estate interests, builders, bankers, and organized labor (particularly the building trades). Backing them up were auxiliary actors, with interests tied to place but less directly to particular places within cities: politicians, local media, utilities, local universities, sports teams, and local cultural institutions (Logan and Molotch, 1987).

Building and expanding upon Logan and Molotch's framework, the dominant approach to describing and explaining urban politics for the past twenty-five years has been "regime" theory. Clarence Stone, whose work on Atlanta pioneered the concept of regimes, defined a regime as "an informal yet relatively stable group with access to institutional resources that enable it to have a sustained role in making governing decisions" (Stone, 1989, 4). Regimes bridge the public and private realms, bringing together formal and informal actors and groups in order to build or maintain support for a specific policy agenda. Neither governmental institutions nor private business interests have the ability to carry out major policy objectives alone, thus "regimes" are necessary to assemble the support and resources necessary to accomplish change. This means that groups without either organized constituents or valued resources will find it difficult to be included in governing regimes. Case study research on regimes has emphasized the power of development interests and other business organizations in local politics (Logan, Whaley, and Crowder, 1997). In a few cases, groups interested in redistributive policies have been able to gain control of decision making for periods, enabling them to follow very different local agendas (Orr, 1992; Stoker, 1987; Turner, 1992). Typically, however, these groups do not solidify into "regimes" as defined in the literature, as they are not able to maintain their agenda across elections.

How regimes are formed and remain influential is tied to the structure and culture of local politics. Barbara Ferman's concept of political "arenas" provides a framework for thinking about how and where decisions are made and how those outside the regime might achieve influence. Arenas are "spheres of activity that are distinguished by particular institutional frameworks and underlying political cultures" (Ferman, 1996, 4). They shape the relationships that develop, the form of political mobilization and organization, the types of conflicts that get aired, opportunities for leadership, and the range of likely policy options. Arenas have internal logics, institutional frameworks, and political cultures that create/deny opportunities for participation. Strategies for action will vary according to the main arena where politics takes place: in electoral arenas, the key link between citizens and government is institutions interested in political power, such as ward organizations, political clubs, interest groups, reform organizations. In civic arenas, private, nonprofit institutions, voluntary organizations, and informal clubs dominate, producing an associational politics based on the density of local networks. Civic organizations tend to cluster by function, ethnicity, and geography and are strongly influenced by philanthropic organizations that distribute resources to groups and foster cooperative culture. Business arenas tend to be dominated by a handful of powerful businesses that benefit from cooperation in large projects. They are linked to government through campaign contributions, major development and service contracts, land use decisions, and board appointments. They will vary according to the strength and diversity of local businesses. Intergovernmental arenas are dominated by bureaucrats, with vertical lines of authority based on regulations. For example, under devolution, ties between state and local governments may strengthen and those between federal and local organizations may decline.

According to Ferman, for neighborhoods and others interested in quality of life or distributional issues, the most viable arenas for action and influence are civic and electoral. Business arenas tend to be closed to neighborhoods, and intergovernmental arenas distance them from participation. Political cultures most favorable to quality of life or equity concerns emphasize communalism, collective enterprise, trust, reciprocity, and social networking. Those working against it emphasize cynicism, mistrust, competitiveness, and strong individualism (Ferman, 1996). This framework provides a useful starting point for discussion of local housing politics.

Local housing politics Pushing for local housing goals means entering the local political fray. Despite the general tendency of those with a direct interest in land development to influence local government priorities, case study research in several cities has documented periods when a local "regime" focused on redistributive policies was able to take hold (Krumholz and Forrester, 1990). Research conducted in the 1980s and early 1990s documented the rise of local housing movements in several cities in response to cuts in federal funding for housing (Goetz, 1993; Yin, 1998). As housing affordability problems creep upward into the middle classes, the politics of general residential development and affordable housing development increasingly intersect. In this context, making the case for the ongoing needs of extremely low-income households is likely to become even more challenging. An external (e.g., state) mandate to address specific housing needs provides advocates a foot in the door to the discussion. Conversely, where mandates are

absent, advocates must build local support for housing as a priority issue, in the context of local development-dominated politics.

Scholars have chronicled the rise of local housing movements in cities around the country, arguing that contrary to expectations, these movements were able to counteract the decline in federal funds by pushing for local support. We review two cases from this literature here with particular attention to how these local efforts initially formed. Specifically, our research questions included: Was there a catalyzing event? What allowed them to consolidate their gains over time? How do conditions in Dallas and San Antonio, our study cities, differ from those described below, which were able to promote successful organizing for housing?

Los Angeles In 1980, the city of Los Angeles did not have a coherent local housing policy. There were no explicit programs in place to address affordability, no effective organized advocacy coalition, and "no local resources devoted to affordable housing except for a state-mandated tax increment set- aside" (Goetz, 1993, 161). Within little more than a decade, housing advocacy groups became organized and vocal, the mayor created key policy positions focused on housing, and an ambitious dedicated trust fund was created.

Goetz (1993) attributes the almost complete turnaround to several factors, but one stands out as catalytic in his account: the redevelopment of Bunker Hill. This one project resulted in the displacement of 6,000 people and elimination of more than 2,200 single room occupancy (SRO) units, thereby exacerbating the city's homeless problem. This came on top of the growth of low-wage employment and helped drive public awareness of housing issues and mobilize local housing advocates. Subsequently, the mayor became more responsive to Housing LA, the umbrella organization formed to push forward the advocates' agenda.

Also important was the election of new council members, willing to push the mayor on new priorities. The mayor responded to pressures by appointing a longtime advocate as "housing coordinator" and formed a panel to study and make recommendations for local housing policy. Subsequent debates over proposed policy solutions solidified the position of the housing coalition as the forum for discussion among advocates. Advocates were able to push for creation of a separate housing agency, further strengthening their position. The culmination of their work was the formation of a hundred-million-dollar local housing trust fund (Briedenbach, 2002).

Cleveland The Cleveland story, as told by Yin, is quite different. In this case, in the context of long-term population and economic decline, civic elites saw an overlap between their interests in bringing middle-class residents back to the city and the housing and neighborhood improvement work of community development

corporations (CDCs). A dramatic increase in support and funding for CDCs, and the creation of a "community development industry system" has resulted from this partnership (Yin, 1998). Yet that support has also arguably meant a shift in direction for CDCs, away from advocacy and from serving primarily low-income residents.

Under Mayor George Voinovich, elected in 1979 with support from a business coalition attracted by his focus on downtown redevelopment and "a new image for the city," corporate interests became increasingly involved in CDC housing activity, primarily as funders, and the housing efforts of Cleveland CDCs began to shift (Yin, 1998, 141). Made possible by changes in federal tax law in 1986, Cleveland's British Petroleum "developed the groundwork for an innovative tax syndication program" using tax credits as an investment for housing development through nonprofits (Yin, 1998, 143). During the mid- to late 1980s, the use of corporate tax credits resulted in greatly increased production numbers, to the tune of four hundred housing units rehabilitated in roughly a five-year period.

Success built upon itself, as national community development intermediaries Local Initiatives Support Coalition and the Enterprise Foundation established local branch offices and began work to "facilitate the increasing productivity of the city's CDCs" (Yin, 1998, 143). By the mid-1980s, national foundations[5] had become major funders of the Cleveland Neighborhood Partnership Program. Funders' development interests were focused on commercial and market-rate housing activity as a "strategy . . . to enhance the city's image as a place for the location of business firms, attract middle-class households to live in the city in hopes of enhancing the city's income and property tax bases, and stimulate consumer expenditures within the city" (Yin, 1998, 144).

Increasingly, Cleveland CDCs were encouraged to take on a more professionalized structure and market-oriented approach to housing activity. Funders institutionalized their goals through the creation of a new organization, Neighborhood Progress Incorporated, which oversaw "corporate efforts directed toward neighborhood development" (Yin, 1998, 144). While the city's well-known Cleveland Housing Partnership, originator of the lease-purchase home ownership model for low-income households, continues to receive support, the balance has shifted away from advocacy on behalf of low-income residents and neighborhoods. Increased funding for CDCs has come at the cost of a weakened voice for low-income residents.

From the two cases outlined above, we draw several lessons. First, as the LA story shows, it is possible to overcome an apparently weak position and move forward. Advocates were able to capitalize on a series of events and a change in the political fortunes, or a change of mayor, to push for real changes and get them institutionalized. Once opportunities arose, they were able to overcome their own internal divisions to work together to set priorities

and affix policy goals to them. In contrast, Cleveland shows us the trade-offs associated with joining forces with civic elites. Where goals are well aligned, it is a win-win situation. Where they diverge, community coalitions are poorly positioned to push back. The challenge becomes building a coalition with enough strength to command attention and access, while maintaining enough autonomy to uphold community priorities. The two cases also show the importance of the arena driving local politics. LA's electoral focus gave advocates a venue to push for change. Cleveland's more civic business–driven politics kept advocates out of the center of discussions.

Coalition building Herbert Rubin draws several lessons regarding the ability of community development organizations to influence policy from his extensive multiyear study (Rubin, 2000). First, he describes the way in which community-based development organizations (CBDOs) can work through umbrella organizations or coalitions to advocate, despite their individual ties to city coffers. Such coalitions, he argues, can be effective vehicles for building a social movement around community development goals. Second, he emphasizes the many dimensions that go into building the fabric of effective coalitions and movements. His description sounds a lot like Ferman's description of civic arenas—with overlapping memberships, personnel, dense social networks, and relationships solidifying ties and trust among members. Finally, he describes the elements of a successful movement, emphasizing the importance of developing a shared framework across coalition/movement members based on a common diagnosis of problems, prognoses for how to respond, and a rationale for action.

The process he describes for achieving this common vision and thus laying the foundation for a local social movement involves reflecting on the work of CBDOs, drawing lessons regarding what works, and developing a way to talk about this, a story to tell. Such stories become common across movement leaders and become the way that the whole community development "industry" (e.g., funders, trade associations, CBDOs, etc.) talks about its work and larger goals. Gradually, these ideas become part of the collective memory of the broader group.

Strategy: Housing Report Cards for Texas Cities
Our approach: telling a new story about housing in Texas cities
In the current context, Texas cities are pushed to address their affordable housing needs neither by state law nor by proactive federal oversight of planning requirements that come with block grant funds. Instead, housing advocates must push for attention to housing in the context of the local political arena. In most cases, the context is heavily weighted toward the concerns of the real estate and development community. In some cases, broader economic interests are also a part of the governing regime (Parmenter and Oden, 2004; Elkin, 1987). In this context, we developed an approach for stimulating local discussion of affordable housing in Texas cities. In this paper, in order to contrast different political contexts, we focus on our experience in Dallas and San Antonio.

The strategy developed was to produce a "housing report card" in each city, aimed at presenting easily understood information on housing needs, city priorities, and local progress toward meeting needs. We developed our approach based on a few operating assumptions, consistent with our understanding of urban politics. First, we assumed that public awareness of housing as an issue was shaped by local politics and thus interest would likely be skewed toward workforce housing (i.e., housing for households approaching median income), thus de-emphasizing the needs of the poor. This would be consistent with local politics dominated by development concerns since it would allow for more general discussion of impediments facing local residential developers. Second, we assumed that leadership needed to come from civic elites, broadly defined, not agency heads or even elected officials. This would be consistent with our understanding of Texas city politics and with our assessment of the structural position of housing agency heads, who have to serve both federal and local masters, often by cooperating with local housing developers. Affordable housing production is more often done by private developers in Texas than elsewhere, making local agencies particularly sensitive to developers' concerns. Third, we assumed that local advocates were organized into the sort of coalitions described by Rubin, where a larger vision for the city was the focus of advocacy. We knew that both San Antonio and Dallas had been successful in securing at least one progressive policy and assumed this was, in part, the result of the work of these coalitions. (Dallas had passed bonds to support a homeless housing project downtown, and San Antonio had created a housing trust fund).

Development of framework We developed our framework for the report cards based on a review of three other models. These three models—the San Francisco Bay Area Housing Crisis Report Card, the Greater Boston Housing Report Card, and the Toronto Report Card on Housing and Homelessness—took very different approaches to their task. Through a review of their reports and discussions with some of the authors, we assessed how their report cards were used, the data requirements involved in preparing them, and the audiences they were addressing. Drawing on their experience, we developed an approach that relies on existing data and grading standards that fit Texas.[6]

We identified six key areas to focus on: leadership, resources, production, targeting, fair housing, and transparency. For each

TABLE 1: Principles underlying grades

area, we identified a set of underlying principles that we wanted to incorporate into a set of measures.

We put together lists of possible measures for each category and discussed these measures with experts and advocates. In order to make the process as replicable and fair as possible, three criteria were used to select measures. First, we sought to document each item from data that is already reported to or required by HUD or other state or federal agencies or reported publicly on a regular basis. Second, to the extent possible, measures avoided judging the quality or degree of compliance of particular items. Where unavoidable, such qualitative measures followed standards developed and in use elsewhere. Deciding what constituted an A or an F again required discussion with stakeholders. Grading follows traditional standards, where a C is average, an A is exceptional, and an F is utter failure to seriously address the issue at hand. We found it most difficult to hold to these rules in judging "leadership." This made our process of vetting our findings (described in the next section) all the more important.

Politics and Housing in San Antonio and Dallas

While we developed report cards for four cities in Texas, we focus here on Dallas and San Antonio. Both are large cities, with council-manager forms of government and a history of corporatist governance, dominated by white businessmen, where minority representation improved only in the late twentieth century following struggles made possible by passage of the 1965 Voting Rights Act. The contrast between them resides in the strength of their economies, the magnitude of social problems, their different racial and ethnic makeup, and, finally, in their political cultures. These differences are in part an outcome of very different histories. In both cities minorities struggled to gain representation and access to power in ways relevant to housing politics. In this section, we briefly describe our experience presenting our report card work in each city, then step back and review each city's political culture, emphasizing the access of minority groups to political power, the impact of the voting rights act on local politics, the legacy left by urban renewal, and the dominant arena for political influence. We then discuss the historical context for addressing social equity concerns in each city, and whether housing ever made the list. We end with our assessment of the prospects for moving the local housing agenda forward.

Dallas, Texas Our Dallas report card assessed the city's progress harshly, particularly in terms of matching resources to needs and in ramping up the scale of production to put it on a trajectory likely to lessen the number of households paying half their gross income for housing. We found that resources were overwhelmingly dedicated to home ownership efforts, with virtually no support for the low- to moderate-income renters that their own analysis showed to have the greatest need for assistance. The share of the city's federal HOME block grant funds allocated to extremely and very low-income renters fell below national averages. Finally, following a controversy over use of federal low-income housing tax credits, the mayor and council imposed severe limitations on the use of this important resource, making it even less likely that renter needs would be addressed. We found particular resistance to any discussion of scattering housing opportunities more broadly throughout the community. When we raised the issue of better economic integration of affordable housing in various venues, invariably discussion shifted, never to return to our question. Overall, we found efforts to be concentrated on revitalization of South Dallas, focused on home ownership and resistant to any discussion of broadening the focus to the city at large.

The groups most directly interested in affordable housing were essentially trade organizations representing, in one case, local

nonprofits producing housing in low-income communities and, in the other, a regional network of housing developers and funders. We spoke with leaders of both groups about our findings and both expressed interest and agreement with many of our findings. But neither saw it in their interest to become directly involved in using the report to push for greater attention to housing issues. In essence, they would not oppose such a push, but it would not be in their immediate interest to publicly challenge current priorities. Comments about the role played by council members in projects piqued our interest in understanding the role that the council played in setting the agenda for housing.

We also presented our findings to the city manager and head of the city's housing department to offer them a chance to correct any misperceptions on our part and engage them in a discussion of our findings. The meeting confirmed our perceptions of the culture of city government, developed as we struggled to collect the information needed for our report card. To our surprise, neither was at all concerned about the city's poor marks on indicators of "transparency." In the view of city and housing agency leaders, time spent on ensuring the public could find out how their funds were being spent was time taken away from other, more important tasks. Nor was the housing director troubled by the apparent disconnect between the severe need for affordable rental identified in their HUD-required analysis and their focus on home ownership initiatives. Indeed, the sense we got was of an agency focused on broader housing needs, rather than those of low-income households. Both assured us that no one in the housing community would dare approach them with our findings.

Following these meetings, we wondered what shaped the climate for these priorities. In particular, how did the city council and other civic leaders define city priorities and how high did the affordable housing needs of low-income residents rank in these priorities?

ITEM	GRADE	EXPLANATION
Leadership	C+	An August 2002 report noted that support for affordable housing among city council members was at an historic low. This places a premium on leadership from the mayor and community leaders. Yet, despite signs of progress, the Mayor was not a consistent advocate for housing needs. Instead, evidence suggests that she was reluctant to use the tools at her disposal to increase attention to housing needs and increase the effectiveness of city policies and programs. Community leaders made some progress in documenting and articulating housing needs and championing solutions; however, these efforts are not yet institutionalized. Most promising are the ongoing efforts to implement the recommendations of the 2002 Mayor's Affordable Housing Task Force on Workforce Housing.
Resources	C+	Federal resources flowing to the city were declining. Local funding was minimal, and did not directly flow toward housing production for low-income families. Bond funding has been spent on infrastructure improvements and land acquisition rather than direct production. The city's housing trust fund was established with only $1 million six years ago, and has received no additional funding from the city. Dallas also has significantly reduced the amount of federal funds dedicated to supporting CHDOs. The overall picture is one of decline, with periodic infusions of bond dollars unable to counter the overall trend.
Production	D	The pace of production of affordable housing in Dallas lags far behind that needed to address the needs of city residents. Moreover, recent production efforts have focused on the creation of homes for sale. In sum, moderate- and low-income renter households in Dallas have few affordable options with comparatively little activity on the horizon. More than 55,000 Dallas renter households paid more than half of their gross monthly income for rent and utilities in 2000. In addition, 20,100 households lacked complete kitchen facilities and 9,000 households lacked complete plumbing in 2002. Based on data reported for 1999-2005, at the current level of activity, it would take more than 32 years for this shortage in units to be addressed and 36 years for units lacking complete kitchens to be repaired. Most production was supported by federal tax credits until late 2005 when the city restricted its use of tax credits to housing for elderly or disabled residents. HUD has added vouchers to the city's stock of 11,000 in response to a court order under the Walker Settlement.
Targeting	C-	The city's Consolidated Plan provides a clear picture of areas of need. Yet spending priorities do not track the trends reported in the data. With the exception of 2005, for all years examined, Dallas consistently focused on homeownership rather than rental housing, and did not prioritize the needs of the lowest income renter households. While receiving disproportionate funding, programs for homeowners do appear to be appropriately targeted, serving low income homeowners unlikely to be served by private mortgage lenders. Support for low- to moderate-income renters is practically non-existent.
Fair Housing	C	Despite some improvement over the past few decades, Dallas remains highly segregated by race and ethnicity, with only Whites and Asians not highly segregated from each other. As of 2000, minority households in Dallas were predominantly concentrated in the Northwest, Southwest and Southeast of the city, with white households predominantly concentrated in the North Central and Northeast. In August 2006 the City was conducting its first study of impediments to fair housing since 1998—well beyond the 2-5 year window recommended by HUD. The 1998 study provided little useful information on the obstacles facing residents, and lacked any analysis of the impact of city policies or programs on fair housing conditions. Finally, the report offers little guidance for city action to improve conditions. Since that time, Dallas was the subject of one of the most famous housing discrimination cases in history – Walker v. HUD. Much of the progress that has been made in Dallas has been a direct result of court-ordered action based on the settlement reached in this case. The Dallas Housing Authority has played the strongest role in this process. The city's Fair Housing Office, an outcome of the Walker Case, has a strong track record in investigating Fair Housing Complaints.
Transparency	D	Dallas is doing a poor job of providing information on programs to residents. Those needing services would be hard pressed to learn about them from city websites. Improvement is desperately needed in making documents that present information on funding priorities and on program performance accessible to the interested public. We were able to obtain such documents only after repeated requests. In some cases, we had to travel to City Hall to view the information. Interested members of the public would be able to learn very little about funding sources, program priorities or performance by visiting the city's website.

History, political culture Dallas, the second-largest city in the state, has a well-developed official mythology about itself and its history. It is presented as a "can-do" place, a city with "no reason to exist," that invented itself through sheer will and determination (Schutze, 1986). Its business-dominated ruling regime is well documented (Elkin, 1987). Its political culture is focused on efficiency and was embodied for years in the form of its shadow government, the Citizens Council, which effectively ruled the city until the 1960s. This top-down, business-oriented civic elite left little space for direct citizen involvement. As described by political journalist Jim Schutze in his book *The Accommodation*:

TABLE 2: report card finding - Dallas

> The fact was that by 1950, a system had evolved in Dallas where the political activities of ordinary people were almost automatically suspect and somehow never fully legitimate. Politics itself was suspect, according to this doctrine. The only truly virtuous public activity was civic, not political, and the meaning extended beyond the mere absence of formal partisan labels. The business leaders who sat around the table of the Citizens Council had become the city's all-powerful unelected board of directors, its true legislature, executive branch and high court . . . there was none of this business of calling up your city councilman and telling

*him you were going to have his job if he didn't get your street-
light fixed . . . he wasn't your city councilman, and he didn't es-
pecially need your vote. He was the Citizens Council's city coun-
cilman, and he needed their vote. (Schutze, 1986, 69)*

The idea that a handful of civic elites, businessmen all, were best able to think for the "city as a whole" would prove remarkably resilient (Fairbanks, 1993). In fact, several authors argue it remains the modus operandi for forming the city's economic development priorities (Morgan, 2004; Hanson, 2003). Nonetheless, the formal dominance of the council by the candidates and agenda of this elite, as represented by the Citizens Council, would change once the city's at-large system of governance was challenged in 1975, ten years after passage of the Voting Rights Act. Under the at-large system, minority residents were represented through formation of political organizations that allied themselves with the dominant regime party and became a reliable voting block. Yet the city remained highly segregated, a pattern reinforced through the city's 1948 plan. Limited, token desegregation efforts were carefully controlled by city elites (Graff, 2008).

Finally, a 1975 court order shook up the city's at-large electoral system. The new system replaced this system with eight councilors elected from fixed geographic districts, along with three elected at-large (Graff, 2008). A 1989 referendum created ten council districts, plus four that each covered one-quarter of the city. Eventually, this plan would also fall to legal challenge, as its districts were too large to enable the election of minority councilors. At the time of its challenge, in 1991, only two of the council's eleven members were black and none were Hispanic, though the two groups together made up 50 percent of the population (Morgan, 2004, table 6.2, 181; Associated Press, 1990). Subsequently, the city moved to a 14-1 system, where all council members are elected by district, with the mayor elected at large.

The results of the shift to single-member districts for addressing the needs of low-income residents and neighborhoods have been mixed. Morgan argues, in her study of the impact of the Voting Rights Act on Dallas, that the result has been greater attention to the allocation of funds across districts but little attention to whether this results in serving the needs of low-income residents. Rather, she finds evidence that funds controlled by council members are sometimes used for patronage (Morgan, 2004). Similarly, journalist Schutze, in a study of the use of Community Development Block Grant funds, found that $22 million had gone to a series of questionable pork-barrel projects recommended by council appointees to the city's Community Development Commission. Most troublingly, five hundred thousand dollars in CDBG funds that had been designated for use for housing needs had been siphoned off into council members' pet projects (Schutze, 1999).

In recent years, high-profile reports on the city's future prospects have pointed attention to the importance of addressing racial and economic inequities (DiMambo cited in Graff, 2008; Booz Allen Hamilton, 2004). One result has been increased discussion of strategies for jump-starting development in the long-neglected "southern sector"—a collection of minority, mostly low-income neighborhoods that have presumably been the focus of federal block grant spending for years. The city's new plan, Forward Dallas!, provides a vision for development in southern neighborhoods. However, realization of this vision will depend on the council backing up these goals through use of the city's budget, bond funds, and federal resources. This takes us back to the council again. Yet in true Dallas tradition, one of the most high-profile efforts to focus attention on housing concerns and strategies for addressing them has been led by J. McDonald Williams, former CEO of development company Trammel Crow. Williams has formed his own institute to study the issue and a nonprofit to redevelop a low-income neighborhood.

The picture painted by various authors and commentators is of a city deeply divided by race and income, yet lacking in either public or community institutions capable of competently addressing the needs of low-income and minority communities. While the perceived reasons for inaction vary by race in recent polls, there is general agreement that not much is being done to improve conditions. Finally, battles over public housing redevelopment and environmental conditions in West Dallas and, more recently, a scandal involving a council member and a high-profile affordable housing developer have undermined public confidence in proposed solutions. In this context, it is hard to find an untainted champion for the housing needs of the low-income residents of minority neighborhoods. Despite a high-profile 2007 series on housing needs in the *Dallas Morning News*, including coverage of our findings, the issue has gotten little traction (Tarrant and Dillon, 2007).

San Antonio, Texas Our review of San Antonio's affordable housing efforts also revealed major challenges. Economic development has led the city's agenda for some time. Not surprisingly, community efforts have focused on raising attention to job quality and education in the city's economic development efforts. Housing problems have not made San Antonio's list of top priorities. Neither the current nor the previous mayor championed housing issues, and housing organizations and advocates have had a hard time bringing attention to the issue. Lack of commitment has undermined the allocation of resources necessary to confront housing problems. The city has not consistently put its own funds toward housing production, nor has it used bonds to raise revenue in order to counter declines in federal housing resources. While it has a handful of effective nonprofit affordable housing producers, their capacity is limited. Thus,

in a high-growth, relatively poor city, housing resources and production are lagging far behind the levels needed to address existing needs. City spending priorities are generally in line with housing needs, but more attention needs to be placed on dispersing housing opportunities for low-income households throughout the region. The city's current fair housing plan, required by HUD, provides no serious assessment of either barriers or solutions. Given the city's current focus on expansion to the south to accommodate the construction of a heavily wooed Toyota production facility, this represents a lost opportunity. Overall, our findings indicate that the city faces a serious challenge ahead of it—one that will only be met with strong leadership, which is so critical to the development of the bigger pool of resources needed to address the challenge.

As in Dallas, a small group was directly concerned with housing issues. With support from the local office of the Enterprise Foundation (now Enterprise Community Partners), the most successful local affordable housing producers had begun meeting to discuss strategies for increasing local production of affordable housing. This group provided us with valuable feedback as we developed grading criteria and measures. But again, they were reluctant to use our findings to engage city management or council in discussion of housing priorities. They did not disagree with key findings, but they encouraged us to present them ourselves to the council.

Our next step was to meet with the city's assistant city manager overseeing housing programs. Again, this meeting solidified our perception of the city's political culture. Following our detailed presentation of findings, the assistant city manager was neither surprised by our findings nor very upset by them. She arranged for a subsequent meeting where we went over findings with the heads of the two departments overseeing various aspects of the city's housing and community development programs. Both men provided us with additional information to correct errors in our draft and also made changes to their Web site in order to improve their score on "transparency." Our overall sense was that they saw the issues we raised as ones they could focus on internally, through improved communication with the local housing producers and internal review of past reports to assess progress on ongoing areas of concern. They correctly perceived that there was little danger of local advocates going to the council with our findings. Our most damning critique was of the lack of leadership on housing issues by elected officials in the city.

Again we wondered why there was no sense of urgency attached to housing issues and what role the council might play in responding.

History and framework of local politics San Antonio, the nation's ninth largest city and the third largest in Texas, has long lagged behind the nation and the state in indicators of eco-

ITEM	GRADE	EXPLANATION
Leadership	D	Elected officials have not made affordable housing a priority in San Antonio. There are no mayoral initiatives focused on the issue and no efforts to compensate for changes in federal funding for housing. Housing-related positions are overwhelmingly supported by federal funds. Community leaders have been unable to mount an effective ongoing effort to set priorities and measure progress. On the other hand, city oversight of programs is sensibly organized, with responsibility for all housing programs under the same city manager.
Resources	C	The flow of Federal resources to the city was declining. Local funding was minimal. The city participated in a program with the Enterprise Foundation and Fannie Mae that does provide funding for capacity building for CHDOs. The city's trust fund lacks a dedicated funding source, limiting it to income from its initial $10 million endowment and funds generated through loan repayments. No general revenue or general obligation bond revenue had been dedicated to housing in the last three years.
Production	D	Over 40,000 San Antonio households paid more than half of their monthly gross income in housing costs in 2000. An additional 18,250 households were living in overcrowded conditions. In 2004, 29,100 households lacked complete kitchens, while 9,900 lacked adequate plumbing. Based on data reported for 1999-2002, it would take at least 32 years for this shortage in affordable units to be addressed and 41 years for the units lacking adequate plumbing alone to be repaired. Most production is supported by federal tax credits. Although the city maintains a stock of 11,000 housing vouchers, no new vouchers have been added since 2000.
Targeting	C+	The city's Consolidated Plan provides a general overview of needs, supported by data. While data on housing needs provided by HUD shows very strong differences across groups by income levels, priorities do not track these differences very closely. Compared to national HUD benchmarks, San Antonio falls slightly behind on targeting funds to the lowest income groups. Need for affordable rental housing remains high: As of 2000, close to 23,000 households with incomes below $12,950 paid more than 30% of their gross income for rent.
Fair Housing	C	San Antonio rates high on measures of racial and ethnic segregation, with only Whites and Asians not highly segregated from each other. Historically, Latinos, especially low-income households, have been concentrated just east of the center city. African-Americans have been concentrated to the west of downtown. According to the most recently calculated dissimilarity index for the city, 68% of blacks would need to move to other parts of the city to achieve full integration. Similarly, over 57% of Latinos would need to move. The City's Impediments to Fair Housing Study failed to adequately assess current conditions and obstacles to improvement. It provided no real basis for targeting action to "affirmatively further" fair housing goals, as required by Fair Housing Laws.
Transparency	B+	San Antonio was doing an adequate job of providing access to the public on existing programs, priorities for use of funding and reports on performance. Most documents were available online, program information for residents was available online, and assistance for Spanish speakers was available. Improvement was needed in the depth of analysis of local needs included in reports, and in giving the public easy access to documents, either through the internet or in public libraries.

TABLE 3: report card finding - San Antonio

nomic development and well-being. It is a poor city relative to national norms: in 2000, close to half of city households (46.6 percent) had incomes below $34,000—placing them in the bottom 40 percent of households nationwide (Brookings, 2003, 56). Though a plurality of the city's population, San Antonio's Hispanic citizens have historically been underrepresented in local politics and, therefore, lacked the political clout to affect sustained change (Munoz, 1994). A white political machine, reliant on patronage, ran the city until the 1940s. As with blacks in Dallas, Mexican-Americans participated in this system by voting for the machine in exchange for low-paying jobs (Munoz, 1994, 107). Henry Cisneros was only the second mayor in 150 years with a Spanish surname (Rosales, 2000). Only one Hispanic—Ed Garza—has been elected mayor since Cisneros left office in 1989.

Until the 1970s, the city's agenda was controlled by the Good Government League (GGL). The GGL was a "nonpartisan party" formed in 1954 by a group of conservative, mostly Anglo businessmen that recruited and elected candidates to city council. Between 1955 and 1972, the league ran and elected seventy-five of eighty-one members (Sanders, 1997, 38). For decades there was tacit acceptance of a system holding one council seat for a West Side Hispanic and one for an East Side African-American, while the GGL engineered continuing control of the other seven seats and maintained Anglo overrepresentation. Among the results of the group's influence were two major elements of the city's economic development strategy for the period: the development of the convention center for Hemisfair '68 downtown through urban renewal and the state's

decision to locate a branch of the University of Texas Medical School in San Antonio (Wolff, 1997, 4–5).

As in Dallas, minority representation did not advance until well after passage of the Voting Rights Act. San Antonio's at-large city council election scheme came under scrutiny when the Justice Department retroactively reviewed the 1972 annexation of sixty-six square miles and 51,400 (predominantly Anglo) people; the annexation was ruled to have "diluted minority voting strength" (Wolff, 1977, 9). San Antonio was left with the choice of undoing the annexation or adopting single-member districts for electing city council members. In 1977, the city passed the charter amendment altering the council structure to eleven seats: ten single-member districts and the mayor (still elected at-large). Unlike in Dallas, change was swift: in the May 1977 election, Anglos lost majority control of the council, retaining just four seats and the mayor's. "For the first time since 1837, the year after Texas won independence from Mexico, Mexican-Americans held real power on the council" (Wolff, 1997, 9).

In 1973, the dominance of the GGL was challenged from several quarters. Charles Becker, a prodevelopment businessman, defied his GGL colleagues by running for Place 2 (the seat tacitly reserved for the next mayor) without the GGL's endorsement (Wolff, 1997, 3–5). He won. That same year, Communities Organized for Public Service (COPS) formed. Under the leadership of Ernie Cortes Jr., COPS began as a group composed of primarily Central West Side Hispanics advocating for equity in the city's provision and maintenance of infrastructure-related projects. It drew its membership from a network of Catholic parishes in central-west and south side neighborhoods. As Wolff (1997) notes, the COPS "agenda did not include civil rights or social welfare issues. Members wanted hard goods delivered to their neighborhoods in the form of streets, drainage and good city services" (p. 8). They were successful in shifting priorities for use of Community Development Block Grant funds toward these goals. COPS was also instrumental in helping secure ten million dollars from the sale of the city-owned cable station to establish the city's Housing Trust Fund in 1989. Yet no additional funding has been added to this fund since its establishment twenty years ago. During the 1990s, COPS and partner Metro Alliance increasingly focused on the creation and funding of Project QUEST, an effort focused on job development, training, and preparedness.

In 1990, shortly after the creation of the Housing Trust Fund brought the prospect of significant local support for housing, the power of electoral politics as a vehicle for advancing housing needs was undermined when term limits were passed by referendum. Under the new limits (the most restrictive in the country), the mayor and city council members were limited to no more than two two-year terms. Voter participation rates fell steadily, from a high of 43 percent in 1981, to a nadir of 7 percent in 1999. Drop-off was

highest in inner-city, heavily minority council districts (Vega and Bretting, 2002). Even as groups made inroads with elected officials or advanced their own policy champions to positions of political influence, they were often unable to sustain or achieve any continuity of support strong enough to produce significant change. In our interviews, this was the main issue raised by local housing stakeholders.

However, recent elections and changes in term limits suggest that opportunities for advancement of housing issues may have better prospects in the future. In November 2008, San Antonio passed a ballot measure to extend term limits from two two-year terms to a maximum of four two-year terms (Idell Hamilton and Allen, 2008).[7] Mayor Phil Hardberger spearheaded the initiative, which was supported by COPS and Metro Alliance. In addition, at least four current council members profess support for housing and community development activities (San Antonio City Council, 2009). The combination of longer tenure for city council members and a group of potentially more sympathetic elected officials could create opportunities for advocates to garner support for affordable housing and sustain that support long enough to affect real change. Yet in the context of the city's ongoing struggle for economic development, the prospects for moving housing needs higher on the list of priorities remain daunting. Advocates have been unable to effectively link housing to broader economic development concerns. As Wilson et al. predicted in 1997, the future success of community-based housing advocates will be "dependent on constant political involvement and bargaining, with few certainties" (p. 31).

Lessons: Getting Housing on the Agenda

In the absence of state policies requiring attention to local affordable housing needs, all progress is dependent on local politics. As we conducted our research and began discussing our work with local housing advocates, we came up against a number of challenges that made us reflect on our initial assumptions about the nature of politics in the cities and the role of housing in local politics. On the whole, we found that housing coalitions were extremely weak, if present at all. For the most part, they were narrow in membership, more trade association than coalition, with most member organizations dependent on the city in some way and thus reluctant to be publicly associated with direct criticisms of city policy. Yet we also saw differences between the two cities, differences that seemed rooted in the different arenas driving their politics and the way that housing advocates are able to work in these arenas.

As discussed earlier, the dominant arena for action in local politics effectively defines the strategies that are likely to be most effective in provoking change. In both cities, minority residents have historically faced significant constraints to their participation in local electoral politics. But the power of electoral politics differs

in the two cities. Arguably, despite significant changes in the electoral representation of minority communities in Dallas, effective strategies must still work through civic elites. Changing the agenda from below would require tremendous community mobilization. In Dallas, district elections and weak, fragmented community organizations appear to undermine chances for success in effective organizing around housing concerns. The city government's closed political culture, where requests for information about the use of public funds were treated as highly unusual and suspect, continues to be most compatible with elite-led efforts on behalf of the poor.

In contrast, efforts to respond to the needs of low-income and minority neighborhoods in San Antonio have been successfully tied to electoral politics since the fall of the GGL. COPS was able to demand attention to the needs of poor neighborhoods in the 1970s and 1980s. But the imposition of term limits severely undermined the power of electoral politics as a vehicle for the representation of inner city, minority neighborhoods. In addition, COPS has increasingly focused its attention on improving the quality of jobs resulting from local economic development efforts. Nonetheless, the potential still exists for a return to such a strategy, particularly as term limits are relaxed.

The goals of civic elites backing local planning in Dallas are similar to those pursued in Cleveland: in both instances, elites wish to bring middle-class residents back into the city to build its tax base. Yet in Dallas, local housing groups are not viewed as potential partners in this process. They are not seen as having much capacity or competence. As the city shifts focus toward the poorer neighborhoods in its "southern sector," local housing advocates are virtually voiceless. Instead, a local businessman who has played a leading role in fostering public discussion of affordable housing has initiated and begun implementing a redevelopment plan for a low-income neighborhood, leading to some tensions as he pushes for broader use of eminent domain to further his project. Those advocating for the housing needs of low-income residents and neighborhoods have virtually no leverage.

In other cities, advocates have been able to take advantage of moments of crisis to push for important changes. Both Dallas and San Antonio are pursuing major initiatives that might present an opportunity to advocates. The Dallas city plan, mentioned above, includes a housing element whose goals are being made real as district plans are developed. Yet in an elite-driven system, where local housing organizations typically avoid advocacy, this opportunity is being lost. In San Antonio, the change in term limits presents a real opportunity to engage elected officials. Yet the attention of the strongest community advocates, COPS and Metro Alliance, remains focused on ensuring that the city's major economic development initiative produces jobs for low-income city residents. Advocates must connect housing and economic development in

order to benefit from recent changes in the city's term limits.

The challenge facing advocates in both cities is the need to build local coalitions with enough strength to commend attention and access, while maintaining enough autonomy to uphold community priorities. Rubin argues that community-based development organizations can work through umbrella organizations or coalitions to advocate, despite their individual ties to city coffers. The basic elements necessary for successful coalition-building are within reach in San Antonio: a community of advocates that trust each other and share common goals. To move to the next step, they need to broaden their networks and work collectively to frame public discussions of the city's housing needs. The story told by our report card, while regarded as useful, has not yet been translated into local terms, converted into a local story about the housing needs of residents and local priorities and larger goals.

For the many cities where rule by business organizations or civic elites is the dominant arena, advancing distributional issues such as access to affordable housing will be quite difficult. Absent electoral access to agenda setting, putting the needs of low-income, minority people and neighborhoods on the agenda will require mass mobilization, supported by a network of community-based organizations. In Dallas, such a network is not in place and will be hard to create. In San Antonio, the coalition has the potential to push for greater attention to housing needs, linked to their efforts to improve access to good jobs for residents of low-income communities.

ELIZABETH MUELLER is an Assistant Professor of Community and Regional Planning in the School of Architecture at UT Austin. She also holds a faculty appointment in the School of Social Work. She holds masters and doctoral degrees in city and regional planning from the University of California, Berkeley. She is primarily interested in questions of social equity in cities and regions. She teaches courses on city planning history and planning theory, affordable housing policy, community development, urban politics, qualitative research methods, and research design. Prior to coming to U.T., Dr. Mueller was Assistant Professor of Urban Policy at the Milano Graduate School at New School University where she was also a Senior Research Associate in the Community Development Research Center. In addition to her teaching responsibilities, Dr. Mueller is an active researcher. Her work focuses on community development and affordable housing. She is co-author of *From Neighborhood to Community: Evidence on the Social Effects of Community Development*, the first study to systematically consider residents' views of the work of community development corporations. Her work has been published in *Economic Development Quarterly*, *Policy Studies Journal*, *The Journal of Migration and Ethnicity*, *Berkeley Planning Journal* and *Planning Forum*. She is also active in state and local affordable housing policy and advocacy, producing research aimed at advancing the state of current discussions. She is a member of the Texas Housing Forum, a statewide group bringing together stakeholders from a wide range of interests and perspectives to make affordable housing a priority for Texas. She serves on the boards of the Texas Low Income Housing Information Service and of LiveableCity and is active in housing issues in Austin. She co-authored the 1999 report *Through the Roof: A Report on Affordable Homes, on the barriers to affordable housing in Austin*, published by the Community Action Network's Affordable Housing Task Force.

Notes

1. While cities receiving federal community development block grants and other funds aimed at affordable housing needs are required to assess local needs and prioritize the use of these funds, these efforts are not typically linked to local policy tools such as zoning.

2. For example, the Bay Area Housing Crisis Report Card tracks progress on housing through information reported under the state's comprehensive planning law, which requires cities to include a housing element with specific information in their comprehensive plan.

3. House Bill 2266, passed in 2005, amends the Local Government Code to prohibit a municipality from adopting a requirement that establishes a maximum sales price for a privately produced housing unit or a residential building lot. The bill did not include rental housing since inclusionary zoning for rental housing is akin to rent control, which is already virtually impossible to enact under state law.

4. In participatory action research, researchers engage in research as active participants in the subject under study, with the goal of contributing to the outcomes sought by the community under study. In this case, the principal investigator was part of a coalition that was working to make attention to affordable housing needs a priority at both the state and local levels in Texas.

5. Funders included the Ford Foundation, Cleveland Foundation, Gund Foundation, British Petroleum, and the city of Cleveland.

6. The Bay Area report card was able to rely on state reporting requirements; Boston aimed at a more academic audience in context of state fair share mandates; Toronto's housing agency prepared report cards internally for use in raising public understanding of the need for return to production of social housing, especially for the homeless. Data access and requirements were different in each case, and intended audience and purposes were also different. In all three cases, cities had a ready audience of advocates able to use the information to advance their own work and push for policy changes or accountability to make past victories meaningful.

7. The new term limits do not apply to council members in office November of 2008 when the initiative passed.

Works Cited

Associated Press. *Bias Charged, Dallas Council Backs Redistricting.* New York Times. 29 December 1990. <http://www.nytimes.com/1990/12/29/us/bias-charged-dallas-council-backs-redistricting.html> (28 April 2009).

Dallas at the Tipping Point—A Roadmap for Renewal. *Booz Allen Hamilton Online.* 2004. <http://www.boozallen.com/publications/article/658245> (2 May 2009).

Briedenbach, Jan. *LA Story: The Coalition that Made a $100 Million Housing Trust Fund Happen.* Shelterforce. Issue #122, April/May 2002. <http://www.nhi.org/online/issues/122/Briedenbach.html> (2 May 2009).

San Antonio in Focus: A Profile from Census 2000. Living Cities: The National Community Development Initiative. Brookings Institution, Center on Urban and Metropolitan Policy. 2003. <http://www.brookings.edu/reports/2003/~/media/Files/rc/reports/2003/11_livingcities_SanAntonio/Sanantonio2.pdf> (28 April 28).

Elkin, S. *City and Regime in the American Republic.* Chicago: University of Chicago Press, 1987.

Fairbanks, R. B. *For the City as a Whole: Planning, Politics, and the Public Interest in Dallas, 1900–1965.* Columbus: Ohio State University Press, 1998.

Ferman, B. *Challenging the Growth Machine: Neighborhood Politics in Chicago and Pittsburgh.* Lawrence: University Press of Kansas, 1996.

Goetz, E. *Shelter Burden: Local Politics and Progressive Housing Policy.* Philadelphia: Temple University Press, 1993.

Graff, H. *The Dallas Myth: The Making and Unmaking of an American City.* Minneapolis: University of Minnesota Press, 2008.

Idell Hamilton, T., and E. Allen. *Term Limits Proposal Wins Narrow Victory.* San Antonio Express-News. 4 November 2008. <http://www.mysanantonio.com/news/Term_limits_proposal_wins_narrow_victory.html> (9 February 2009).

Krumholz, N., and J. Forrester. *Making Equity Planning Work: Leadership in the Public Sector.* Philadelphia: Temple University Press, 1990.

Leo, C. *Regional Growth Management Regime: The Case of Portland, Oregon."*Journal of Urban Affairs 20(4) (1998): 363–94.

Logan, J., and H. Molotch. *Urban Fortunes: The Political Economy of Place.* Berkeley, CA: University of California Press, 1987.

Logan, J. R., R. B. Whaley, and K. Crowder. *The Character and Consequences of Growth Regimes.* Urban Affairs Review 32(5) (1997): 603–630.

Molotch, H. *The City as a Growth Machine: Toward a Political Economy of Place.* American Journal of Sociology 82(2) (1976): 309–332.

Morgan, R. P. *Governance by Decree: The Impact of the Voting Rights Act in Dallas.* Lawrence, KS: University of Kansas Press, 2004.

Munoz, C., Jr. *Mexican Americans and the Promise of Democracy: San Antonio Mayoral Elections.* In Big-City Politics, Governance, and Fiscal Constraints. George E. Peterson, ed. The Urban Institute Press. Washington, DC, 1994.

Orr, M. *Urban Regimes and Human Capital Policies: A Study of Baltimore.* Journal of Urban Affairs 14(2) (1992): 173–87.

Parmenter, B., and M. Oden. *Beyond Portland: Constraints and Opportunities for Regional Planning in Dissimilar State Legislative Frameworks.* Draft paper for presentation at the Association of Collegiate Schools of Planning Conference, Portland, OR, October 2004.

Pendall, R. *From Hurdles to Bridges: Local Land Use Regulations and the Pursuit of Affordable Rental Housing.* Paper presented at the Rethinking Rental Housing Conference, Cambridge, MA, 2006.

Rosales, R. *The Illusion of Inclusion: The Untold Political Story of San Antonio.* Austin, TX: University of Texas Press, 2000.

Rubin, H. *Renewing Hope within Neighborhoods of Despair.* Albany, NY: State University of New York Press, 2000.

Mayor & City Council. San Antonio City Council Official Website. <http://www.sanantonio.gov/council/> (13 February 2009).

Sanders, H. T. *Communities Organized for Public Service and Neighborhood Revitalization in San Antonio.* In Public Policy and Community: Activism and Governance in Texas. Austin, TX: University of Texas Press, 1997.

Schutze, J. *The Accommodation: The Politics of Race in an American City.* Secaucus, NJ: Citadel Press, 1986.

Schutze, J. *Gimme Gimme, City Hall Has $22 Million in Federal Funds to Fix Your Neighborhood. Instead, It's Spending the Money on Barrels of Pork.* Dallas Observer. 13 May 1999. <http://www.dallasobserver.com/1999-05-13/news/gimme-gimme/1> (14 February 2009).

Stoker, G. *Regime Theory and Urban Politics.* In Theories of Urban Politics. Thousands Oaks, CA: Sage, 1995.

Stone, C. *Regime Politics: Governing Atlanta, 1946–1988.* Lawrence, KS: University of Kansas Press, 1989.

Stone, C. N., M. E. Orr, and D. Imbroscio. *The Reshaping of Urban Leadership in U.S. Cities: A Regime Analysis.* In Urban Life in Transition. Newbury Park, CA: Sage, 1991.

Tarrant, D., & D. Dillon. *Is Dallas Losing Its Livability? Cost of Living Grows with City.* The Dallas Morning News. 10 June 2007. <http://www.dallasnews.com/sharedcontent/dws/news/local-news/stories/061007dnentapt_overview.2e85b2c8.html> (28 April 2009).

Turner, R. *Growth Politics and Downtown Development: The Economic Imperative in Sunbelt Cities.* Urban Affairs Quarterly 28(1) (1992): 3–21.

Vega, A., and J. Bretting. *The Impact of San Antonio's Term Limit on Political Participation Over Time, University of Texas at San Antonio Metropolitan Research Policy Institute Brief.* 2002. <http://mrpi.utsa.edu/content/briefovertime.htm.> (15 February 2009).

Wilson, R. H., P. Wong, and H. T. Sanders. *The Place of Community in Public Policy.* In Public Policy and Community: Activism and Governance in Texas. Austin, TX: University of Texas Press, 1997.

Wolff, N. W. *Mayor: An Inside View of San Antonio Politics, 1981–1995.* San Antonio, TX: San Antonio Express-News,1997.

Service Learning Through a Community-University Partnership

MONICA BOSQUEZ, MARIANA MONTOYA, AND SUZANNE RUSSO

Community-university partnerships for environmental justice are becoming increasingly prominent in many American cities in which universities and low-income communities have historically experienced a contentious relationship. This article focuses upon a specific university-community partnership that drew on the perceptions of elementary school students to isolate and interpret environmental hazards in the neighborhood surrounding their school and homes. The aim is to highlight the institutional and social barriers that must be addressed to achieve some measure of success in these collaborative efforts. This case also emphasizes a specific challenge in community-based efforts—the inclusion of various age and socioeconomic groups found within a community, especially children and young adults. The inclusion of youth as research partners in environmental justice efforts is an important element in understanding how environmental issues affect an entire community, and for teaching our future leaders to think critically about their environment and ability to effect change.

In the spring semester of 2007, an applied GIS course led by Professor Bjorn Sletto in the Community and Regional Planning program at the University of Texas at Austin undertook an environmental justice project in partnership with People Organized in Defense of the Earth and Her Resources (PODER), an East Austin advocacy organization, and Zavala Elementary School, located in the heart of historic East Austin. The basic goal of the project was to assess the environmental hazards children attending Zavala are exposed to on their routes to and from school and to better understand and document their perceptions of environmental hazards. Recognizing the "untapped potential within the relationship between the university and its local community," Dr. Sletto designed a course based upon service learning in East Austin (Brown, 2006, 2). Community-university partnerships built on service learning can offer students, at various educational levels, invaluable experience to develop the kind of 'think-on-your-feet' skills necessary for success in the real world, and an opportunity to put their class lessons into a real-life context. These partnerships offer community organizations labor, technical skills, and financial resources that otherwise might not be available while lending the university's legitimacy and quality assurance to the project.

The class's overall goal for the first semester of the East Austin Environmental Justice Project was three-pronged: (1) establish solid relationships with our community partners; (2) develop a model for data collection and analysis with youth as research partners; and (3) build a community information system that can be utilized by our community partners to educate residents and influence policy makers regarding environmental hazards in East Austin. At the beginning of the semester, the class refrained from creating a specific mission statement or establishing anticipated findings so that research tasks and goals could be developed in coordination with our community partners. To ensure the diverse research needs were accomplished, the class was divided into three teams, each responsible for coordination of materials development on research on their specific topic: volunteer and field coordination, GIS, and design and media. During the first set of meetings with PODER, a limited set of specific goals were established to guide the three teams in their work: develop a research project with teachers and students at Zavala Elementary School to document fifth and sixth graders' routes to school and their perception of the environment surrounding their school; develop a geographic information system that incorporates students' travel routes and perceptions of the urban environment; develop a set of products that would combine to form a model community information system, including interactive GIS, a poster, and papers, all incorporated in a user-friendly web site; and develop a research manual for other community-university partnerships investigating children's perceptions of the urban environment.

This paper provides an analysis of the class's experience with community engagement and outreach. Provided here is a critical examination of community-university partnerships, focusing on the challenges and best practices of engaging community-based organizations and youth as research partners. We conclude with a discussion of the challenges we faced and an analysis of lessons learned in order to better facilitate future community-university partnerships in Austin and other communities.

Community-University Partnerships for Environmental Justice

One common method for involving communities in environmental justice (EJ) research and planning exercises is through community-university partnerships. These partnerships have great potential for both faculty and university students and the community, contributing to important community objectives as well as mending sometimes poor relationships between the university and its local community. However, significant challenges and obstacles often prevent these partnerships from coming to fruition or achieving their goals. Several challenges have been identified and examined at length within the academic community, including

the perceived and actual power differential between a community organization and the university, differences in discourse and methodological approaches to research, academic/semester calendars that may impede sustained dialogue about needs or completion of ongoing projects, and faulty expectations about time commitments and material resources (Reardon, 1999; Holland, 2001; Williams et al, 2005).

Often the first major obstacle from universities' point of view is the challenge of collaborating within a context of distinct power differentials, where the community perceives the university as a powerful, wealthy, and somewhat alien institution with little connection to their needs or aspirations. Some techniques are available to address this barrier. First, it is important to establish a positive relationship based upon a deep understanding that all collaborators are working to achieve a common goal. Second, open and transparent knowledge exchange is crucial to diminishing the power differential and building trust between partners (Holland, 2001). Third, all collaborators must have equal voice in establishing project goals, methodological approaches, and expected outcomes or deliverables (Reardon, 2005).

Universities often choose to target low-income, minority communities near university campuses for a partnership. In some cases the same community will be approached for numerous research projects and service learning courses sponsored by different departments over a number of years. While these projects might provide valuable research material for the university, the risk is that few, if any, concrete results or benefits are seen for the community. Community members and community-based organizations do not want to serve as a laboratory for university study and are skeptical of contributing their limited time toward a university partnership (Reardon, 1999; Green and Mercer, 2001). These realities can be overcome only by establishing a shared goal, clearly delineating a high degree of citizen participation in establishing the research goals and methods, maintaining transparency and communication, and spending time cultivating personal relationships and trust (Reardon, 1999).

Once the partnership and mutually developed goals are established, additional obstacles in the research process commonly arise. The reality that "community dynamics rarely share the methodical approach to research design and implementation that characterizes university-led studies" is the root of many of these obstacles (Williams et al, 2005, 294). To produce research results that will embody standards of objectivity and scientific rigor, which is important if project results aim to influence policy makers, the university team must often take the lead on research design and methodology. To accomplish this without controlling the project, the university team needs to exercise patience in establishing relationships of trust, and in "drawing limits around the research

terrain itself" (Williams et al, 2005, 295) while allowing the community partners to direct the goals of the research.

An important method for continuing the dialogue over university-community partnerships on a meta scale is to produce reports and critiques written for a community audience, not only an academic audience, thus enabling the community to engage in dialogue and action along with academics (Hart and Wolff, 2006). On a micro scale, dialogue should be cultivated throughout the project with assessments serving as specific points of feedback from the community partners. Each collaborator "holds different goals and expectations for the project; arrives with different experiences, assets, and fears; and operates from a different sense of power and control" (Holland, 2001, 53). Regular assessments provide clarity on expectations and attitudes toward progress, and demonstrate a commitment to the needs and opinions of the community partner (Holland, 2001).

It is especially important to have a close dialogue and assessment process with community partners to clarify what products, services, or activities will be delivered, and over what time frame. A common problem with community-university partnerships is that students present their final work (often an exploratory or interim project) at the end of a semester, then move on to other courses or activities, leaving the community behind with unmet expectations. Since the circadian rhythm of the university is based upon semesters or terms, community members and university participants need to delineate clear work objectives that can be completed in these limited time frames and develop a firm understanding of the commitment of faculty or students to continue or follow up once a course term is finished.

The term "community-university partnership" may be contentious since it implies participation by the entire, or at least a representative group from, the community. Working with a community-accountable organization, such as one with a board of directors elected by the community, is recommended to ensure the research produced is not skewed toward a special interest. Incorporating youth as research partners is important to gaining an understanding of the effects of environmental hazards on an entire community, since youth often are effected differently by and possess different perceptions of environmental agents than adults.

Giving Youth a Voice in Environmental Planning

Children have the right to a healthy and safe environment, education, recreation, and decision-making processes that address their needs (Varney and Vliet, 2005). However, children are rarely recognized as visible, individual subjects who can contribute to decision-making processes. As a result, few proper systems are available for children and young adults to communicate their needs and opinions in political and judicial decisions. Around the world a

shift in this paradigm is occurring. Organizations and communities are recognizing that children have a right to inclusion in decisions that affect them (Kruger and Chawla, 2005), and that their input is valuable in understanding how policies will affect a community. As a result, these groups are developing models to allow children's voices to be heard in the decision-making arena. Article 12 of the Convention on the Rights of the Child, adopted on November 20, 1989, by the United Nations, states that all children have the right to express themselves freely in all matters affecting them, and that they have the right to be heard in judicial and administrative processes that directly affect the child (Office of the High Commissioner for Human Rights, 2007). Cities such as Johannesburg, South Africa (Kruger and Chawla, 2005), Sathyanager, South India (Driskell, Bannerjee, and Chawla, 2001), and organizations like Growing Up in Cities (Chawla, 2002) are putting this declaration into action by designing formal systems for children's participation in environmental research, urban planning, and other administrative decisions.

One major challenge for EJ researchers and planning practitioners who want to include youth's ideas, perceptions, and opinions in their research is the different perceptions youth have of the world around them. These differences in perception occur between youth and adults, and also within groups of youth whose emotional and mental development can greatly vary. Therefore, "consideration must be given to the ways in which states and adults view children and gain a proper understanding of their opinions, as well as ways in which adults can facilitate their participation" (Skivenes and Stranbu, 2006, 11). Research methodologies and opportunities for participation must be designed specifically to address the unique needs and attributes of younger community members. As Joy Carlson (2005) states, "children are not little adults. They interact with their environment differently" (225), and, therefore, experience different environmental effects and have different perceptions of the environment than adults.

Chao and Long (2004) speak of the necessity of involving youth in EJ research, since children and teens are among the most affected by environmental and public health decisions, and can help bring a fuller understanding of how environmental problems affect an entire community. However, working with youth can be very challenging, and it requires researchers to think about their methodology on a new level. Researchers may perceive youth as an easy window to a community rather than valuing what they can offer as active participants in the research. A few suggestions are offered for working successfully with teens on an EJ research project:

- Develop a methodology that is understandable and appealing to youth
- Maintain good communication throughout the entire project

- Ensure that the youth participants understand how their work fits into the different stages of the project
- Make the youth feel like an important part of the project—affirm that their inputs valuable (Chao and Long, 2004).

Matthew Goldwasser (2004) authored *A Guide to Facilitating Action Research for Youth*, in which he encourages teachers and activists to engage students in experiential learning, or service learning, through activist research. He suggests the use of three primary questions to organize the research and develop an action plan: what?, so what?, and now what? The "what" question examines what we want to accomplish through our research. This step seeks clearly laid-out goals and an analysis of the best ways to collect information to meet these goals. "So what" is asked after the research has been collected. This step analyzes what findings have been made and what these findings mean. "Now what" pushes participants to apply these findings to the situation, challenging the researchers to consider what comes next.

The challenges and benefits of involving youth researchers in university-community partnerships were demonstrated in the East Austin Environmental Justice Project. The importance of youth participation in this project was established early on, allowing all partners to coordinate schedules and develop appropriate research materials. The university class and PODER remained dedicated to youth participation in the research throughout the course of the semester, even though challenges were experienced in gaining participation and in collecting data that met PODER's expectations. PODER's experience working with youth and the class's efforts to research and implement best practices enabled us to work effectively with the fifth-grade class at Zavala and the high school interns at PODER. The major challenges faced were coordination of schedules between PODER, Zavala, and UT students and gaining participation from students and teachers at Zavala. Our greatest success was the development of research and evaluation materials for use in storyboarding, mental mapping, and community mapping workshops that can be replicated in future years and in other environmental justice research projects.

Case Study: the East Austin Environmental Justice Project

The East Austin Environmental Justice Project is a multiyear community-university partnership between PODER and the Community and Regional Planning Program (CRP). The first stage of the project involved a collaboration between the applied GIS course taught by Assistant Professor Bjorn Sletto in the spring semester of 2007 and East Austin community partners PODER and Zavala Elementary School.

PODER was founded in 1991 by a group of Chicana/o East Austin activists with a mission to "redefine environmental issues as social and economic justice issues, and collectively setting our own agenda to address these concerns as basic human rights. We seek to empower our communities through education, advocacy, and action. Our aim is to increase the participation of communities of color in corporate and government decision making related to toxic pollution, economic development, and their impact on our neighborhoods" (PODER, 2007).

Since their founding, PODER has successfully rid East Austin of a gas tank farm and a Browning Ferris Industries (BFI) recycling center, and helped gain a stronger voice for East Austin residents within the political sphere. Currently, Susana Almanza and Erika González codirect PODER, while Sylvia Herrera, a founding member of PODER, serves as the health coordinator. Ms. Almanza is a former planning commissioner for the city of Austin, former member of the City of Austin Environmental Board, and current cochair of the Southwest Network for Environmental and Economic Justice. Ms. González coordinates all of PODER's youth activities, including the Young Scholars for Justice internship program that "is dedicated to the development of youth and young adults of color to address education, environmental, economic, and social justice issues affecting them and ensure gender, racial, and resource equity. The project promotes youth and young adult integration in all areas of PODER's program work" (PODER, 2007, 1).

PODER was selected as the ideal community partner because of their experience with and strong belief in working with young adults, their dedication to environmental justice in East Austin, and their strong reputation and trust within the East Austin community. From PODER's perspective, a partnership with UT was desirable because of the personnel and technological resources that could be brought to the project, as well as the university's reputation within

the city government. Their hope was that information regarding hazards in East Austin might be more powerful to city officials if the data and reports were cocollected and coproduced by UT rather than by PODER alone.

The first semester of the partnership in the spring of 2007 had the central goal of collecting information on children's perceptions of environmental hazards near their schools and homes in East Austin, and packaging this information in a format that PODER would be able to use to persuade policy makers that environmental hazards in their community need to be addressed by the city. Relationship-building between the university class and the East Austin community was the central factor in our ability to successfully devise and implement an appropriate methodology, and create a product useful to PODER.

The framework for our project was determined by Dr. Sletto and Susana Almanza prior to the beginning of the semester. In the fall of 2006, Dr. Sletto approached PODER as the principal community organization ideal for collaboration with the university due to their record of local environmental justice activism. During the initial discussions regarding the purpose and shape of the collaborative project, Ms. Almanza indicated that local parents were concerned about their children's exposure to environmental hazards. Together she and Dr. Sletto drafted the initial framework of the project, specifically the goal of working with children through mapping in order to better understand their perceptions of and interactions with the environment.

During the semester several recurring challenges were pondered and addressed by all participants. These challenges included the ethics of representing children's voices, prioritization of education or data collection, logistics of working with children of various ages, and coordinating multiple community partners. CRP students discussed at length the complexities of community-university partnerships, the approaches regarding best practices to foster relationships with local residents, and how to ensure that the community would be speaking for itself. We also aimed to balance theory with practice through a service learning framework.

Methodology

A three-phase experiential learning through action research project with students and teachers at Zavala Elementary School was developed based upon Matthew Goldwasser's (2004) three-question framework of "what?, so what?, and now what?" The first experiential learning phase employed was storyboarding and mental mapping activities during class time at Zavala. These exercises addressed the concepts of environmental justice and environmental hazards while providing students an opportunity to express with their own drawings and words the places they consider to be hazardous and those they consider safe within their

neighborhood. The second phase of the research project was the mental mapping workshops that were intended to produce quantifiable information about students' ability to isolate and document environmental hazards in their neighborhood. The third phase is development of a community information system (CIS) and is not yet complete. The CIS is based upon data gathered in the workshops and will allow PODER, Zavala Elementary students, and the East Austin community to create maps and share information about their environmental justice efforts.

UT students developed the storyboarding activity based on literature reviews, discussions in the classroom, and conversations with PODER and teachers from Zavala. Insights from Zavala fifth grade teacher Mr. Guillermo Barrera were crucial to the development of an age-appropriate methodology. Mr. Barrera also assisted in developing the forms used for this activity, encouraged other teachers to participate, and integrated the mapping project into his curriculum. Participants at the workshops collaborated with UT students and PODER interns to map environmental hazards, called points of interest, within a specified grid and collect sensory information on each point of interest. Our class spent several weeks creating and refining the methodology to collect this information from the Zavala students.

Two storyboarding activities were held on March 1 and March 21, 2007, with students from the fifth and sixth grades of Zavala Elementary. Members of PODER participated in both events, presenting the main goals of the project, the importance of children's perceptions in EJ research, and a discussion of environmental hazards in the neighborhood. A community mapping workshop followed each storyboarding activity, with workshops held on March 4 and March 24.

During the first storyboarding event, UT students, Mr. Barrera, and a sixth grade teacher, Mr. Gabriel Estrada, instructed their classes to draw "places I like" and "places I do not like." UT students also provided each child with a large-scale map of the neighborhood and asked them to draw their routes from home to school. For the second storyboarding activity, involving only sixth-graders, Mr. Estrada suggested a change in the methodology. Instead of completing storyboards, the children drew a mental map of their route from home to school, documenting the "places they liked" or places they "did not like" along these routes and the reasons why. This more sophisticated exercise was thought to be a better learning exercise for the sixth grade class.

The storyboarding and mental mapping exercises yielded information about Zavala students' perceptions of their physical environment—the place they liked and didn't like—and of their spatial understanding. The exercises also provided us with an opportunity to introduce the topic of environmental justice to these students in preparation for their role as researchers at the community mapping workshops. The purpose of the workshops was to gain detailed, quantifiable information about youth perceptions of specific places, and their exposure to environmental hazards near their school and home.

Each workshop began with a registration table where students turned in their permission forms and provided their address. The area around Zavala was divided into grids of eight to ten blocks. Students were placed within the grid closest to or encompassing their home—it was assumed that students would be more interested in or have more comments about the area most familiar to them. Workshop participants were put into teams of two to four students with at least two adults in each team for the mapping exercise.

After the first workshop, debrief meetings were held with PODER and the university class to get feedback on the methodology and data. While comments from the university students related to technical aspects of data collection and the challenges of working with children, comments from PODER were focused on equity in our process, consciousness of gender and race relations, and dissatisfaction with the UT students' hands-off approach to identifying the points of interest. PODER viewed the workshops as an opportunity to educate students about the environmental hazards surrounding Zavala, and thereby influenced which places students selected as points of interest. UT students had a scientific obligation to allow Zavala students to select the points of interest without interference from adults or other youth in the workshop. The Zavala partners thought the data collected was valuable because it showed the strengths and limitations of their students' knowledge about the environment, thereby facilitating the development of an appropriate environmental education program.

The debrief meetings led to important conversations about working with community partners, including harmonizing the goals of education with a scientific research methodology, understanding how the university's history in East Austin affects our partnership, and clarifying PODER's goals for this project. The debrief meetings also led to refinement of the research methodology, both for the second workshop and for future semesters. Comments from PODER made it apparent that we needed to provide specific roles for each person so that everyone would understand their responsibilities and to ensure that each participant had a meaningful opportunity to contribute. The newly established roles were workshop coordinator, team leader, team support, and process documenter. We also realized that more time and effort needed to be focused on educating students about environmental hazards in the classroom to avoid education in the field that might influence what the students document as their own perceptions, thereby unethically biasing the data. We were not able to put this lesson into action during the first semester, but it will be an important element in the future.

Relationship Building

During the semester, university students spent time establishing trust with one another other and with PODER. In addition to time built into the class syllabus intended specifically to build trust between PODER and Dr. Sletto's class, project goals were discussed in depth throughout the semester, leading to continual development and refinement of our research methodologies. A number of issues were grappled with in the classroom while analyzing the project goals, including: establishing the role of UT students, particularly whether students would be working as partners or client/patrons with PODER; how to harmonize academic and activist goals; and whether the purpose of the project would be to provide a service to one particular organization or the community at large. Negotiating positionality as nonresidents of the service area and perceived "gentrifiers" of East Austin also factored into the initial organizational and trust-building process. These concerns continued to guide class efforts to be transparent, inclusive, and respectful of stylistic differences in developing the methodology. Respecting and learning from PODER's extensive on-the-ground experience was also a class ambition.

As the project progressed, a dynamic web of relationships was created, leading to new partnerships and successes as well as to logistical and communicative challenges. In addition to the twelve students in the applied GIS course were three American Youth Works Computer Corps volunteers, two PODER interns, and faculty members at Zavala Elementary School. From a pedagogical perspective, much of the responsibility for coordinating workshops, reviewing project progress, and communicating goals, ideas, and concerns was transferred from Dr. Sletto to the planning students. This enabled students to have ownership of the project and fully participate in the community-university partnership.

UT students experienced the fluid nature and malleable end goals that resulted from the highly participatory nature of the project. The GIS team reassessed how best to design and burnish research tools to meet goals in light of feedback from PODER, class discussions, and logistical realities. For example, because of its active schedule, PODER was only able to participate in one of the two weekend activities. The UT students also became the de facto liaisons with Zavala teachers, who became critical partners in the data collection process. Students had not anticipated working directly with Zavala due to their initial efforts to defer to PODER as the primary liaison; however, it became necessary as the semester-based time frame of the project placed pressure on scheduling options and deadlines for the UT and Zavala partners. The necessary compression of semester-based projects was an issue that had been considered by the class (Esnard, Gelobter, and Morales, 2004), but not experienced firsthand.

Interclass dynamics evolved as each of the three teams worked through creative differences. The GIS team faced the difficult task of organizing and representing data gathered through the mapping exercises in a way that best represented the overall goals of the community colleagues. The design team struggled to visually represent the project while considering the need to speak to a diverse audience including the academic community, city officials, and local partners. The fieldwork team strove to maintain meaningful learning opportunities for the Computer Corps volunteers, maintain communication with PODER and Zavala Elementary, and coordinate efforts between class members.

Research Process and Results

Storyboarding Storyboarding was selected as a method to facilitate children's participation in the identification of environmental hazards in East Austin because it is a form of storytelling that allows children to represent their observations and impressions of the world around them through a visual medium. By organizing different events and experiences, stories can help children to construct their own world and to arrive at a better understanding of it (Lake, 2003). The storyboarding exercise in this project allowed children to illustrate, with words and pictures, places in their community that they liked or disliked, and to prepare them for the workshop that was aimed at gathering more data about perceptions of environmental hazards in East Austin.

While some children noted perceptions of environmental hazards, most of the children from both grades did not include commonly recognized environmental hazards in their drawings or maps. Only 13 percent of the drawings included the most significant environmental hazards near the elementary school. Most of the sites children disliked were viewed as threatening and unsafe, such as parks with drug dealers, streets with excessive traffic, and abandoned houses. Most of the children chose to draw the playground at Zavala Elementary as their favorite place. These findings can be interpreted in different ways. It may be possible that children did not include hazardous places because they do not know

Zavala students creating storyboards with help from Erika Gonzales of PODER.

what they are: children have limited knowledge about officially recognized hazardous materials sites. On the other hand, children may know about these hazards and the potential harm they may cause, yet their familiarity with these sites may make them indifferent. In future research, we would like to discuss the drawings with the kids and with their teachers to get a better understanding of why they chose to include or exclude specific locations.

A significant problem with the sixth grade participants was that many of their mental maps were missing "important places," in part because of lack of instruction by the teacher and UT students. But it is important to recognize that this activity was not part of

Zavala students filling out a point of interest form during a community mapping workshop, with ut students standing by to answer questions.

the sixth grade curriculum, which meant it was "something else" they needed to do instead of other planned activities. In addition, the sixth graders had completed a storyboard before, so they might have been confused about redrawing these same places again on their mental map.

The storyboards and mental maps provided valuable information about Zavala students' perceptions of their environment. Most importantly, these perceptions were expressed by the students themselves through their own drawings and descriptions. Creative self-expression enables students to explore their own ideas and understanding of their physical environment, associations they have with particular places, and how they feel about specific places and why.

This type of personal exploration provides youth with an opportunity to internalize environmental justice. However, to expand on the information collected through mental mapping and storyboarding, we needed quantifiable, scientific data that could be integrated into a GIS system. Therefore, we followed up the in-class exercises with Saturday community mapping workshops intended to gather sensory data on places youth deemed to be environmental hazards, and to evaluate each block within the Zavala Elementary School feeder district.

Community mapping workshops The community mapping workshops allowed the Zavala students to serve as researchers, journalists, and cartographers, while also providing an opportunity to teach these young students how to critically analyze their environment, and to collect data on their perceptions of environmental hazards. For the organizers of these workshops, the greatest challenge was recruiting students to attend—getting participation at community events is notoriously difficult. The most influential factor in how many students attended the workshops was support of key faculty members at Zavala. Mr. Guillermo Barrera (Mr. B), a fifth grade teacher, served as our primary contact at Zavala and was highly supportive of our efforts to map environmental hazards in Austin; he worked with our class to develop the research methodology, devoted his class time to teaching mapping and environmental hazards, and required his students to attend the Saturday workshop. Mr. Estrada, a sixth grade teacher, allowed us to work with his class to collect mental maps of the neighborhood from his students and discuss environmental hazards. However, Mr. Estrada was not as involved in the project as Mr. Barrera, and only one of Mr. Estrada's students attended our second workshop. Despite this, the support of these teachers granted us access to a group of young people with unique knowledge about the areas around Zavala.

The second factor in the success of the workshops was creating a methodology to collect information on environmental hazards that the children were able to understand and respond to. This meant wording our questions and providing a form for collecting the children's perceptions in terminology that they would comprehend. With Mr. Barrera's help we chose a set of six aspects of locations, smell, sound, look, cleanliness, fun, and safety, with a gradient of fifth grade–appropriate terminology, that workshop participants could use to rate their perceptions of each site they chose to record as a "point of interest" (see figure 1).

It was important that we maintained an age-appropriate approach to the entire workshop. This included games at the beginning of the event, a playful attitude, appropriate language on the data collection forms, and an appropriate length of time spent in the field. We learned in the second workshop that even a one-year grade difference can change whether our forms and our questions were age-appropriate, though within grades mental maturity and scientific sophistication can vary greatly as well.
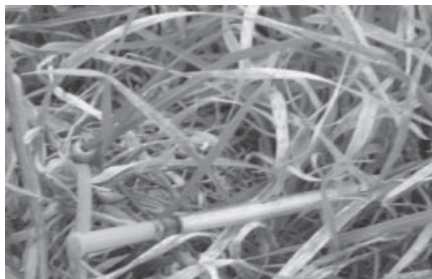

FIGURE 1: The point of interest form created for Zavala students to use during the community mapping workshops to record places or objects they thought were environmental hazards.

A needle documented as a point of interest by a group of Zavala fifth-graders.

Though designing our methodology was the most time-consuming aspect of the workshops, gaining the support of the teachers turned out to be the biggest challenge. We learned that without the engagement of teachers, we had very little chance of gaining strong interest and participation from students. Engaging parents in the project was also challenging. We originally anticipated that parents would accompany their children on the mapping walks, providing an opportunity to capture parents' perspectives as well. However, only one parent attended either of the workshops. Lack of parent engagement in school activities is an ongoing problem.

A major lesson of the project was the difference between how our class and our community project partner, PODER, measured success. From our academic perspective, success meant that we were able to implement our devised methodology and gather accurate data. PODER wanted to gather data that showed there were environmental hazards affecting children in the neighborhood while educating the community about these hazards. While we shared the desire to make a case for redress of these environmental justice issues in East Austin, as academics we were reluctant to take a more activist approach in the data-gathering process. Since one of our initial aims was to serve as a facilitator of PODER's goals, we needed to keep our priorities and goals aligned with those of PODER.

Though we constantly questioned our approach and critiqued our methodologies to account for PODER's goals, tensions did arise between our responsibility to maintain an ethically pure research project and PODER's responsibility to gather persuasive information about hazards to children in East Austin. While we did not consider our data biased, the debate over our role as academics or facilitators for PODER's agenda should be considered in greater depth for future projects. Communication between the university and the community partner on this subject prior to implementation of the methodology should be considered of paramount importance.

All collaborators were pleased with the materials, data management, and maps created through the course of the semester. However, as previously discussed, when asked to map environmental hazards, children recorded sites they felt threatened by, such as abandoned houses, parks occupied by drug dealers, bars, and mean dogs. Therefore, our results did not meet PODER's expectations of gathering data on children's perceptions of environmental hazards such as metal processing plants and other businesses that emit toxic fumes. When we began processing the data, it appeared our maps would be of little use to PODER. However, as PODER discussed the project's findings with the community and policy makers, the maps of children's perceptions have proven to be powerful in bringing attention to the pollution and safety hazards faced by children in East Austin.

In June of 2007, Susana Almanza and Erika Gonzalez invited our class to present the findings of our research to the City Council in an effort to persuade the city of Austin that the area surrounding Zavala needs to be rezoned to rid the neighborhood of industrial uses. Two council members responded positively to the presentation and vowed to work with the community to address the environmental hazards.

Despite the frustrations and disappointments felt by all parties at some point during our partnership, the process of undertaking this project helped establish a working relationship between PODER and the university. This portends future partnerships between these two groups, building upon these past experiences to create greater change in the years to come. As such, this exercise demonstrated the promise of more long-term community-university partnerships.

Community-university partnerships are essential in an age when universities have increasingly deep impacts on the communities surrounding them. The array of resources available to public universities places upon them an obligation to work toward the betterment of the communities of which they are a part. The constant tension in these partnerships over the struggle to negotiate course goals and academic ethics with the immediate needs of a community partner and its activist goals should serve as a valuable learning experience for both groups. In our experience, PODER would have gotten results closer to their expectations if we had prompted children on the walks to comment on what we consider environmental hazards rather than allowing the children to self-select the points they consider to be environmental hazards. The latter type of data, and analysis of why points were or were not considered environmental hazards to children, is valuable for discussions of theory and in identifying potential unsafe areas in the neighborhood, but it appeared not to serve the immediate interests of PODER.

Conclusion

While participants in this community-university partnership had different expectations and different opinions regarding the data produced, everyone considered the project a success with the awareness that improvements would be made in future semesters. Through the mental mapping, storyboarding exercises, and two community mapping workshops we collected valuable data on children's perceptions of their environment. Over the course of the semester, a methodology was developed that can be replicated in future years; a framework for a community information system was built; partnerships between the university, the East Austin community, and Zavala Elementary School were deepened; and a clear plan for improving participation and data collection in the future was developed.

Although the storyboarding activity needs refinement, it helped illustrate the difference between children's and expert perceptions

of "environmental hazards" and safety. It also showed that children have limited knowledge about local environmental hazards. They have extensive spatial knowledge about their neighborhood, and this knowledge was reflected in their mental maps. This contradiction and lack of environmental awareness should be discussed with teachers and perhaps addressed through educational interventions in the future. It is important to plan storyboarding activities in close cooperation with teachers so they can include them as part of their class curricula. The more related these activities are to their classwork, the more the teachers can be committed to this type of project.

Upon completion of the initial project and the semester, the UT students had learned that the dynamic nature of community-university partnerships demands flexibility, patience, and the ability to release ownership of a joint effort when many partners are involved. The goal of serving the community through a community-university partnership has led to much additional time reviewing the vision of the project, maintaining open channels of communication, and refining research methodologies. The conflicting expectations and approaches between partners became "learning opportunities," as one student put it, opportunities for dialogue and a deepened understanding of our partners. The learning experience in itself became as rewarding as the findings produced by the act of collaboration.

The ultimate success and impact of this project will depend on sustaining and further building the relationship between the three groups across academic years and semesters. This experience shows that building trust and relationships, understanding the real terrain of specific communities, and developing information and findings useful to a community can rarely be accomplished in a four-month class period. Future semesters will serve to refine the data collection methodology, expand the community information system, and bring the city of Austin into our project as a partner in developing solutions for the environmental hazards in East Austin.

MARIANA MONTOYA is a doctoral student in the University of Texas at Austin's Department of Geography and the Environment. Building upon her undergraduate studies in biology at the Universidad Nacional Agraria La Molina in Peru and master's in science in ecosystem management at the Universidad Autonoma de Baja California, Mexico, Mariana's current research is focused on political ecology and environmental integrity in the Peruvian Amazon (2007).

SUZANNE RUSSO achieved a bachelor's of arts in Humanities from the University of Texas at Austin in 2004, focusing on integrated rural development in Africa. After a semester at American University's graduate program in sustainable development, Suzanne completed a master's of science in Community and Regional Planning at the University of Texas. During her time in Austin, Suzanne worked with a variety of organizations to secure affordable housing, sustainable food systems, and walkable cities (2007).

MONICA BOSQUEZ is pursuing her master's in Latin American Studies and is employed as a development specialist with the Texas Office of Rural Community Affairs, where she works on self-help water and wastewater projects throughout the state. As a returned environmental conservation volunteer for the Peace Corps in Panama, she maintains close ties with coffee producers, artisans, and community groups in that region. Monica recently completed a Ford Fellows consultancy in central Mexico and is looking to incorporate the experience into her research interests in multilevel partnerships and community development in rural areas (2007).

Works Cited

Carlson, Joy E. *Exposure and Toxicants and Child Health: Comments and Questions.* Children, Youth and Environments 15(1) (2005): 224–233.

Chao, Khan, and Sokny Long. *Youth Participation in Research.* Special Issue of Race, Poverty and the Environment (Winter 2004).

Chawla, Louise. *Putting Young Old Ideas into Action: The Relevance of Growing Up in Cities to Local Agenda 21.* Local Environment 6(1) (2001): 13–25.

Driskell, David, Kanchan Bannerjee, and Louise Chawla. *Rhetoric, Reality and Resilience: Overcoming Obstacles to Young People's Participation in Development.* Environment & Urbanization 13(1) (1991): 77–89.

Goldwasser, Matthew. *A Guide to Facilitating Action Research for Youth.* Philadelphia: Research for Action. 2004. <www.researchforaction.org> (15 May 2007).

Green, L. W., and S. L. Mercer. *Can Public Health Researchers and Agencies Reconcile the Push from Funding Bodies and the Pull from Communities?* American Journal of Public Health 91(12) (2001): 1926–1929.

Hart, Angie, and David Wolff. *Developing Local 'Communities of Practice' through Local Community-University Partnerships.* Planning, Practice & Research 21(1) (2006): 121–138.

Holland, Barbara. *A Comprehensive Model for Assessing Service-Learning and Community-University Partnerships.* New Directions for Higher Education 114 (2001) (2001): 51–60.

Kruger, Jill Swart, and Louise Chawla. *We Know Something Someone Doesn't Know . . . Children Speak Out on Local Conditions in Johannesburg.* Children, Youth and Environments 15(2) (2005): 89–104. <http://www.colorado.edu/journals/cye/> (15 May 2007).

Lake, V. *Children's Stories of Hope: Moving Toward an Expanded Understanding of the World Children Live In.* Early Child Development and Care 173(5) (2003): 509–518.

Office of the High Commissioner for Human Rights. *Convention on the Rights of the Child.* 1996. <http://www.unhchr.ch/html/menu3/b/k2crc.htm> (15 May 2007).

PODER. *Mission.* PODER Web site, 2007a. <http://www.poder-texas.org/mission.html> (15 May 2007).

   Projects. PODER Web site, 2007b. <http://www.poder-texas.org/projects.html> (15 May 2007).

Reardon, Kenneth M. *A Sustainable Community/University Partnership.* Liberal Education 85(3) (1999): 20–26.

Skivenes, M., and A. Strandbu. *A Child Perspective and Children's Participation.* Children, Youth and Environments 16(2) (2006): 10–27.

Varney, D., and W. Vliet. *Local Environmental Initiatives Oriented to Children and Youth: A Review of UN-Habitat Best Practices.* Children, Youth and Environments 15(2) (2005): 41–52.

Williams, Allison, Ronald Labonte, James E. Randall, and Nazeem Muhajarine. *Establishing and Sustaining Community-University Partnerships: A Case Study of Quality of Life Research.* Critical Public Health 15(3) (2005): 291–302.

GIS Technology & Community and Public Participation

Using GIS in community development work in Santo Domingo, Dominican Republic

MARTIN K. THOMEN AND SHAWN STRANGE

Introduction

In spring semester 2008, students in CRP 386: Applied Geographic Information Systems (GIS) conducted a participatory study of risk and vulnerability associated with flooding in an informal housing settlement in Santo Domingo Norte, Dominican Republic. The course was part of a new research and service learning relationship between the city of Santo Domingo Norte, the School of Architecture, and the Universidad Autónoma de Santo Domingo that was initiated in summer 2007 by Dr. Kent Butler. There was also collaboration between University of Texas at Austin faculty in the School of Public Policy, Geography, Anthropology, and Latin American Studies. The intent of the ongoing partnership is to provide technical assistance to planning institutions in Santo Domingo and to create opportunities for field research to students concerned with development planning in Latin America.

Following a series of meetings with the Dominican National Council on Urban Issues (CONAU), nongovernmental organizations (NGOs) in the Dominican Republic, and community leaders in Los Platanitos, Dr. Bjorn Sletto developed a pilot project to document risk and vulnerability of people living in the community of Los Platanitos, an informal housing settlement located on a low-lying former landfill in the municipality of Santo Domingo Norte. The project focused on the social and health implications of the defining geographical feature of Los Platanitos, a large drainage ditch, also known as a *cañada*, which runs through the community. The *cañada* was at one time a natural creek, but in recent years it has been lined with concrete and, in places, covered with a cement cap. Because of inadequate sewage and solid waste management, the former creek is now severely contaminated with garbage and blackwater. When it rains, water laced with sewage and chemicals floods the houses that line the *cañada*, leading to high levels of gastrointestinal disorders and respiratory diseases.

The ten students enrolled in CRP 386 began their study of Los Platanitos in the winter of 2007 in classrooms at UT. They then traveled to the community to conduct field work in early 2008 and returned to UT for more class-based analysis. They later returned to Santo Domingo to present their preliminary work and get feedback from the residents of Los Platanitos and government planning officials. This entire interactive process was of key importance to the project and allowed the students to engage in an ongoing dialogue with community members and planning officials in Santo Domingo.

The research team used a mixed-methods approach that incorporated both quantitative and qualitative analyses. Mixed-method research transcends the traditional "qualitative-quantitative" divide and also combines multiscalar analyses and perspectives. A mixed-method approach is the hallmark of the Rapid Rural Assessment (RRA) design of this project. RRA is a commonly used approach for conducting quick assessments of the social and environmental issues facing marginalized communities. Rapid risk assessment, which draws on the principles of RRA, attempts to identify the nature and level of environmental risks (such as flooding) in a given area and to determine what individuals or groups are more vulnerable to these risks. Time constraints require that RRA practitioners efficiently and effectively identify major risk factors within a very limited period of time, and rapidly develop methods to study the impacts of these risks on different social groups and individuals. In this way, this approach is quite radical in that it goes against the rigid divisions of knowledge production found in academic institutions. Additionally, because RRA practitioners often have limited knowledge about local conditions, a mixed-method approach allows researchers on the RRA team to share information and data and critically evaluate each others' work. A theoretical framework based on the precepts of social justice, critical development, and the application of mixed methods offers a more comprehensive and integral approach to the study of development and poverty. As such, this type of research moves beyond simply a technical evaluation of the physical conditions of a community. Instead, a mixed-methods approach helped the researchers better understand the various environmental, historical, social, economic, and political factors that may be contributing—in different ways—to the everyday realities of informal settlements in Santo Domingo by integrating the community's local knowledge and experience.

The project drew on the theoretical framework of political ecology and developed a blend of research methods, including participatory mapping, architectural surveys, and ethnography, to document the flooding problem in Los Platanitos. In order to maximize time in the field, the students were organized into three teams—physical survey, geographic information systems (GIS) and mapping, and social documentation—each working at a different scale and with different types of data in order to develop a comprehensive analysis of the challenges confronting the community. This article will explore the ways in which GIS was used to represent the local knowledge gathered in the field and to meet the theoretical and practical goals of the research team.

GIS and Mapping

Mapping and GIS are essential tools in RRA, helping facilitate participatory field research and comprehensive analysis and dissemination of spatial data. GIS can be used to conduct preliminary analysis of the study area, and also to document local knowledge of neighborhood boundaries, locations of hazards and economic activity, and distribution of social characteristics at different scales. Information on buildings and infrastructure can be incorporated in GIS and analyzed to assess structural quality and spatial relationships. This allows local communities and governments to make better-informed policy decisions. The goal of utilizing GIS technology in this study was to document the local knowledge of the community of Los Platanitos and utilize it when creating maps, documents, and analyses of geographic and social characteristics. This information could then be taken to local governing and planning bodies to help inform the decision-making process on projects that may alleviate some of the risk and vulnerability faced by the community of Los Platanitos.

Like all parts of this project, the GIS-based analysis started before any of the students had visited Los Platanitos. The first step of the GIS analysis was a data-gathering process that involved the compilation of spatial data from various sources in Santo Domingo, in particular GIS shapefiles produced by CONAU. These files gave the research team an initial understanding of the geographical and demographic makeup of Santo Domingo, but they were of limited use due to the variances in scale between city data and the local community. To produce larger-scale spatial data on Los Platanitos, the team captured aerial images from Google Earth before traveling to Santo Domingo. These aerial images were added to the GIS program ESRI ArcGIS 9.2 and georeferenced to match (overlay) the data files provided by CONAU. After this, a grid was superimposed on top of the medium-scale image, which allowed the team to disassemble the larger image into grid sections and reproduce these in a map book. The primary reasons for creating the map book were to help student researchers orient themselves in the field and to correctly mark locations of important points, which would later be digitized and used to create the final maps.

Once the small-scale map books were created, a series of large maps (forty inches by sixty inches) were printed from the georeferenced images. They were printed at various scales: a larger, regional map, a medium-scale map encompassing the Los Platanitos neighborhood and the surrounding area, and a more detailed map of the neighborhood itself. A variety of map types were created so that the different research teams, working at different scales in the analysis, would have a choice in which maps to use. The GIS team would use the book to record hydrographic data, footprints of buildings, public spaces, important locations, and other data. The map books would also allow each team member to record significant locations and locations where photos were taken. Worksheets were designed to facilitate data management and correspondence between locations on the maps and the data.

The GIS mapping team worked on the largest (regional) scale of all the teams to better understand the context of the flooding and solid waste problem as well as other conditions of the community. Before leaving for Santo Domingo the GIS team had georeferenced aerial photography of the area into the GIS program. The team also formulated a list of features in the community that they wished to identify with community members once they were in the field. These included locations that are important for everyday life in the community, such as businesses, residences, and public places, and also features relevant to the flooding problem, such as the locations of storm drains or the various branches and other features of the cañada.

Field Work

Once in Los Platanitos, GIS team members utilized the various maps for different aspects of their field work. The first step was a participatory mapping exercise where community members drew boundaries of the Los Platanitos neighborhood to help define the study area. Community members distinguished the community of Los Platanitos from the surrounding neighborhoods. These boundaries were also essential for the social documentation team, which performed a community survey based on a random sampling of households in the study area. After this, students developed, with community participants, methods and techniques that would assist in identifying important community resources by way of these images. This participatory action method was essential in building the framework of the GIS mapping project and built teamwork between students and the community. The goal was to have the local residents "own" the maps and actively participate in compiling data that were relevant to the community's needs.

The next task was working with community members to trace the roads and the footprints of buildings, and to mark important nonresidential locations, which we categorized as either commercial or public spaces. The methodology in the field was straightforward. The student GIS team members walked around Los Platanitos with community members who helped identify the important locations and features of the neighborhood. Most streets and alleys of the neighborhood were marked on the aerial photos, as were stores, churches, and public areas. Each entry's information, such as ownership, purpose, and condition of the structure, was recorded on the worksheets. The data recorded on the worksheets helped build the GIS shapefile attribute tables once the students returned to UT.

Important hydrological features in the watershed upstream and downstream from the *cañada*, along with areas of

impermeable surfaces around the community, were documented. Specifically, lagoons, rivers, areas of water accumulation, and points where water entered the cañada were recorded. Additionally, community members were consulted in the recording of the highest flood level they remembered, specifically in the aftermath of Hurricane George in 1998. These data helped determine the floodplain in the area. Dates of flooding were recorded to distinguish between catastrophic floods and common, annual floods that occur during the rainy season. Community participants also helped the research team understand the flows and accumulations of water that lead to heavy flooding, and at which areas the cañada is inundated with trash that impedes the flow of water.

Back at UT

After returning from the field, the GIS team compiled data from what they had gathered, as well as data from the other two research teams, and transferred them to GIS using various methods. While the GIS team was mapping important community features and the floodplain, the environmental survey team was working in a smaller scale by documenting, measuring, and drawing the *cañada* and its immediate surroundings as well as assessing the quality of the structures of the houses. The physical survey team focused on the material and cultural landscape of the one-kilometer-long *cañada* itself. The social documentation team performed a community survey questionnaire based in part on the official census of the Dominican Republic throughout Los Platanitos. Their goal was to collect data on the social reality of community members, in particular focusing on the impact of the flooding on the living conditions of the people they surveyed. All three of the teams' data were incorporated into the GIS platform once the teams had returned to UT.

Boundaries and roads drawn by community members and the qualitative research team were digitized over the georeferenced images. Meticulously documented features of the physical environment, including measuring the channel depth and width and all the buildings lining the channel and photographed taken by the physical survey team were georeferenced. Excel spreadsheets with data from the household survey were joined with the shapefile of survey boundaries, and also with shapefiles of the upper and lower regions of Los Platanitos. This allowed the team to produce maps showing spatial distributions of social characteristics. Building footprints were digitized and information was added to that shapefile's attribute table to distinguish between different land uses and displayed the names of buildings and their structural quality. The worksheets filled out for each recorded feature contained the pertinent information that was included in the attribute tables. Initial maps of the road network, maximum flood levels, the regional hydrography, and points of water entry and flow from the area were produced to bring back to the community for their feedback.

Back to Los Platanitos

All of the maps and representations of the data gathered during the fieldwork were compiled for the community when the research team returned to Los Platanitos in the spring of 2008. The entire research team was well aware of the profound effects that mapping and representations of place can have on the relationships between people and their lands. The points, lines, and areas on maps can suggest a finality and a legitimacy to land tenure issues that may, in fact, be in considerable flux and contention. The symbols and text can imply, in the selection of shapes and language, the importance of one culture over another. The fact that these maps were the first maps ever produced of Los Platanitos made the return trip an important and crucial step in the development process of this research.

With preliminary findings in hand, the students returned to Santo Domingo to present maps, posters, and an initial report to the residents of Los Platanitos, representatives of the municipality, scholars from the Universidad Autónoma de Santo Domingo (UASD), and NGOs engaged in the project. Additional fieldwork was conducted to fine-tune and further develop initial research. A roundtable discussion was held with the various actors to foster an open dialogue about the problems facing the *cañada*.

The physical survey team drawings that had been transferred into maps and diagrams using AutoCAD, ArcGIS, and PhotoShop were used in participatory workshops where community members identified areas of solid waste buildup and flooding, places where children play, and unsafe locations. Maps created with data gathered during the fieldwork were essential during the second field trip, when students walked with a hydraulic engineer and community members to gather further regional and water flow data. The students also worked with community members to field check all the maps, including the building footprints and important nonresidential locations, and to confirm the quality of the roads and alleyways in detail.

More importantly, the students and community members held a roundtable discussion and presentation of the research findings with city officials and NGO representatives at the CONAU. This dialogue was a vital step in integrating the research findings, community concerns, and perspectives of the municipality and NGOs into a cohesive framework that could be applied to conduct further risk and vulnerability assessments in Los Platanitos and other *cañadas*. The GIS-based maps were used in a powerful way to convey local knowledge about the causes and effects of the flooding and sanitary and solid waste issues present in the community of Los Platanitos. The open, unprecedented dialogue between residents of Los Platanitos, city officials, and NGO representatives was one of most important achievements of the class project. The roundtable discussion during this follow-up trip provided a crucial

opportunity for community members, students, municipal and university officials, and nonprofit representatives to discuss the future of the project in Los Platanitos as a whole. In conjunction with the roundtable discussion, students facilitated a community visioning workshop to develop a community-based plan for social and environmental improvements in Los Platanitos.

The visioning process was chosen as a way of widening the lens with which both the researchers and the residents were approaching the problems facing the *cañada*. The deliberations were informed by an important question posed by a community leader during the roundtable discussion: "So, now what?" Whereas the other facets of our mixed-methods approach had been used primarily to collect data on existing conditions within the community, the visioning process was aimed at uncovering the future possibilities imagined by the residents and placing them before the collective.

The model was comprised of three core components, which were conducted in sequence:

(1) developing the community's vision of the ideal neighborhood environment;

(2) identifying the existing resources within the community that were available at different scales; and

(3) creating an action plan that combines the components of the vision identified in step one with the resources identified in step two.

All activities were facilitated over the course of two days within a local church in order to accommodate seating for the participants. Residents who took part in the activity were notified through word of mouth by the researchers and the project community partners, and were generally representative of the demographic makeup identified through the household survey. Several of the participants had not taken part in any of the previous project-related activities, and therefore provided perspectives that were potentially less biased by project parameters. Since residents had responded favorably to the use of images to represent ideas in the initial January focus groups, one of the students in the qualitative research team drew graphic representations of community responses.

The visioning process was an open-ended activity where residents were asked to disregard any perceived financial, political, or logistical constraints and instead imagine what their ideal community would be like. The task was initiated with a minute of silence, when participants closed their eyes to envision the community they would like to live in. After completing the moment of silence and opening their eyes, participants were asked to look at a blank sheet of white poster paper on the wall in front of them and share their visions with the group so that they could be added to the poster.

Ideas began to pour forward, and each one was noted in words and graphics as it was presented to the group. Community members did not hesitate to propose specific components of an ideal

community, and clearly justified the significance of each factor. As each proposal was presented, the group was given time to consider the relationships between the different factors and to discuss their roles and significance in the overall vision. This method proved useful for facilitating the discussion of local needs on a larger scale, both in spatial and social senses.

After residents were satisfied with the vision components, they were asked to consider the resources (both capital and social) that existed within the community. Key goals of this activity were to consider and identify resources in order to create the action plan in the third step of the process, and to widen the scope of the community's area of reference when developing their planning strategy. Residents were asked to list local resources first, then municipal, national, and international resources, respectively. The final phase of the visioning process consisted of the drafting of a planning framework. Participants were guided to consider who would be in charge of leading the actions for each objective, what the specific action would be, and when they would achieve it. A comprehensive strategic plan was not attempted; however, residents worked through several goal-specific plans with an emphasis on becoming familiar with the model in order to replicate it for a variety of community development needs.

Further GIS Work

The mixed methods and public participation used by the research team allowed the community participants' local knowledge and desires for their community be represented in a powerful way to local officials and representatives of various groups. The second trip to Los Platanitos was essential for fine-tuning the data collected and analyzed by the team during the first trip. It also allowed the students and community members to connect the local knowledge with policy makers. Upon return to UT, parts of the GIS shapesfiles and spatial analysis were adjusted based on community feedback received during the second trip. Finally, the GIS team attempted to construct a 3-D representation of the community using ArcScene. Physical attribute and structural information collected by the physical survey team about each building was joined to the shapefile containing the buildings in the community. ArcScene was used to interpolate a digital elevation model of Santo Domingo provided by CONAU, which allowed the team to "drape" all of the shapefiles over the resulting 3-D surface. The building heights were then "extruded" from the building footprint layer and the physical survey drawings for 3-D display. 3-D modeling allowed the team to better visualize the elevation differences between the upper and lower regions of the neighborhood, and to more effectively represent water flows and areas at greater risk of flooding. This representation, combined with the other data collected, informed the research team's final report. The report provided detailed steps

that could be taken by policy makers to asses and lessen the risk and vulnerability posed by flooding and other issues to the community of Los Platanitos and others in the region. GIS allowed the team to locate and analyze Los Platanitos in several layers of analysis, including within the larger watershed and floodplain, in a social context, and with details about the built environment of the community. The final class products included 2-D and 3-D GIS maps, architectural drawings of the cañada and the built environment, posters, photography, and life stories, which combined to paint a profound picture of the social and environmental conditions in Los Platanitos.

The students also created a model for rapid assessment of cañadas that is being implemented throughout Santo Domingo. The city of Santo Domingo Norte is developing infrastructure projects to address the serious conditions in Los Platanitos. However, the project was more than a technical exercise: it was also an opportunity to demonstrate the enthusiasm and talent of the CRP program in a real-world setting while also illuminating ways in which GIS-based analysis can assist in risk and vulnerability assessments in informal settlements. Students were also able to participate in efforts to resolve a complicated planning issue and witness the very real ramifications of environmental risk. Developing and implementing multidisciplinary research methods in a limited time frame was an invaluable learning experience for the students. It also proved a beneficial experience to be able to incorporate the local knowledge of the Los Platanitos community in the search for effective solutions to decrease the risk and vulnerability of the people living there.

This project was made possible through a Mebane Grant provided by the School of Architecture, with additional funding from the Department of Geography, the LBJ School of Public Policy, and the Institute for Latin American Studies. The students included David Baumann, master's student in public affairs; Monica Bosquez, master's student in Community and Regional Planning, and Latin American studies; Meredith Bossin, master's student in Community and Regional Planning, and Latin American studies; Erin E. Daley, master's student in public affairs and Latin American studies; Rosa E. Donoso, master's student in Community and Regional Planning; Maritza Kelley, master's student in public affairs and Latin American studies; Solange Muñoz, doctoral student in geography; Dana Stovall, master's student in Community and Regional Planning and Latin American studies; Shawn M. Strange, master's student in Community and Regional Planning; and Martin Thomen, master's student in Community and Regional Planning. The project was led by Professor Dr. Bjørn Sletto of the graduate program of Community and Regional Planning at the University of Texas at Austin.

MARTIN THOMEN is a recent Community and Regional Planning graduate (May 2008). He earned a masters in CRP with a transportation planning specialization and also has a BA and BS from UT Austin. He currently works as a transportation planner.

SHAWN M. STRANGE is studying for a Master of Science degree in Community and Regional Planning at The University of Texas at Austin's School of Architecture. He is engaged in economic development research at both the national and international level. His interests are sustainable development in transitioning economies and the integration of informal economies into rapidly urbanizing regions. He is also focused on social equity by way of transportation accessibility. Prior to graduate study, he worked as a Corporate Relations Associate for the Council of the Americas and as a Program Specialist for the 2005 Texas Base Realignment and Closure (BRAC) Strike Force. He earned a BBA in International Business/Spanish and is the Co-Founder and Career Development Chair of the Society for International Planning and Public Policy (SIPPP) at UT Austin.

The Transportation Barriers of the Women of Pudahuel, Santiago

MARISA FERARRI BALLAS

Santiago de Chile serves as a model for other large Latin American cities as a result of Chile's consistent macroeconomic policies and strong economic growth. The city's metropolitan region accounts for more than 39 percent of Chile's gross domestic product (GDP). The country's economic development has linked Santiago to the world economy in terms of its new economic sectors. It has become a headquarters for the main service activities of the finance sector and global innovations and products as well as a popular destination for travel and living (de Mattos, 1996). People from all over the world choose to live in Santiago as a result of its modernity, convenient transportation system, and stable, ever-strengthening economy. The city also appeals to Chilean residents, with a high concentration of capital and income and a reputation of a high quality of life. As a result, approximately 35.6 percent of the country's population lives in Greater Santiago, at a density of 7683.1 persons per square kilometer (Schiappacasse, 1998).

This upsurge in popularity and economic success has resulted in an increasing amount of research on Chile's development policies and their implications. A number of projects have found that the Chilean housing and urban development process in Santiago has generated social and environmental conditions that result in unequal access to urban amenities for different groups of its population. While this research identifies the existence of inequality, little actually delves into the relation of residential segregation and transportation issues for vulnerable populations. The research that does explore this relation lacks a gendered focus of the various elements that play a role in the transportation situation of low-income women who live in the urban periphery. Such research on the most vulnerable population with the most need for reliable, affordable, and safe transportation is necessary in providing a gendered perspective to the widely implemented Chilean/Santiago model.

The research project, titled "The Transportation Barriers of the Women of Pudahuel, Santiago," was implemented in 2006 to identify the current transportation barriers faced by female residents in low-income social housing districts located in Santiago's urban periphery. This article first presents a historical account of urban expansion and transportation in such low-income, peripheral locations of Santiago, providing a contextual basis for the project. It then discusses the research project and its findings, suggesting further areas of research and policy improvements.

Social and Residential Segregation in Santiago, Chile

At the end of the 1960s, a number of people settled on Santiago's urban periphery in the form of squatter settlements. These were the *campamentos*, a term used to describe self-provided housing established through land invasions. During the 1970s, more than four hundred thousand people settled in *campamentos* on Santiago's periphery (Fadda and Ducci, 1993).

This process ended abruptly when the public housing market was privatized in order to reduce the housing deficit by the 1973–1989 coup-established military government. As a result, the housing construction rate increased by approximately one hundred thousand units per year, which continued through the late 1990s (Fadda, 2000). To further limit precarious settlements, land regularization and slum eradication programs were initiated in the 1979 Urban Development Policy. These programs were developed to "promote the harmonious growth of the city and peripheral housing development" (Fada, 2000). They were directed at encouraging families to move from illegal settlements to multifamily, low-income housing districts. Between 1980 and 1987, 53,322 public housing units were constructed and designed to relocate approximately 150,000 families away from the wealthier northeast sector of the city toward the peripheral neighborhoods.

Due to the strengthening economy and social housing policies, Santiago's urban area expanded from 35,000 to 65,000 hectares between 1979 and 1995. During this period, the population also increased by 20 percent from approximately 4 million to 4.8 million inhabitants (Fada, 2000). After the military-established government relinquished power, talks began about coordinating housing policies with the planning system, but little was actually done. While the new democratic governments increased the social housing construction rate to one hundred thousand units per year, all developments were located on the urban periphery, furthering the social and residential segregation of lower classes from the rest of the population. Currently, there are few initiatives to reduce the process of urban expansion, though resulting social and infrastructure costs are increasing at a rapid rate. For example, social housing developments on the urban periphery have caused problems for the local authority, especially in terms of extra amenities, infrastructure, and facilities. They have also added a significant burden to the residents looking to access amenities, such as work and health care, that typically exist in the central area of Santiago. This process also worsened the sociospatial segregation of the city by increasing the distance between rich and poor neighborhoods (Jiron, 1995).

Transportation Barriers for Women in Low-Income Social Housing Districts

In 1990, Chilean authorities introduced new urban transportation policies that would prioritize and modernize the existing transportation systems. Its main goals were to avoid the economic and technical collapse of the transportation system, to eventually expand routes and maintain stability in the future, and to enact licitación de recorridos. The concept of *licitación de recorridos* is a technical and legal tool that permits administrative authority the power to determine what types of vehicles or public transport services and their routes can be on the road during high pollution times, natural disasters, and city emergencies. Through this tool, the authority can regulate the city's public transport when it is necessary for "public good." It also allows the city to correct the distortions of the free market in public transport, avoid the intervention of the state when it is not needed, and still take advantage of private incentives. Through this process, Santiago has reduced the use of vehicular parking, increased the quality of service of the public transportation system, reduced pollution rates, and formalized the bus operators' jobs (Cruz Lorenz, 2001).

These improvements to the public transportation system are evident throughout central downtown Santiago. The city's Metro system is one of the most efficient subway systems in the world. The Metro runs every minute during peak times and every minute and a half during off-peak times. The routes are efficiently planned, and connections are simple and easy to understand. Yet the Metro is more expensive than the bus system and does not extend into the majority of social housing districts located in the urban periphery. Therefore, in order to access the Metro from these distant locations, residents are forced to take a bus closer into the city center, doubling the cost of transportation each way. For the majority of women who live in these areas, this multimodal method of transportation is not an option due to increased costs. As a result, they are forced to use the much slower and less secure bus system, or if possible, walk.

"The Transportation Barriers of the Women of Pudahuel, Santiago"

This research project was initiated in 2006 to identify the transportation barriers of female residents of Pudahuel, a social housing district on Santiago's urban periphery, while accessing work and health care. Given the influx of women in the Chilean workforce, coupled with existing gender expectations of females to continue to rear the children, female residents are in need of an efficient, affordable, and safe transportation system.

Methodology The project consisted of 130 surveys distributed to female residents of Pudahuel at local bus stops and community

health centers throughout the area. Two focus groups were also implemented, as well as two individual interviews. All methodology was utilized to assess existing safety and affordability barriers of the Santiago transportation system. It also aimed to identify individual variables that heightened these barriers, including income level, number of children, distance from home to work and to health care facilities, and mode of transportation.

Pudahuel, the research focus area, is the third-poorest district of Santiago and 17th out of 134 districts for drug use and crime. Between 1989 and 1994, 17,000 new public housing units were built; today, 32.1 percent of residents live below the poverty line (Zegras, 2005). The following segment of the article presents research findings and addresses four critical needs of the females surveyed.

Findings

- 50.5 percent of participants were married, 33.1 percent were single, and 11.4 percent were separated.
- 33.8 percent worked a formal job for income, 15.4 percent were currently looking for a job, 34.5 percent identified themselves as "stay-at-home moms," 5.4 percent were students, and 10.9 percent worked informal jobs or were living off of a pension.
- 60.3 percent worked the normal day shift, 4.1 percent worked the night shift, 15.1 percent worked only during the morning, 6.8 percent worked only during the afternoon, and 13.7 percent worked a combination of shifts.

Child-friendly transportation services While the range of ages of women surveyed was broad, the majority of women fell between the ages of thirty and forty-five. Many of those surveyed and interviewed in this age group identified a need for more child-friendly public transportation systems. Among the needs listed were increased stroller accessibility, modes of transportation, and policies that accommodate and give preferential seating room to mothers with young children, and safety issues. The majority of women living in Pudahuel use the bus more than the child-friendly Metro to access work and medical centers. Seventy-four percent of the women surveyed use the bus to access work, while 38 percent use the bus to access health care. Buses present certain difficulties for females accompanied by young passengers, especially during peak hours, when the bus is overcrowded and the majority of passengers are forced to stand. The limits of carrying and watching children on the bus are exacerbated when there is more than one child. Eighty-five percent of the women who were surveyed had more than one child, and 18 percent had more than four.

While "unofficial" bus policy is for people to give up their seats to women with young children, this usually does not occur.

Therefore, many women are forced to carry their children and groceries, be aware of others and "pickpocketing," and steady their balance while traveling for long periods of time. Some form of official policy must exist that designates "child-friendly" seating, especially during peak hours, which would make the journey much more comfortable and safe for women traveling with young children.

Reduced fares for low-income families Seventy-eight percent of the women surveyed had between three and six people living in the same household, all supported by the same income. The majority of women, 53 percent, had a monthly familial income under 39,678 pesos ($79.00), while 26.5 percent had a monthly familial income between 39.678 and 67.658 pesos (between $79.00 and $135.00). These findings indicate a demand for transportation policy that allows discounts for those who can identify need based on a monthly income. As stated above, findings indicate that the majority of women would prefer to use a multimodal transportation system but are unable due to increased costs of the Metro. They are forced to take the much slower, less safe, and less reliable bus system. For example, 65 percent of the women surveyed used the bus to travel to work, 9 percent walked, 3 percent biked, and no women reported using the Metro. To access medical centers, 53.1 percent walked, 37.7 percent took the bus, 4.6 percent drove, and no women reported using the Metro. During the focus groups, the women stated that even the bus becomes very expensive without any form of discount for low-income families. In one case, almost 30 percent of a participant's income went to travel-related expenses to and from work every week. With these situations, women surveyed were unable to save extra money and, in many cases, provide for their families. Research findings indicate a dire need for reduced fares for low-income families in order to access work and health care.

Extension of the METRO to Pudahuel and economic development
Of the women surveyed, 22.1 percent spent one hour traveling to work, 33.8 percent spent one to two hours, and 25 percent spent more than two hours. In terms of accessing medical centers, 49 percent of the women spent less than 20 minutes, 36 percent spent 20 to 40 minutes, 11.5 percent spent 40 to 60 minutes, and 4 percent spent over an hour. (It must be noted that the women were surveyed in medical centers around Pudahuel, which is probably why the majority of women spent less time accessing medical centers than accessing work.)

The extension of the Trans Santiago Metro into Pudahuel would decrease the majority of women's time spent traveling to work. As stated above, due to the inaccessibility of the Metro, the majority of women are forced to use the bus system, which poses longer trip times due to the number of informal stops and re-

duced speed capability. While the Metro was extended into other urban peripheral comunas, such as Florida to the south and Las Condes to the north, these comunas generate higher familial incomes and are undergoing more economic changes than Pudahuel. Malls, restaurants, and business offices abound in these locations, while they are still relatively absent from Pudahuel. As a result, the projected majority of users of the Metro in Pudahuel are its residents. Because a large number of residents would not be able to afford a ticket without reduced fares, the private transportation system would not generate enough revenue. This scenario reduces any likelihood that the Metro will be extended until a variety of land uses and increased economic development opportunities appear in and around Pudahuel.

Improved safety features The main emphasis of this research project was to determine the perceived level of safety of female residents of Pudahuel when accessing work and medical centers. "Safety" was categorized into two areas, one in regard to delinquency (described as robbery and assault), the other in regard to traffic accidents (described as drivers' capability and attention to the road). In terms of delinquency, 47.1 percent of women felt very unsafe when they traveled to work, 35.7 percent felt unsafe, 12.9 percent felt safe, and 4.3 percent felt very safe. When accessing medical centers, 38 percent felt very unsafe, 37 percent felt unsafe, 23.1 percent felt safe, and 2 percent felt very safe.

This data shows low levels of perceived safety by women when using the transportation systems. Many of the women who were interviewed in the focus groups and personal interviews had encountered some sort of violent experience while using the bus system or walking to and from the bus stop, or knew

The amount of time women from Pudahuel spend commuting to work each day.
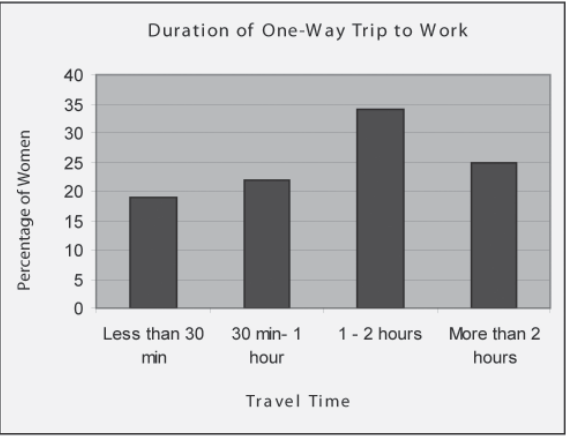
Women's perceptions of the risk associated with being involved in an accident during their commute to work.

Women's perception of risk associated with delinquency during their commute to work.

someone who had experienced violence. Such experiences were described as harassment, assault, and rape. Improved lighting around the stops, increased patrol watch, and more formal and centralized stops would provide for a safer environment while the women waited for the bus.

In terms of traffic accidents, 45.7 percent felt unsafe while traveling to work, 37.1 percent felt very unsafe, 10 percent felt safe, and 7.1 percent felt very safe. While accessing medical centers, 42.3 percent felt unsafe, 28 percent felt very unsafe, 27 percent felt safe, and 2 percent felt very safe. Many of the women interviewed expressed concern with the operators collecting money while they drove, swerving around cars, not paying attention to the road, and driving at higher speeds than the posted limit. Policy must be aimed at improving operators' abilities to concentrate while driving and at enforcing bus compliance with speed limits. Strict fines should be imposed on bus operators who exceed the legal speed limit and who disobey traffic laws. In order to improve concentration, money collection systems should be set up in order for the operator to have the sole responsibility of paying attention to the road.

Conclusion

The transportation system throughout Santiago is undergoing significant changes as a result of an increasing population and economic development improvements. Residents who live in and around the city in wealthier comunas, such as Las Condes, have the opportunity to utilize the newly improved bus and efficient Metro subway systems. As a result, they can enjoy shorter rides and waiting times, safer and cleaner environments while traveling, and increased accessibility throughout the city. As the city and private market strive to improve the bus systems to encourage multimodal transportation, Santiago's transportation system is serving as a model for other international developing cities. Yet what is neither depicted nor explored are the transportation and day-to-day experiences of residents who cannot afford to live near the Metro lines and whose bus systems have not been improved as a result of their distance from the city center. The paradox with this relationship is that these are the residents who need affordable, safe, and efficient transportation the most. They are the ones traveling the farthest distances in the poorest areas. Furthermore, little research has been conducted regarding these inefficiencies of the peripheral transportation system. The majority of existing research concentrates on the transportation problems and improvements related to the downtown center and Metro lines.

In order to improve the transportation systems in areas that exist along the urban periphery, more interdisciplinary research must occur regarding the residents who live in these areas, the land use and development that is occurring in these areas, and the creation of transportation/land use models that will benefit both the

residents and economy. Only then will the improvement process begin for decreasing transportation costs and trip times, and increasing safety and accessibility measures for the women who live in these areas, such as Pudahuel.

MARISA FERRARI BALLAS entered the University of Michigan at Ann Arbor in 2001 and completed her degrees in English and Spanish literature. During her undergraduate education, Marisa was employed at a brownfield redevelopment consulting firm in Detroit, Michigan. In 2005, Marisa entered the Graduate School of Architecture at the University of Texas at Austin. She received her M.S. in Community and Regional Planning in the spring of 2007. During her graduate career, she traveled to Santiago, Chile, to perform research on transportation and environmental design to examine safety issues for low-income residents of peripheral communities.

Works Cited

Cruz, Carlos. *Transporte urbano para un Nuevo Santiago.* Santiago, Chile: Ministerio de Obras Públicas, Transporte y Telecomunicaciones, 2002.

De la Puente, Lafoy P., E. Torres, and P. Munoz. *Satisfaccion residencial en soluciones habitacionales de radicacion y erradicacion para sectores pobres de Santiago.* Revista EURE XVI(49) (1990): 7–22.

De Mattos, C. *Avances de la globalizacion y nueva dinamica metropolitana: Santiago de Chile, 1975–1995.* Revista EURE XXII(65) (1996): 39–63.

Fadda, G., and M. E. Ducci. *Politicas de desarrollo urbano y vivienda en Chile: Interrelaciones y efectos, in Chile: 50 años de vivienda social.* 1943–1993. Valparaiso: Universidad de Valparaiso, 1993.

Fadda, G., P. Jiron, and Allen, A. *Views from the Urban Fringe: Habitat, Quality of Life and Gender in Santiago, Chile.* In Compact Cities: Sustainable Urban Forms for Developing Countries. London: Spon Press, 2000: 167–182.

Jiron, P. *Progressive Housing in Chile? An Evaluation of the Chilean Housing Policy and its Capacity to Reach the Allegados."* Master of Science Dissertation, Development Planning Unit, London, 1995.

Schiappacasse, P. *Diferenciacion del espacio social interurbano en el Gran Santiago. Un analisis a nivel distrital.* Tesis para optar al grado de Magister en Geografia, Facultad de Arquitectura y Urbanismo, Universidad de Chile, Santiago, 1998.

Zegras, Christopher Pericles. *Sustainable Urban Mobility: Exploring the Role of the Built Environment.* Cambridge, MA: Massachusetts Institute of Technology, 2005.

Large-Scale Transport Planning and Environmental Impacts
Lessons from the European Union

JESSICA DOYLE

"It is now widely recognized," began a 2000 book, "that transport in Europe is unsustainable, and that the trend-based path of continuous and continuing growth is unacceptable" (Banister et al., 2000). From an American perspective, European transport growth seems considerably less unsustainable and unacceptable than similar growth in the United States. In 2004, the European Union's (hereafter EU) current and prospective members had a population of 451 million, to the United States's 286 million, but just 212 million cars to 205 million cars in the United States (Schade et al., 2006). Cities such as London, Paris, Madrid, and Prague are known for their extensive public transit systems, while other cities, most notably Amsterdam, are famous for their hospitality to bicyclists. Europe's rail network is far more extensive than Amtrak, the American counterpart. Although air travel in Europe has increased considerably in the last decade, the majority of journeys of six hours or less, and business journeys of four hours or less, within Europe are made by rail (*The Economist*, 2007b). Not surprisingly, American planners sometimes look to European urban areas as potential role models for encouraging nonautomotive modes of transport.

Nevertheless, the harmful environmental impacts of transport remain a concern in Europe. As of December 2007, only eleven of the twenty-seven current members of the EU were expected to meet emission ceilings for four pollutants by 2010 (European Environment Agency, 2007a). In 1998, an estimated 28 percent of carbon dioxide (CO_2) emissions from Europe were transport based; four-fifths of those emissions came from road transport (European Commission, 2001). The environmental costs of transport are estimated at 1.1 percent of the combined GDP of all EU members (CEC, 2006). Sixty-seven million Europeans are believed to be exposed to harmful noise levels related to transport (EEA, 2009). Between 1990 and 2006, greenhouse gas emissions from thirty-two European countries actually declined in most sectors, including industry, but grew by 26 percent from domestic transport (European Environment Agency, 2009).

Even more worrisome, from a purely environmental standpoint, is the growth in road transport, both passenger and freight, in the twelve countries that have joined the EU since 2004 (the EU-12 [1]). With Soviet-era rail networks decaying and standards of living rising, the residents of the EU-12, primarily in eastern Europe, are increasingly buying, and relying on, cars.[2] Thus, as in the United States, there is concern in Europe about the environmental costs of growing use of transport.

Responses to such concerns, however, are complicated by the way transport planning is handled in Europe. Although the 1957 Treaty of Rome, which founded what is now known as the EU, called for a common transport policy, transport planning has largely been handled on a national level. The largest change in European transport planning since the early 1990s has been the EU taking on the job of preparing and recommending a common transport policy, which it has done in the form of the Trans-European Transport Networks (TENs-T). One of the primary goals of the TENs-T has been to allow for growth in transport use while reducing the potential harms to the natural environment. More recently, the EU has introduced the Marco Polo program, which also aims to reduce environmental harms by encouraging shifts to less harmful transport modes.

This paper will examine how the European Union has incorporated concern over harmful environmental impacts into region-wide transport planning. It will examine the TENs-T projects and the Marco Polo program in light of how they help to advance EU environmental goals of reducing environmental harms caused by transport. It will then examine public critiques, focusing on environmental impacts, of EU transport planning efforts. Finally, it will examine what lessons there may be for regional transport planning in the United States.

Environmental impacts of European transport

Literature on the environmental impacts of European transport, including official reports from the European Union, have been relatively wide-ranging in their scope, concerned not only with GHG emissions or air pollution but with a broader number of potential threats to quality of life. In the 2001 report "A Sustainable Europe for a Better World" (CEC, 2001), the European Commission identified the main threats to sustainable development as GHG emissions from human activity, poverty, the aging of the population, antibiotic-resistant strains of diseases, threats to food safety, the loss of biodiversity, and transport congestion. The 2006 Renewed EU Sustainable Development Strategy (SDS) grouped climate change; threats to public health, poverty, and social exclusion; demographic pressure and aging; the disappearance of natural resources and biodiversity; and changes in land use and transport as threats to future sustainable development (CEU, 2006). The 2006 midterm report on sustainable mobility (CEC, 2006) named CO_2 emissions, air quality, noise pollution, and land use as primary environmental concerns. Air pollution, in the form of particulate matter, is blamed for an estimated 350,000 annual premature deaths in Europe (CEC, 2006).

In European transport literature, the primary environ-

mental concern is CO2 emissions. With road freight transport expected to grow by an estimated annual 20.5 billion t-km (tons per kilometer) in the EU-25 between 2007 and 2013 (Millán de la Lastra, 2007), increasing CO2 emissions will likely continue to be the most-discussed environmental impact of European transport movements. The 2006 SDS names reducing greenhouse-gas emissions from transport as an operational objective, to be fulfilled by holding new car fleets to higher emissions standards, shifting transport from road to more environmentally friendly modes, and developing an EU fuel strategy (CEU, 2006).

The EU and its member states are signers to the Kyoto Protocol (UNFCCC, 2007). The target for the EU-15 is an 8 percent reduction in CO2 emissions, compared to 1990 levels, by 2008-2012 (CEU, 2006). In March 2007 the EU announced plans to cut greenhouse gas emissions even further, to 20 percent below 1990 levels by 2020. We can reasonably expect, then, that reducing CO2 emissions will remain an EU-level policy goal over the next decade.

But meeting such targets will be difficult. Many member states are expected to meet those targets by buying credits in emission-reductions programs in developing countries (*The Economist*, 2007a). Furthermore, some European leaders have pointed to potential tension between economic development strategies and environmental protection regulations, particularly in the context of a Europe-wide recession. In January 2008 Nicolas Sarkozy, France's president, argued in a letter to José Manuel Barroso, president of the European Commission, that industry would shift to countries with less stringent environmental standards, costing France jobs (Hollinger et al., 2008). In February 2009, Günter Verheugen, a German politician serving as the EU's Commissioner for Enterprise and Industry, stated publicly, "We should do everything possible now to stimulate the economy . . . anything else has to wait," and criticized recent EU environmental legislation: "We have made the European car much more expensive" (*Der Spiegel*, 2009). Transport will be affected if the EU is to meet its greenhouse gas emission-reduction goals. Hickman and Banister (2007) conducted a series of "backcasting" scenarios to determine what policy measures Britain would need to meet its 2030 CO2 emission-reduction goals. Their analysis predicted that technological innovation on its own would not be enough to offset increased emissions from additional population and travel growth; travel behavior would also have to change. At an EU level, Rodenburg, Ubbels, and Nijkamp (2002) tested three hypothetical EU transport policy scenarios, one aimed at enhancing mobility, one at minimizing environmental damage, and one at improving social and economic quality of life. Not surprisingly, the package of policies aimed at minimizing environmental damage produced a decrease in CO2 emissions, while the mobility package saw the largest increase. The quality-of-life package also lessened emissions, although not as much as the environmental package. They concluded cautiously that, while reducing emissions yet allowing for economic growth presented "formidable policy challenges," making changes in policy and transport systems "might offer possibilities to make a step forward in a more sustainable direction."

Despite concerns voiced at the national level, the EU seems to have embraced the idea that it must create policy to influence travel and transport decision making. The TENs-T initiative is one of the largest initiatives; the Marco Polo program, while less ambitious, is also significant for its emphasis on freight transport.
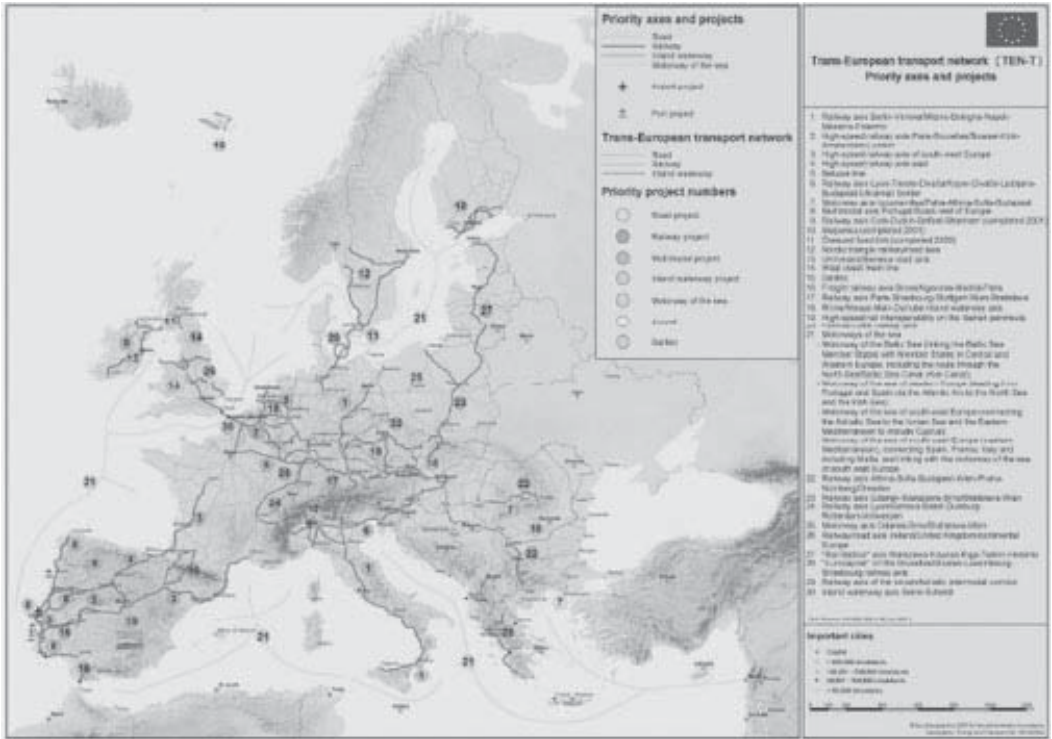
EU transport policy initiatives: the TENs-T and MARCO POLO

Transport planning at the EU level is not a new concept. The 1957 Treaty of Rome called for the establishment of "trans-European networks" in transport, telecommunications, and energy. It made the interoperability of national networks and called for what was then called the European Economic Community to ". . . take account in particular of the need to link island, landlocked and peripheral regions with the central regions of the Community" (EEC, 1957). Yet for years the EEC, which would become the European Community and later the EU, was unwilling to move toward a common transport policy (European Commission, 2001). The member states have traditionally handled transport policy as a national concern. Given that transport policy is by definition more spatially grounded than, say, monetary policy (the power over which many members, Britain and Denmark among them, still refuse to grant the EU), it is not surprising that transport planning has by and large been determined within national borders.

Beginning in the early 1990s, however, the EU began to assert the need for a common transport policy. This was in part due to the growing awareness of the disproportionate environmental harms of certain transport modes. When the 2001 white paper was written, road transport accounted for 44 percent of the EU's goods transport market and 79 percent of its passenger transport market (European Commission, 2001). By 2007, after enlargement, the latter figure had risen to 81 percent (EUROPA, 2007). The commission now looks to add environmental awareness into all its policies (Faludi and Waterhout, 2002), including transport planning. The 2001 white paper on European transport policy describes sustainable development as a "lever" toward a common transport policy (European Commission, 2001).

The EU regards transport policy, economic growth, and sustainability as interlinked: more growth will mean more demands on transport infrastructure, which could in turn mean more environmental harm if the environment is not taken into consideration well in advance of growth. Thus, concerns about environmental impacts have led the EU toward regionwide transport planning.

TENs-T So far the most ambitious EU initiative toward a common transport policy has been the Trans-European Transport Networks (TENs-T). The TENs-T are a series of transport infrastructure projects, mostly multinational, proposed by the EU to facilitate the movement of people and goods within the entire EU. The TENs-T are considered a crucial factor in enhancing the growth and economic competitiveness within Europe (European Commission, 2005). Moreover, the TENs-T are expected to help "ensure sustainable transport" (European Commission, 2005) by increasing options within the transport network, decreasing congestion, and shifting both passenger and freight traffic from road to other environmentally friendly modes. More than half of the proposed projects are solely, or primarily, structured around new or upgraded light rail systems.

The TENs-T proposals currently consist of thirty projects (in Figure 1), of which two have been completed. The total cost of completing all thirty projects was estimated in 2008 to be Ð397 billion (European Commission, 2008).

Ross (1998) described the TENs-T initiative as "groundbreaking," not only in terms of its scope, but in terms of the EU's ambitions, in funding transport initiatives directly and in doing transport planning across borders. Both aspects have made it difficult for the EU to move forward on the TENs-T. The EU, which is financed by tax collections from member states, can use a portion of its funds to finance TENs-T projects in less wealthy member states; a total of Ð6.7 billion was committed thus in 2004–06 (European Commission, 2005). But the EU cannot bear the total cost: Ð224 billion roughly equals its entire budget for two years.

In presenting the TENs-T in 2005, Jacques Barrot, then–vice president of the European Commission with responsibility for transport, complained that member states had decreased their transport infrastructure spending, in many cases to less than 1 percent of national GDP (European Commission, 2005). Similarly, van Exel et al. (2002) describe an "investment inertia" that occurs when the benefits of the TENs-T occur at a European-wide level; national transportation departments find these benefits hard to quantify, and thus the TENs-T become less of a funding priority at the national level. In short, the EU may have difficulty building the TENs-T, given the discrepancy between the funding sources and the recipients of potential benefits. A 2008 report pushed back the potential completion dates of nine of the thirty projects to 2020 and one, a railway axis from Lyon, France, to the Ukrainian border, to 2025 (European Commission, 2008).

The EU positions the TENs-T as creating less environmentally harmful connections for both passenger and freight travel on a European scale. However, the evidence that the TENs-T will reduce CO2 emissions and other negative environmental impacts is not unambiguous. The 2003 TEN-STAC scenario findings (NEA Transport Research and Training BV, 2003) suggest that emissions will be cut in some of the larger Western European countries, but continue to rise in several of the fast-growing EU-12 states (see Figure 2). Meanwhile, Banister et al. (2000) point out two difficulties with high-speed rail, which is the primary mode in more than half of the planned TENs-T projects. One is that, to reduce greenhouse gas emissions from road transport, light rail must draw would-be drivers from the road. If rail passenger transport grows while road passenger transport stays constant, the EU will have cut some of the future CO2 emission growth, but the rail built by TENs-T projects will not have been as effective in curbing emissions as if there were a decrease in road passenger traffic. The other difficulty

is that in encouraging travel by long distances (the completion of the Rail Baltica project, for example, would allow passenger travel along high-speed rail from London to Tailinn), the TENs-T rail projects may, in the long run, stimulate demand for air travel.

MARCO POLO	TENs-T
Focused on freight movements only	Focused on passenger and freight movements
Aimed at changing transport services	Aimed at creating new infrastructure
Focused on ancillary infrastructure	Focused on strategic infrastructure
Aimed at shifting modes of freight transport	Aimed at creating a Europe-wide transport network
Private sector driven	Public sector driven
Bottom-up (from companies making bids)	Top-down (from EU and member states)
Short-term focus	Long-term focus

Marco Polo A newer EU-level program is Marco Polo, which was first proposed in 2002 and adopted in 2003. The primary goal of the Marco Polo program is to shift freight transport from roads to modes considered more environmentally friendly—short sea shipping, inland waterways, and rail—while improving intermodal freight operations (Horn and Nemoto, 2005). During the 2007–13 budgetary period, Marco Polo[3] has roughly €450 million ($588 million) to provide for eligible projects (DG TREN, 2006). Table 1, below, shows the differences in focus between the larger TENs-T program and the Marco Polo program.

The chief difference between the two programs is that Marco Polo focuses exclusively on freight transport. The EU has singled out freight movements for two reasons: because freight growth has shown steady increases and because so much of freight transport is moved by roads, considered the most environmentally harmful mode of transport (in terms of air pollution and GHG emissions). The total volume of freight transported in the EU, measured by ton-kilometers, increased by 35 percent between 1996 and 2006 (European Environment Agency, 2009). In the EU-15, road freight transport grew by 35 percent, while short sea shipping grew by 31 percent, inland waterway freight activity by 9 percent, and rail freight transport by 6 percent (Millán de la Lastra, 2006). By 2020, 45 percent of freight within the EU-25 (the EU save Romania and Bulgaria) is expected to be carried by road (Millán de la Lastra, 2006). Thus EU policy makers believe that achieving modal shift on freight transport will lead directly to benefits in the form of lower CO2 emissions.

Projects, or "actions," financed by Marco Polo fall into five categories. One, "modal shift" actions, have been described as "robust, but not innovative" (Millán de la Lastra, 2007). They are projects drawing on prior knowledge and research to shift freight transport away from roads. "Catalyst" actions are expected to be more technologically innovative, while "common learning" actions are to help member states share best practices as to intermodal freight movement. In 2005, Marco Polo also began financing initiatives related to the "motorways of the sea" project, to promote inland shipping, and "traffic avoidance" actions, meant to, among other goals, reduce the number of empty runs by freight vehicles. Table 2 shows the differences in funding allowances for the three types of actions.

	Modal shift actions	Catalyst actions	Motorways of the sea	Common learning actions	Traffic avoidance actions
Minimum subsidy or grant	€500,000	€2 million	€2.5 million	€250,000	€1 per 500 t-km or 25 vehicle-km
Subsidy rate (maximum percentage of eligible costs covered)	35 percent	35 percent	35 percent	50 percent	35 percent
Maximum funding period	3 years	5 years	5 years	2 years	5 years
Percentage of projects awarded funding in 2007	81 percent	7 percent	7 percent	4 percent	0 percent

Public Critiques of EU Transport Policy

With nearly 400 million people affected by EU policy decisions, it would be naive to expect that such large-scale projects as the TENs-T would go uncriticized. What may be of interest to American transport and environmental planners is that, even as they have been framed in the context of greater environmental concern and efforts to reduce greenhouse gas emissions on the EU's part, the TENs-T and other infrastructure projects have been criticized not only on economic or transport planning grounds, but on environmental grounds.

One example of heavy debate between the EU and environmental groups is the arguments over the Betuwe Line, TEN-T Priority Axis #5 (see Figure 3). Consisting largely of upgrades of existing track, the project was primarily intended to create a 160-km (99.4-mi) rail link between the port of Rotterdam and the German-Dutch border. Doing so, argued the EU, would enhance Rotterdam's status as a European transport and distribution hub, and provide a nonroad option for transport into and out of the port (European Commission, 2005). The 2005 TEN-T report predicts that "the shift from road to rail will be particularly significant along the route of the A15 line" (European Commission, 2005), which runs from Rotterdam to Nijmegen, a city near the border. Thus the EU could argue, and has argued, that the conception and construction of the Betuwe line is an example of a top-down strategy of promoting modal shifts to reduce harmful environmental impacts.

However, the Betuwe line, which opened in June 2007, has been strongly criticized by environmental nongovernmental organizations and activist groups since plans were first announced in 1991 (van der Heijden, 2006). Early criticisms were led by VLOB[4], an association formed by twenty-one different residents' organizations in neighborhoods scheduled to be affected by the line's creation. The environmental activist group SNM[5], a branch of the larger nongovernmental organization European Federation for Transport and the Environment (T&E), initially cautiously welcomed the switch from road to rail transport, but later turned against the project, arguing that the Dutch and European governments were not doing enough to make rail freight transport competitive and abate noise pollution (van der Heijden, 2006).

In June 2007 T&E published an editorial by Willem-Jan von Grondelle, a representative on SNM, summarizing the group's arguments against the Betuwe line:

> The government had always made it sound so good: a freight rail link as a means of relieving the environmental impact of growing road transport. But by the early 1990s a variety of studies had demonstrated that in reality things would pan out rather differently. By providing a new track back to the German hinterland, what the Betuwe line would achieve most was improved competitiveness for the Port of Rotterdam. . . . Apart from anything else, a green transport option from Rotterdam to the hinterland already existed: river barges along the Rhine. . . .
>
> Although it now has a number of tunnels and other measures to reduce noise and ecological and landscape impacts (to some extent), there has been no effort to provide the

> sustainability-oriented freight transport policy the Netherlands so badly needs. . . .
>
> It is not what one would call a showcase environmental project. (European Federation for Transport and Environment, 2007b)

These criticisms of the Betuwe line have taken place within the context of broader critiques of the TENs-T and of European transport policy in general. As van der Heijden (2006) writes, "By linking TENs to climate politics, habitat conservation, the preferred kind of economic growth and the very grounds for mobility, these groups [such as T&E] have opened up the discussion on the desirability of individual TENs."

Such clashes can also be seen over the expansion of European ports and the development of the "motorways of the sea" included in the TENs-T. The EU, through the TENs-T and MARCO POLO, has promoted shifting cargo from road to sea as a way of decreasing environmental damage. But Psaraftis (2005) points out that it will be difficult to expand and maintain European ports in the face of high environmental and security standards. The creation of a potential container terminal in Dibden Bay, United Kingdom, was dropped in 2004 on environmental grounds, following a yearlong public inquiry (Psaraftis, 2005). A shipping-consulting firm has estimated that the average European port expansion delay because of environmental concerns is four years (Miller, 2007). In Belgium, an expansion of the Port of Antwerp had been delayed by three years, as of 2007, because of a group of activists fighting the destruction of Doel, a seventeenth-century village (Miller, 2007).

The arguments over ports, like the arguments over the Betuwe line, show how the EU and its critics frame the environmental impacts of transport projects differently. The EU, trying to combine environmental concerns with economic expansion, argues for the creation of more transport infrastructure, albeit less environmentally harmful infrastructure. European environmental activists, however, decry the need for both the infrastructure and the economic growth. A Dutch representative of Friends of the Earth, an environmental activism group, stated in regard to ports that "Europe just needs to buy less from Asia" (Miller, 2007). If environmental stewardship in the EU becomes seen as not simply redirecting growth but halting or reversing it, then the EU will find it difficult to convince its citizens that it incorporates environmental concerns into its transport policies.

Another line of criticism is not directed specifically at any one project, but at the goals of EU transport policy in general: namely, that it attempts to accomplish three mutually exclusive goals, in promoting economic growth, slowing or reducing harmful environmental impacts, and promoting "cohesion," which is to say decreasing economic disparities within Europe. The last has been promoted as a goal ever since Spain and Portugal, then consider-

ably poorer than the average EU member, joined the EU in 1986, and has increased since the admission of ten new countries in 2004 and two more in 2007. But reducing economic disparities, while maybe having social and economic benefits for Europeans, will not necessarily lead to reduced environmental impacts. Walz, Schade, and Doll summarize the conflict neatly:

> Cohesion policies are imperative to combat regional disparities. If successful, these policies result in a greater dispersion of economic activities within Europe, and counteract the centralization of activities. This gives rise to additional transportation needs, and transportation policies must accommodate these additional needs—resulting in additional CO_2 emissions. (Walz, Schade, and Doll, 2007, 92)

They conclude that if the EU is to reconcile its economic and environmental goals, it should focus less on infrastructure building and more on promoting "green" transport innovations (Walz, Schade, and Doll, 2007).

The existence of the cohesion goal means that in the EU, growth in transport demand is linked not only to economic growth in the EU as a whole, but in areas lagging economically. Table 3 lists the thirty TENs-T projects, the countries in which they are set, and the funding awarded by the EU in November 2007. Those countries with an annual GDP of less than 90 percent of the EU average, and thus receiving EU funds meant to promote economic cohesion—the EU-12, plus Greece and Portugal[6]—are highlighted in bold.

Table 3 shows that, while nearly half of the funding went to projects involving cohesion countries, so much of the TEN-T activity is concentrated in southwest Europe that the percentage drops to under 30 percent if Portugal is removed. Indeed, a T&E press release on the 2007 funding pointed specifically to the lack of money awarded to two motorway projects largely in cohesion countries, Projects #7 and #25 (European Federation for Transport and Environment, 2007a). As we have noted, one of the largest environmental concerns at the EU level is the growth in road transport in the EU-12. It would not be surprising if the financing trends of 2007 continue in the near future, with rail projects given higher priority over road projects. The question would be, then, whether such prioritizing would lead to less investment going to the less wealthy new members, undermining the EU's "cohesion" goal.

Meanwhile, only four of the EU-12 countries—Hungary, Poland, Czech Republic, and Romania—were involved in the fifteen projects selected for funding under the 2006 round of Marco Polo selections (Millán de la Lastra, 2006). In the near future, Marco Polo funding will likely continue to be skewed toward the original fifteen EU members, since there is greater freight activity in the wealthier member states. Again, however, the EU may find it politically difficult to balance its goals of enhancing the economic growth of its less-developed member states and of reducing the environmental

harms caused by transport.

Finally, the 2006 ECORYS report, which looked at transport investment priorities and funds to promote economic and social cohesion, suggests that the twin goals of environmental sustainability and decreasing regional disparities may not be as compatible as EU policy makers would like. Comparing two different scenarios, one with maximum investment in road projects identified in the EU-12 plus Spain, Portugal, and Greece, and one with maximum investment in rail projects, some of the EU-12 would see greater increases in GDP per capita from the former. The results are summarized in Table 4.

The ECORYS analysis also suggests that the EU-12 will need sufficient funding to maintain their road networks (ECORYS, 2006). Such efforts would, again, run contrary to the EU's efforts to promote modal shift. Improving the road network in the EU-12, even if it helps with economic growth in the short term, runs the risk of further entrenching the car as a mode of transport in those countries—and the resulting emissions. And yet refusing to fund road projects, if it is not combined with careful management of rail investment, risks stunting economic growth in the poorest part of the EU.

Conclusions

With federal transportation funding up for reauthorization in 2011, the United States will again see a debate as to optimal funding of transportation projects. This debate will likely be conducted in a context of concern about climate change and the harmful effects of CO_2 and other greenhouse gases. Given the European Union's having been more willing than the United States to factor climate change concerns into planning and policy making, some American policy makers and commentators will look to the EU as a potential model. This paper has examined the ways in which the EU has incorporated concerns about environmental impacts, specifically CO_2 emissions, into transport policy, specifically with the TENs-T and Marco Polo projects. It has also discussed how these policy projects have been received in the EU, and why environmental activists have not necessarily applauded the EU for its stated commitment to decrease the growth of CO_2 emissions.

As we have seen, the EU has, much more explicitly than the United States, addressed goals of reducing CO_2 emissions in its transport planning and policy. However, it is not clear that the EU can use the TENs-T to promote its three main goals—reducing environmental harms of transport, encouraging economic growth, and promoting socioeconomic cohesion—simultaneously. Banister et al. (2000) and the white paper (2001) both called for the "decoupling" of transport growth and economic growth, but so far the EU has not been able to make much progress in this area, and the "decoupling" goal was largely dropped from the 2006 Mid-term Review (European Environment Agency, 2007b). Moreover, a cri-

No.	Name	Modes	Countries affected	Funding awarded, 2007 (in million €)
1	Railway axis Berlin-Verona/Milan-Bologna-Naples-Messina-Palermo	rail	Germany, Italy	960.11
2	High-speed railway axis Paris-Brussels-Cologne/Bonn-Amsterdam-London	rail	Belgium, France, Germany, the Netherlands, United Kingdom	29.78
3	High-speed railway axis of southwest Europe	rail	France, **Portugal**, Spain	671.89
4	High-speed railway axis east	rail	France, Germany	10.00
5	Betuwe line	rail (freight)	the Netherlands	19.88
6	Railway axis Lyons-Trieste-Divaca/Koper-Divaca-Ljubljana-Budapest-Ukrainian border	rail	France, **Hungary**, Italy, **Slovenia**	754.50
7	Motorway axis Igoumenitsa/Patras-Athens-Sofia-Budapest	car	**Bulgaria, Greece, Hungary, Romania**	3.48
8	Multimodal axis Portugal/Spain–rest of Europe	car, rail, air, sea	**Portugal**, Spain	69.00
9	Railway axis Cork-Dublin-Belfast-Stranraer	rail	Ireland, United Kingdom	none
10	Malpensa airport (completed 2001)	air	Italy	none
11	Øresund fixed link (completed 2000)	rail, car	Denmark, Sweden	none
12	Nordic triangle railway/road axis	rail, car	Finland, Norway, Sweden	155.49
13	U.K./Ireland/Benelux road axis	car	Ireland, United Kingdom	80.71
14	West Coast main line	rail	United Kingdom	none
15	Galileo	satellite navigation technology	all	190.00
16	Freight railway axis Sines/Algeciras-Madrid-Paris	rail (freight)	France, **Portugal**, Spain	5.00
17	Railway axis Paris-Strasbourg-Stuttgart-Vienna-Bratislava	rail	Austria, France, Germany, **Slovakia**	438.35
18	Rhine/Meuse-Main-Danube inland waterway axis	river	Austria, Belgium, **Bulgaria,** Germany, **Hungary,** the Netherlands, **Slovakia**	190.2
19	High-speed rail interoperability on the Iberian Peninsula	rail	**Portugal**, Spain	267.0
20	Fehmarn Belt railway axis	rail	Denmark, Germany	374.29
21	Motorways of the sea	sea	Belgium, Denmark, Finland, France, **Greece**, Ireland, Italy, the Netherlands, Norway, **Portugal, Slovenia**, Spain, Sweden, United Kingdom	none
22	Railway axis Athens-Sofia-Budapest-Vienna-Prague-Nuremberg/Dresden	rail	Austria, **Bulgaria, Czech Republic,** Germany, **Hungary, Romania, Slovakia**	22.25
23	Railway axis Gdansk-Warsaw-Brno/Bratislava-Vienna	rail	Austria, **Poland, Slovakia**	7.07
24	Railway axis Lyons/Genoa-Basle-Duisberg-Rotterdam/Antwerp	rail	Belgium, France, Germany, the Netherlands	403.62
25	Motorway axis Gdansk-Brno/Bratislava-Vienna	car	Austria, **Poland, Slovakia**	none
26	Railway/road axis Ireland/United Kingdom/continental Europe	rail, car	Ireland, United Kingdom	10.00
27	"Rail Baltica" axis Warsaw-Kaunas-Riga-Taillinn-Helsinki	rail	**Estonia,** Finland, **Latvia, Lithuania, Poland**	124.05
28	"EuroCprail" on the Brussels-Luxembourg-Strasbourg railway axis	rail	Belgium, France, Luxembourg	57.18
29	Railway axis of the Ionian/Adriatic intermodal corridor	rail	Greece	37.00
30	Inland waterway Schiene-Scheldt	river	Belgium, France	420.19
			Total funding	5271
			Total funding for projects involving cohesion countries	2491
			Percentage of funding for projects involving cohesion countries	47.3 percent
			Percentage of funding for projects involving cohesion countries (minus Portugal)	29.3 percent

tique often voiced in European environmental discussions sees environmental preservation and economic growth as directly opposed to each other. Future infrastructure projects, even if the EU presents them as the least harmful of several alternatives, may be rejected by a polity worried that any contributions to growth can only result in further environmental damage. The TENs-T, although formulated at the EU level, are funded at the national level, and thus may be defeated by member states concerned that the EU, for all its leadership, does not place a high enough priority on the environment as opposed to economic growth.

Is there a way out of this dilemma? New technologies, such as zero-emission vehicles or cleaner light rail locomotives, may help. Horn and Nemoto (2005) express a cautious optimism that the Marco Polo program, aimed at the private sector, may be able to promote and fund technological advances in intermodal freight transport. Meanwhile, Walz, Schade, and Doll (2007) suggest that the EU can establish a global competitive advantage in the development of green technological innovations. But Marco Polo has been controversial within the European Parliament (Psaraftis, 2005) and is a fairly small amount of funding to bear the burden of stimulating technological development. A suggestion more

TABLE 4: Differences in GDP per capita growth between certain transport infrastructure investment scenarios (ECORYS, 2006).

Greater GDP per capita growth with maximum investment in road projects	Greater GDP per capita growth with maximum investment in rail projects	No difference, or not applicable
Bulgaria Poland Romania Slovakia Slovenia	Czech Republic Estonia Latvia Lithuania Portugal Spain	Cyprus Greece Hungary Malta

transport planners will have to expand their arsenal of potential strategies if they are to continue to supply adequate transport infrastructure while working to minimize short- and long-term environmental damage.

frequently heard (e.g., Banister et al., 2000) is to externalize the costs of road transport in the form of road pricing. Road pricing was originally meant as the source of funding for many of the TENs-T projects (Ross, 1998), but to date has not been implemented at the EU level or at the national level in any EU member state. The 2006 Mid-term Review called for the European Commission to create a model for calculating external costs for future infrastructure pricing projects by mid-June 2008 (CEC, 2006).

The final question is what lessons American transportation and environmental planners can learn from the EU's example. One apparent obstacle faced by the EU but not by the United States is the former's historical lack of a designated federal role in transportation planning. Unlike the EU, whose members are still national governments asserting national priorities, the United States Department of Transportation still controls federal transportation spending, which it can use to promote or discourage certain transportation policies at the state level. As with the European countries, so the American states will find it difficult to coordinate on projects where benefits within state borders are not immediately apparent, but there is precedent for a coordinated, federally led transport policy initiative—the creation of the interstate highway system in the 1950s. The EU's difficulty in coordinating its own environmental regulations with the differing goals of its members suggests that the United States, if it were to adopt a similar approach, would need to assert and enforce such a policy at the federal level, with federal dollars.

The antigrowth critique is currently less politically powerful in the United States than in the EU, particularly in the face of an economic downturn. However, American transport planners and infrastructure designers can learn from the EU's need to balance competing goals. It will be difficult, even for American planners, to justify new infrastructure projects on environmental grounds, as new projects (as Banister et al. predicted with new European rail networks) may induce greater transport demand; recall that Hickman and Banister (2007) forecast transport demand as overwhelming any emissions savings from technological innovation in the United Kingdom. In creating new infrastructure projects with potential environmental harms in mind, planning for modal shift may not be enough to meet desired goals, especially if the goals are reduction in greenhouse gases. Both American and European

JESSICA L. H. DOYLE is a doctoral student in City and Regional Planning at the Georgia Institute of Technology and will be awarded a master's degree in City and Regional Planning in August 2009. She works as a research assistant at the Center for Quality Growth and Regional Development, focusing on the relationship between infrastructure investment and regional economic growth. Before entering graduate school Ms. Doyle worked as an editor for Economist.com, the online edition of *The Economist* magazine. She lives in Atlanta, Georgia.

Notes

1. Hereafter this paper will refer to the ten countries that have joined since May 2004 (Bulgaria, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, and Slovenia) as the EU-12. The EU members who joined prior to 2004 will be referred to as the EU-15.

2. The relationship between increasing economic prosperity and increased car buying can be illustrated by the significant decline in car sales in multiple European countries, including the EU-12, in early 2009. The European Automobile Manufacturers' Association reported that in February 2009, 18.3 percent fewer new cars were registered in Europe compared to February 2008. The drop was 30.3 percent in the EU-12 (excluding Cyprus and Malta), including a 76.2 percent decline in Latvia, a 66.5 percent decline in Romania, and a 21.8 percent decline in Slovenia, generally considered one of the most stable and prosperous of the new member states (ACEA, 2009).

3. Officially the Marco Polo program can be divided into Marco Polo I, which ran between 2003 and 2006, and MARCO POLO II, which received formal funding from the EU's 2007–13 budget. There is no substantive difference between the two in terms of aims, and so I will refer to both as Marco Polo.

4. Vereniging Landelijk Overleg Betuwelijn, or Association for National Deliberation of the Betuwe Line (van der Heijden, 2006).

5. Stichting Natuur en Milieu, or Foundation for Nature and the Environment (van der Heijden, 2006).

6. The original four "cohesion" countries, when the Cohesion Funds assistance program began in 1993, were Greece, Ireland, Spain, and Portugal. Countries are ruled ineligible for such EU assistance after their annual GDP per capita increases to 100 percent of the EU average. Ireland became ineligible for cohesion funds in 2004; Spain is currently being phased out. All of the EU-12 became eligible for cohesion funds upon joining the EU.

Works Cited

Banister, D. *Unsustainable Transport: City Transport in the New Century.* New York: Routledge, 2005.

Banister, D., D. Stead, P. Steen, J. Akerman, K. Dreborg, P. Nijkamp, et al. *European Transport Policy and Sustainable Mobility.* London: E & FN Spon, 2000.

Commission of the European Communities (CEC). *Keep Europe Moving—Sustainable Mobility for our Continent: Mid-term Review of the European Commission's 2001 White Paper.* Brussels: European Commission, 2006.

A Sustainable Europe for a Better World: A European Union Strategy for Sustainable Development. Brussels, Belgium: European Commission, 2001.

Council of the European Union (CEU). *Review of the EU Sustainable Development Strategy.* Brussels, Belgium, 2006.

EU Lacks Ideas and Direction in Economic Crisis. Der Spiegel. 16 February 2009. <http://www.spiegel.de/international/europe/0,1518,607952,00.html> (4 April 2009).

ECORYS Nederland BV. *Strategic Evaluation on Transport Investment Priorities under Structural and Cohesion Funds for the Programming Period 2007–2013: Synthesis Report (No. 2005. CE.16.AT.014).* Rotterdam, Netherlands, 2006.

The Environment: Winds of Change. The Economist. 9 March 2007. <http://www.economist.com/world/europe/displaystory.cfm?story_id=8835705> (13 January 2008).

Europe's Railways: A High-speed Revolution. The Economist. 5 July 2007. <http://www.economist.com/business/displaystory.cfm?story_id=9441785> (13 January 2008)

European Automobile Manufacturers' Association (ACEA). *PASSENGER CARS: European Registrations Down 18.3 Percent in February.* (Press release.) 2009. <http://www.acea.be/index.php/news/news_detail/passenger_cars_european_registrations_down_183_in_february/> (4 April 2009).

European Commission. *Trans-European Transport Network: Implementation of the Priority Projects Progress Report.* May 2008.

*Trans-European Transport Network (TEN-T): Selection of
Projects for the TEN-T Multi-annual Programme 2007–2013 and
the Annual TEN-T Programme 2007.* MEMO/07/491. Brussels,
Belgium, 2007.

*Trans-European Transport Network: TEN-T Priority Axes
and Projects 2005.* Luxembourg: Office for Official Publications
of the European Commission, 2005.

*White Paper—European Transport Policy for 2010: Time to
Decide.* Luxembourg: Office for Official Publications of the Eu-
ropean Communities, 2001.

**European Commission Directorate-General Transport and
Energy (DG TREN).** *Marco Polo Programme: Frequently Asked
Questions (FAQ).* 17 July 2006. <http://ec.europa.eu/transport/
marcopolo/faq/doc/faq.pdf> (10 August 2007).

European Economic Community. *Treaty of Rome.* 1957.
<http://eur-lex.europa.eu/en/treaties/index.htm#founding>
(15 January 2008).

European Environment Agency. *Transport at a Crossroads: TERM
2008: Indicators Tracking Transport and Environment in the Eu-
ropean Union.* EEA Report No. 3/2009. Luxembourg: Office for
Official Publications of the European Communties, 2009.

*Several EU Member States to Miss 2010 Air Pollutant
Targets.* <http://www.eea.europa.eu/highlights/several-eu-
member-states-to-miss-2010-air-pollutant-targets> [5 De-
cember 2007].

*Transport and Environment: On the Way to a New Common
Transport Policy.* Luxembourg: Office for Official Publications of
the European Communities, 2007b.

European Federation for Transport and Environment. *Commission
Claims Sustainability In Tens Funding List.* 13 December 2007.
<http://www.transportenvironment.org/Article529.html>
(4 January 2008).

Betuwe and LBT: A Tale of Two Infrastructure Projects.
21 June 2007. <http://www.transportenvironment.org/Arti-
cle418.html> (4 January 2008).

Executive Agency for Competitiveness and Innovation. *MARCO
POLO News Alert 7.* December 2008. <http://ec.europa.eu/
transport/marcopolo/publi/news/mp_newsalert7.pdf> (4 April
2009).

Faludi, A., and B. Waterhout. *The Making of the European Spatial
Development Perspective: No Masterplan.* London: Routledge,
2002.

Hickman, R., and D. Banister. *Looking over the Horizon: Transport
and Reduced CO2 Emissions in the UK by 2030.* Transport Policy
14 (2007): 377–387.

Hollinger, P., G. Parker, A. Bounds, and S. Laitner. *EU States
Tussle over Emissions Promises.* Financial Times, 14 Janu-
ary 2008. <http://www.ft.com/cms/s/0/7e40bcb4-c2e8-11dc-
b617-0000779fd2ac.html?nclick_check=1> (15 January 2008).

Horn, B., and T. Nemoto. *Intermodal Logistics Policies in the EU,
the U.S., and Japan.* Transport Policy Studies Review 7(4) (2005):
2–14.

Millán de la Lastra, C. *The Marco Polo Programme: Key for
Sustainable Mobility.* Presentation made at the Marco Polo II
Conference, Lisbon, Portugal, 2007.

The Programme: Past, Present, and Future. Presentation
made at the Marco Polo II Conference, Nantes, France, 2006.

Miller, J. W. *Activists Choke Growth of European Shipping.* Wall
Street Journal, 18 May 2007.

NEA Transport Research and Training BV. *TEN-STAC: Scenarios,
Traffic Forecasts and Corridors on the Trans-European Network.*
2003.

Psaraftis, H. N. *EU Ports Policy: Where Do We Go from Here?*
Maritime Economics & Logistics 7(1) (2005): 73.

Rodenburg, C. A., B. Ubbels, and P. Nijkamp. *Policy Scenarios for
Achieving Sustainable Transportation in Europe.* Transport Re-
views 22(4) (2002): 449–472.

Ross, J. F. L. *Linking Europe: Transport Policies and Politics in the
European Union.* Westport, Connecticut: Praeger, 1998.

**Schade, W., C. Doll, M. Maibach, M. Peter, F. Crespo,
D. Carvalho, et al.** *COMPETE Final Report: Analysis of the Con-
tribution of Transport Policies to the Competitiveness of the EU
Economy and Comparison with the United States.* Karlsruhe,
Germany, 2006.

Trans-European Transport Network Executive Agency (TEN-T EA). *Priority Project #5: Betuwe Line.* <http://tentea.ec.europa.eu/en/ten-t_projects/30_priority_projects/priority_project_5/priority_project_5.htm> (4 April 2009).

United Nations Framework Convention on Climate Change (UNFCCC). *Kyoto Protocol Status of Ratification.* 12 December 2007. <http://unfccc.int/files/kyoto_protocol/background/status_of_ratification/application/pdf/kp_ratification.pdf> (15 January 2008).

van der Heijden, H.-A. *Multi-level Environmentalism and the European Union: The Case of Trans-European Transport Networks.* International Journal of Urban and Regional Research 30(1) (2006): 23–37.

van Exel, J., S. Rienstra, M. Gommers, A. Pearman, and D. Tsamboulas. *EU Involvement in TEN Development: Network Effects and European Value Added.* Transport Policy 9 (2002), 299–311.

Walz, R., W. Schade, and C. Doll. *Interaction of EU Transportation Policy and Climate Policy.* Intereconomics 42(2) (2007): 90–95.
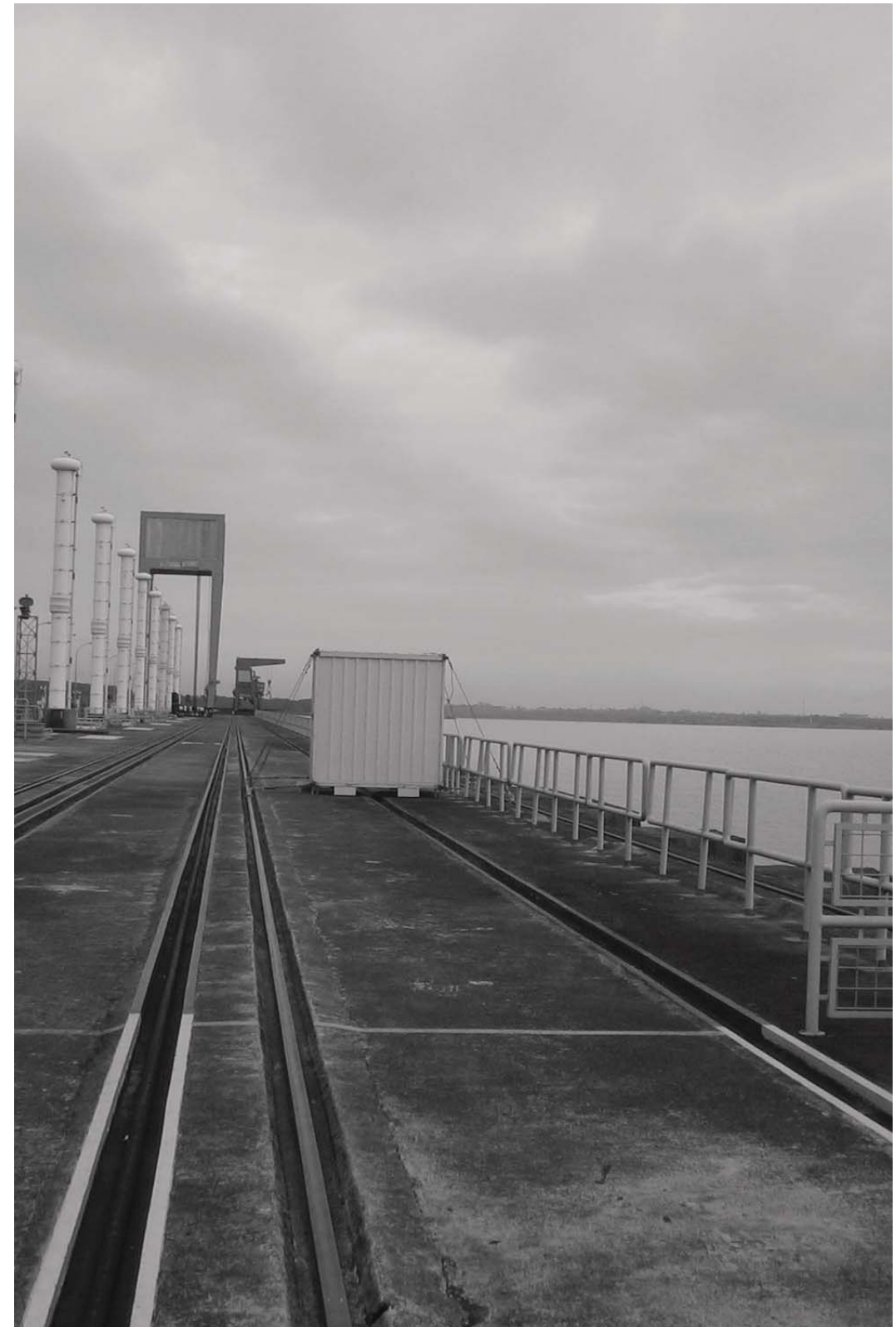
# Crisis Management in Public Administration

FADILLAH PUTRA

In public administration or in the public policy realm, crisis management is given little attention either in the academic or in the professional worlds (Schneider, 1995). Traditional public administration focuses only on planned and programmed activities, meaning those passed through long public policy making phases and procedures. This process creates the general perception of public administration as a science in which organizational and bureaucratic routines become the main concern. However, the most challenging role of government is not to control these routines, but rather to perform well when tested by crisis (Farazmand, 2007). There are many stories that relate government's failures to cope with crises. At the same time, victims rely heavily on government actions during crisis, because they always think that government is the most responsible institution to handle a crisis (Boin, 2005). However, the literature on crisis management in the public sector is very limited.

This essay explores some strategic topics of crisis management that are relevant to the development of public administration science. Those topics are: (1) the basic understanding of crisis management in public affairs; (2) the role of government in a crisis situation at both national and local levels; (3) the role of international organizations; and (4) the media and civil society involvement in crisis management. Comparative case studies (Hurricane Katrina in the U.S. and the Lapindo Mud Explosion in Indonesia) will be provided in order to give real-world perspective to these four aspects.

Understanding a crisis situation

As commonly understood in much of the literature on the topic, including the U.N. standard, there are two contexts of crises: natural and man-made (Samal, 2005; Schneider, 1995; Nudell, 1988). However, some crisis management scholars are not satisfied with this categorization. Ali Farazmand (2001) argues that there are four contexts of crisis: political, economic, leadership, and environmental. This categorization is very descriptive and provides more details about man-made crises (political, economic, and leadership). The environmental context is still ambiguous because environmental crises could be man-made (such as the
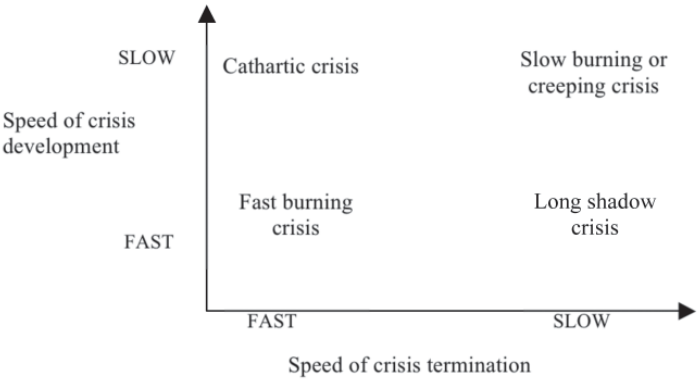
Exxon Valdez Oil Spill in Alaska in 1989) or natural (the Asian Tsunami in 2004 or Hurricane Katrina the year after).

On the other hand, Schoff (2004) differentiates crises into three contexts: natural, incidents, and accidents. Through this categorization, he explains the dimensions of man-made crisis, which he defines as accidents (unintentional man-made crises, such as the Three Mile Island case in Pennsylvania in 1979, and Chernobyl in Ukraine in 1986) and incident (intentional man-made crises, such as terrorist attacks or war). These different contexts of crisis are crucial in shaping and evaluating government response.

A further important distinction is the differentiation of incidents when a true crisis situation is present or incidents in which events are in the normal parameters of public sector activity. First of all, a crisis situation relates to a particular situation when government capacity is inadequate to handle a situation using its own resources (Ozerdem, 2006). For example, if a bus accident happens and kills seven people, it is not a crisis, because the police and hospital can handle it with their own resources. But if the bus contains a bomb and explodes right in the middle of downtown, it injures thousands of people, the police aren't able to handle the panic, and the hospitals don't have enough space for victims, then that is a crisis. Other characteristics of a crisis are: severe threat (Farazmand, 2001; Rosenthal, 2001); threat to the basic structure (physical and nonphysical) and values (such as security, welfare, or health) of society (Boin, 2004; Farazmand, 2007); the inconceivability and unexpected nature of an event (Dror in Rosenthal, 2001); and an event that generates extreme psychological stress (Schneider, 1995). With this complex explanation of the term "crisis," the best way to understand it is not to perceive it as the particular calamity moments themselves, but how the event relates to an organization's capacity to respond to the situation (Smith, 2006).

There are many types of crisis situations. In general, we can differentiate crisis into two types: sudden crisis (such as tsunami, terrorist attack, or nuclear reactor explosion) and creeping crisis (such as the spreading of a virus or the global warming threat) (Farazmand, 2001). More details of this typology of crisis can be seen in figure 1.

Obviously, the hardest crisis to cope with is a fast-developing one, because the degree of preparedness of the government to handle it is very low. On the other hand, in a slow-developing crisis, such as a cathartic or creeping crisis, if the awareness of the government to the crisis is low, it could create long-term and possibly irreversible damages.

Along with the negative face of a crisis, some crisis events may yield positive outcomes. A crisis could become a triggering opportunity for improvement of the system (Farazmand, 2001; Nudell, 1988; Rosenthal, 2001). A postcrisis reconstruction process could yield outcomes that are better than the precrisis situation, and the government also is afforded the opportunity to learn about its own weaknesses and thus improve upon its substantial ability to respond to future crisis events.

Good crisis management

There are at least three domains in which crisis management is systematically analyzed by scholars: business, international politics, and public affairs. Business is a discipline in which crisis management is a prominent subject of discussion. In this area, crisis management relates to how to make the corporation survive after a crisis, meaning how to "avoid suffering financial losses after the crisis" (Laye, 2002). The study of crisis management is also commonly found in international relation studies, most commonly related to potential war between countries. The main goal of crisis management is ensuring that the tensions between countries do not turn into war, and that good diplomacy will be the main strategy of crisis management in this sense (Winham, 1988, Schoff, 2004). The last discipline that is concerned with crisis management, though not as much as the previous two, is in public affairs/administration. In this domain, crisis management relates to how government can prevent, react to, and rehabilitate after a crisis. This essay will only focus on the discussion of crisis and response from the perspective of public sector intervention and management of domestic crises. Public sector crisis management in general can be defined as the implementation of management principles (such as planning, organizing, decision making, coordinating, and controlling) in a crisis or emergency situation (Samal, 2005; Nudel, 1988; Rosenthal, 2001).

However, crisis management is not merely applying basic management principles into a crisis context. Uriel Rosenthal (2001), for instance, explained that the crucial phases of crisis management are prevention, planning, response, and aftermath actions. The last

phase (aftermath action) is not a part of the traditional public management discussion. Indeed, there are some specific phases in crisis management that are not part of traditional management principles.

There are three specific phases of public sector crisis management. The first is the preventive aspect; some scholars describe this aspect using different terms, such as planning, preparedness, and/or mitigation. The second is the rehabilitation aspect; some scholars call this aspect relief, recovery, response, or aftermath actions. This aspect is also the key aspect of crisis management (Ozerdem, 2006; Drennan, 2007; Samal 2005). The third one is coordination; this aspect is not specific to a crisis management context, but "coordination" between institutions in a rapidly changing situation has been emphasized by many scholars. Since an "in-crisis" government may not seek to limit incoming resources (Farazmand, 2007), many organizations may intervene to provide help or goods. Therefore, during or after a calamity, there are often many organizations, institutions, and elements coming into the crisis location. Coordinating those organizations so that the distribution of goods and the activities of each institution will not conflict or overlap is a major challenge for government (Nudel, 1988).

The next step in analyzing public sector crisis management is evaluating the effectiveness of crisis management in practice. Boin (2008) raises three important requirements for good crisis management, which are: sense making, how to understand the situation quickly; meaning making, how to create solid information for media and the public; and learning, how government can learn from the crisis to improve its capacity. Additionally, Ali Farazmand (2007) emphasizes "creative and agile leadership" as the most important requirement for good crisis management.

There are also some specific crisis management requirements that apply to urban areas. First, local governments need to have their own strong crisis management systems, which will allow them not to rely heavily on central government when the crisis occurs (Rosenthal, 2001). The cases of the 9/11 terrorist attack in New York City in 2001, 11/3 in Madrid in 2004, and the Mexico City earthquake in 1985 showed how important it is for cities to have their own crisis management system. Cities should have their own crisis management system because of the density of inhabitants and because they are the centers of business and government networks. Yet, Kartez and Lindell (in Sylves, 1990) said that while "80 percent of the U.S. local governments have a formal disaster plan and system, their leaders continue to be surprised when the crisis occurs." Therefore, the existence of a strong system is no longer the issue, but rather how to familiarize relevant agencies and responsible leaders with the system in order for them to use it with efficiency.

The second important requirement for urban area crisis management is multiethnic awareness. Obviously, urban areas

have had urbanization and immigration for a long time. Urban areas are the melting pot of many cultures and ethnicities. Every ethnic group has its own standard norms and values; therefore, if the crisis leaders are not sensitive to this aspect, misunderstandings between government and the people could interrupt the process of crisis responses and relief (Rosenthal, 2001).

Both ethnic differences of the urban social aspect could disrupt the rehabilitation process and economic gaps. Poor communities (which in some senses are also related to certain ethnic groups) are the most vulnerable groups during a crisis:

> In New Orleans [during the Katrina crisis], local government did not provide transportation for the citizens without their own vehicles to evacuate. As it turns out, most of them were in predominately black neighborhoods. Racial and economic demographics in disaster-prone zone has bee shown to be common adjoining hazardous material sties. . . . In July 2005, monsoon rains flooded the Indian city of Mumbai (Bombay) and eight million of India's poorest were the victims. (Pinkowski 2008, 12)

Good crisis management also strongly depends on decision-making strategies. Figure 2 emphasizes how decision making can achieve maximum accuracy when the decision maker working in a crisis situation makes good decisions rapidly, despite risk and time pressures. The first and the most important step in this method is situation assessment, which involves attending to a selection of the available cues, assembling them into a pattern, and searching long-term memory to recognize the problem (Flin, Youngson, and Yule, 2006).

FIGURE 2. Relationship between situation assessment and decision-making strategy (Adapted from Crichton and Flin in Drennan, 2007, 168).
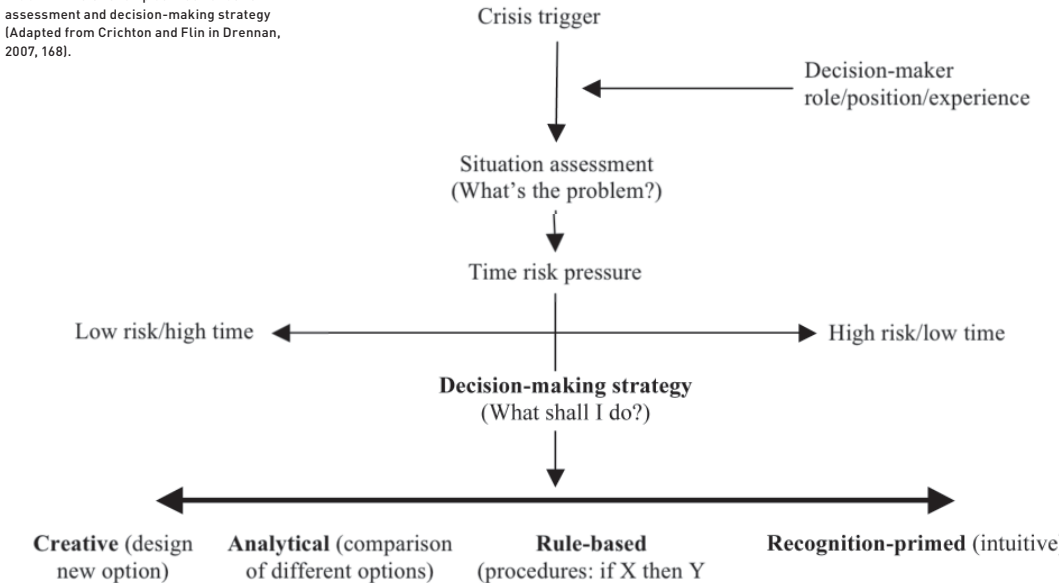
The second step is choosing decision-making strategies based on the types of crisis (figure 1). If the type of crisis is "fast burning," crisis leaders might choose recognition-primed/intuitive because this method is good for quick action to prevent a rapid cascade to a catastrophic adverse outcome. If the type of crisis is "cathartic crisis," the leader should use rule-based strategy because he/she has enough time to consult with the procedures manual/checklist to find the given responses. If the type of crisis is "long shadow," the leader may use analytical strategy because he/she has more time to recall a number of possible courses of action and compares them simultaneously to determine which one best fits the needs of the situation. Lastly, if the type of crisis is "slow burning," a crisis leader could use creative strategy because there is plenty of time for him/her to try any innovative solutions to solve the problem. However, one still has to keep in mind that evacuating and aiding victims is the first priority regardless of which strategy is chosen.

Ultimately, the fundamental concept of good crisis management is determined by the "gap between bureaucratic norm and emergent norm" (Schneider, 1995). The more government can shrink the gap, the better the crisis management will be. Bureaucratic norms always value regularities, procedures, and blueprints. Public officers are required to follow the procedures and blueprints tightly in order to precede their jobs. However, in emergent norms, the situation is the opposite. Crisis situations change very fast and most of the time are unpredictable. Therefore, instead of following the bureaucratic procedures, emergent norms requires crisis officers to be adaptive to the situation. As there are no regularities in crisis situations, emergent norms require public officers to instead come up with strategies to handle the problem rather than simply use blueprints and regulations. The bureaucratic procedures and the emergent norms contradict each other, posing a big challenge for public management of crises.

In a crisis situation, government needs to be more adaptive (emergent norm). On the other hand, it also has to ensure legal accountability (bureaucratic norm) of each decision it takes. Dealing with these two norms, of course, is not an easy task. In so doing, governments need to adjust their bureaucratic norms to the realities and needs that exist on the ground during the crisis situation. This is crucially important for public sector leaders when they are facing a crisis situation. Of course, in "long shadow" and "slow burning" types of crisis, government could impose its bureaucratic norm, but not in a "fast burning" crisis.

In sum, there are four main criteria to measure the performance of public sector crisis management. First, the question is whether or not the government has a crisis management system within its organization. The tasks of the system are preventive, rehabilitation, and coordination measures. Second is the question of the sensitivity of government to multi-identities (including ethnic, class, age, and gender) while rescuing the victims. The third

criteria is related to decision-making strategy in a crisis situation. And the fourth is the question of how successfully the government can adjust its bureaucratic norms with emergent norms in the crisis situation.

Role of government

Most governments do not pay too much attention to crisis management because they think that a crisis is an unusual and unpredictable situation, so well-planned and organizational actions from government are not needed. Yet, governments have to be the most prepared institutions, because people (especially victims) always expect that governments will play central roles during crises (Drennan, 2007; Boin, 2008). Moreover, the failure of a government to cope with a crisis is not tolerated politically; failure to effectively respond to a crisis situation could destroy the political legitimacy of a regime (Boin, 2005). Crisis, hence, must be seen as a test for government (Farazmand, 2007).

Arjen Boin described four aspects of government that are impacted by crisis. Among them are "effects on key political officeholders, strength of leadership, political institutions and policy changes" (Boin, 2008, 292). Moreover, government is sometimes held responsible in a crisis, especially if it fails to take adequate preventive efforts. For example, when government fails to educate people or to implement important standards about building safer housing for earthquakes (like the tsunami) more people may be killed because of this lack of action (Samal, 2005; Ozerdem, 2006). Indeed, the main idea of crisis management is not to stop the occurrence of calamities, especially from natural crises, but the most critical objective in any crisis is "to contain damages as much as possible and prevent the loss of life and property" (Kalantari in Farazmand, 2004, 619). This is basic criteria to evaluate governments' core role in the overall crisis management system.

Why do some governments succeed while others fail in handling a crisis? Saundra K. Schneider (1995) reminds us to be careful when judging a government's success or failure in terms of crisis management, because judgments are usually based on public opinion (media) rather than based on objective evaluation. Of course public opinion is important, but it is not the only instrument of judgment that should be taken into consideration. The other complication of judging the failures of government is to decide if government actions are too slow or if public demand is unrealistic. Therefore, Schneider ended up measuring the gap between the bureaucratic norm and the emergent norm as the main tool to evaluate the quality of a government's crisis management.

In terms of quality of crisis management, there is an interesting and important argument that claims that the weatlth of a country does not affect the quality of crisis management. A study conducted by Ozerdem (2006) in Japan, Turkey, and India serves as an example for this argument. Japan, as one of the wealthiest countries in the world, has a lack of volunteerism (which is extremely important during a crisis), due to its modern individualized society. In India, on the other hand, there was no lack of volunteerism, but the country does have problems in infrastructure because of economic reasons.

This argument is important because no countries' leaders should be overconfident or underestimate themselves regarding crisis preparedness. All countries have the same chance of being successful or failing. The capacity of government to cope with crisis depends on how seriously the government thinks about this particular issue.

Quality crisis management is not only related to fewer numbers of victims, but also to how much government can learn, and then make progressive changes from the crisis. In the case of Japan, there were policy and administrative changes; in Turkey they had bureaucratic paradigmatic shifts after the Marmara earthquake; but in India there were not so many changes after the crises (Ozerdem, 2006; Boin, 2008). Therefore, the point of crisis as an opportunity does not always happen. Sometimes a crisis does not affect anything or even makes the status quo stronger.

The concrete actions that governments can take in crisis management fall into three categories. First are preventive actions. In the cases of slow-developing crises, governments can implement long-term measures, while in cases of fast-developing crises governments can have a high-level preparedness system to minimize victims when a crisis occurs (Samal, 2005). This sort of action calls for rigorous contingency planning, which consists of defining roles of responsibilities and the line of command guidance in a crisis event (Drennan, 2007). Second, during the crisis governments have to create a clear, organized command structure, which can coordinate and control the situation (Kalatari in Farazmand, 2004). Third, after a crisis, management is related to how governments can encourage people to overcome their own problems with government assistance (Samal, 2005).

Some countries already have a good government crisis response system. The U.S., for instance, has a crisis response system that puts community and local government at the forefront. The system also includes coordination at state and federal levels, and it decides when to send FEMA (Federal Emergency Management Agency) to the location after presidential declaration. However, there are some problems, such as overlap of responsibilities within government institutions, public officials who are unable to coordinate all elements, due to the budget constraint, that make the system not work perfectly (Schneider, 1995). In London, responsibilities among local departments for handling crisis situations is stated clearly, and specific job distribution includes what police, hospitals, firefighters, and others should do when a

crisis occurs (Drennan, 2007, 131). We can find a good example of a government crisis management system in Iran through a council (NETF/National Emergency Task Force) that has the three main duties of "prevention, relief and reconstruction which are constitutionally stated in article number 5-2" (Kalatari in Farazmand, 2004, 621). From these examples, we can see that in regard to a good crisis management model, the content of intergovernment relations shape the response system.

The relationship between local and central governments is the central issue in the discussion of the government's role in crisis management. First of all, the capacity of local government has to be clarified. In terms of crisis management, the meaning of capacity is linked with finances (how much money should be allocated to maintain the system), authority (how much discretion it has in making decisions), skill (how many experts it has), and administration capacity (how good is the credibility of organization and infrastructure). Some scholars, such as Settle, Cigler, and Vittes, argue that besides these internal aspects (local government capacity) coordination problems between local and central governments have also led to failures of crisis coping elsewhere (Sylves, 1990).

Local governments need to have their own crisis management institutions, especially for big cities (Pinkowski, 2008, 158; Rosenthal, 1994). Therefore, decentralization is important in crisis management. Decentralization in this sense is not only meant to empower local governments so that they have discretion in their decision making, but also provides more money and other resources. In the case of a large-scale crisis, the central government needs to do coordination of interstate borders and aid victims without sacrificing local autonomy by government impact (Pinkowski, 2008).

Lastly, governments ought to treat crises and disasters like they treat any other policy sectors such as transportation, education, health, or agriculture. The treatment of crisis implies not only creating specific institutions and organizations to handle them, but also creating a good planning strategy, implementation strategy, and evaluation system regarding crisis management (Schneider, 1995).

The role of media

The role of the media is emphasized in the literature on crisis management. This fact shows the significant part that media plays in the whole context of crisis management study. There are three aspects to present in this section: the basic understanding of the media, the position of media in a crisis situation, and how government should handle media in crisis management.

The media is a news business and they live from selling news. News is always related to unique and unusual events (Nudell, 1988, Rosenthal, 2001); there is massive violence, destruction, and acute human or company culpability in particular accidents (Nudell, 1988, 64; Boin, 2005, 72). Normal and regular events are not considered news in the media's perspective. Thousands of airplanes landing safely every day is not news, but one failed landing is news. Therefore, disaster and crisis situations always become news, the commodity that media always wants to sell.

> Network news organizations, along with print journalists, want to report items that will appeal to the widest possible audience. Stories about unmanageable disaster conditions, bureaucratic indifference to human suffering, and the sheer human chaos produced by natural catastrophes are attractive scenarios from a journalistic perspective. (Schneider, 1995, 164–165)

However, the media have been playing a very significant role, especially in providing information to the public. The media does not only provide information about the situation during and after a crisis, but also information regarding preparedness for the crisis. In addition, the media should ensure that they tell a good story and make government look good. The media are crucial for alerts, warnings, and accurate and useful evacuation information.

In general, there are two kinds of media, print (newspaper and magazine) and electronic media (television and radio). These two categories are fundamentally different: electronic media focus on time (the faster the better), while printed media pay more attention to the completeness of the story. On the other hand, there are some similarities between them. First, they always want to get a clear explanation of the events. This nature makes the media always want to find more sources of information, especially when the official sources do not satisfy them. Second, the media has a certain duration for publishing one particular topic, and after several stories they will change the topic. No matter whether the crisis is already resolved or not, the media tend to find another issue if their audience is getting bored with the topic (Nudell, 1988).

In a crisis situation, the media could determine the outcome of government efforts, create the postevent perception, disseminate ideas of what actually happened, assess the authority performance, and promote or squash rumors (Rosenthal, 2001). Therefore, government needs to provide very good and proper information to the media. Yet, the media are usually more interested in getting the information from victims or their families or friends as sources rather than government officials (Nudell, 1988). Indeed, victims and people around them are naturally absorbed with their problem, sadness, and suffering. Then, they usually demand more from the government than it offers. This sort of phenomenon is usually picked up by journalists. On some level, when journalists write this story, they will make the officers work under pressure (Rosenthal, 2001). This is the biggest challenge for government in managing crisis. If government mismanages the media in crisis, the gap between bureaucratic and emergence norms could become larger (Schneider, 1995) or even worse. This also could speed the transformation from crisis to chaos (Farazmand, 2007).

The power of media and yet the media's tendency to show the negative effects of events are the reasons why, sometimes, government regards the media as an enemy. This is not a good attitude because the media is central to delivering important information to the public, to warning people about the possible dangers, to squashing rumors, and to telling people about how to access government assistance. Government still needs media. It is important for government to find the balance between the negative and positive aspects of media in a crisis situation.

> Hence the emerging views of the role of media during disasters and crises is a more paradoxical one: yes, they can cause a lot of trouble and consume a lot of attention; but yes, they can also be tremendously helpful to communicate with the public. (Rosenthal, 2001, 127–128)

This point leads us to the question of how the government should handle the media. The most important thing for a government to do is not to avoid the media. If the government fears the media, journalists will think that the government is hiding something, and then they will go to find other sources that government cannot control (Nudell, 1988; Rosenthal, 2001, 103). Therefore, providing systematic, coordinated, and controlled information to the media is extremely important.

In order to provide systematic and controlled information to the media, highly skilled and experienced spokespersons are needed. The main requirement of the spokesperson is a very good understanding of both the outside (rumors and public opinions) and inside (what's going on in the government response system) situations. Ideally, there is only one spokesperson to avoid inconsistent information (Nudell, 1988). However, in some places this duty is handled by multiple parties. In the Netherlands, for instance, in the 1992 Biljmer disaster, the spokesmen were known as the "triumvirate," which included the mayor, head of the police department and head of the fire department (Rosenthal, 1994). The other important thing regarding the control of information to the public is the content of the statement that the spokesperson makes. The statement has to be well prepared, easily understood (does not cause multiple interpretations), comprehensive, and responsible, and the most important thing is the message has to be honest. As Nudell points out:

> Honesty is really the best policy in crisis management, if only because of the dangers of being found out. You don't have to tell the media everything you know, but what do you say should be accurate. This applies not only to the literal accuracy of the facts, but to overall impression you give as well. Don't try to mislead reporters; tell them what you can and don't talk about what you can't. It won't always be easy, but it will do the most good and the least damage in the long run. (Nudell, 1988, 78)

A press conference should be held every day, at least twice a day, morning and evening (Rosenthal, 2001). By doing so, it will satisfy the journalists' deadlines and the response of the newest progress of government works will also be announced earlier. By using all of these strategies, the government places the media as an integral part of the crisis management.

Role of civil society

Civil society in this essay means institutionalized and organized private and nonprofit institutions. This could mean the difference between grassroots organizations (GROs) or nongovernmental organizations (NGOs) (Uphoff, 1994), or the more detailed categorization from Kaldor (2003) of social movement, NGOs, social organizations (similar to GROs), and nationalist/religious groups. Therefore, the focus of the role of civil society in crisis management is on the role of these formal organizations, commonly called civil society organizations (CSOs).

There are two main reasons why the involvement of CSOs in governmental crisis management is important. First, CSOs, especially at local and community levels, can think and react more rationally and contextually during the crisis than government because they feel the disaster directly (Boin, 2004, 75). In the case of the supercyclone at Orissa, India, in 1999, CSOs came to the location earlier than government did (Samal, 2005). Moreover, CSOs also can provide experts, basic necessities, and volunteer forces more quickly and with less bureaucratic involvement than government does (Ozerdem, 2006). In some case studies we can see that CSOs played a very important role during Katrina.

The second reason is political and organizational. Public and/or civil society is the most important stakeholder of public sector organizations (PSOs); therefore, PSOs have a responsibility to public or civil society. This point leads us to the conclusion that governmental response systems have to have public accountability (Schneider, 1995), and also social responsibility. This implies not only answering the public's questions, but also giving them input and advice, and allowing them to evaluate the whole process of crisis management (Drennan, 2007).

To understand the real action that CSOs could take in a crisis situation is important. As already stated at the beginning of the paper, the key concept of crisis is an unusual and extraordinary situation that attacks the basic structure and values of a society (Boin, 2008). Therefore, the process of reconstruction not only comprises the physical aspect, but also psychological and social aspects. This is the basic argument of "community redevelopment concept" in which citizen participation is emphasized in order "to bring the community back to exactly where it was before disaster" (Sears in Pinkowski, 2008). In order to do so, there are many real actions that CSOs could perform, such as rebuilding the social networks, providing leadership, and recovering people's psychology. For physical rehabilitation, the real actions could be mobilizing volunteers,

providing public goods (foods, shelter, health services, etc.), and providing experts (Samal, 2005; Ozerdem, 2006).

A new model of CSO's involvement in crisis management has been developed and is gaining support. Alka Dhameja (in Pinkowski, 2008) came up with the community-based disaster management (CBDM) concept, which is a community-based approach. This model emphasizes the involvement of CSOs in crisis management to enable civil society to become directly involved in the formulation, implementation, and evaluation of crisis public policy. Through putting the focus on local community CSOs, Samal (2005) argued that local communities have to be the most prepared element because they are the first element that is directly touched by a crisis and its effects. This is the basic argument of community contingency planning (CCP) that is developed at a village and community level. In India, these small organizations have an umbrella organization at the state level called ODMM. This organization guarantees the ongoing involvement of civil society in an overall government crisis management system (Samal, 2005). This kind of organization is also helpful for government in that it makes coordination easier.

Role of international institutions

Globalization has been widely discussed in the public administration realm. International actors and elements that were not taken into account in governance studies now have become the important elements (Farazmand, 2004). Also in crisis management, the role of these international institutions has become increasingly important. However, there are still some issues regarding their role across countries.

Large-scale calamities inevitably attract world attention. The disaster at Sichuan, China, that caused 69,000 people to be killed is one example, as are the billions of U.S. dollars spent in the Asian tsunami in 2004, Hurricane Katrina in 2005, and the South Asia earthquake in 2005 (Coppola, 2006, 530). Many international institutions were present to give help. However, that is not always the case. No matter how big the disaster is, if there is no permission from the country, it is hard for international institutions to enter the country. The disaster cyclone at Nargis Burma in early May 2008, for instance, also attracted world attention, but no international donors intervened because the domestic political aspect in Burma did not allow it.

International aid for disaster across countries began to increase in the 1970s. That trend was specifically caused by some big disasters happening at the time. The drought in Ethiopia in 1975 and the Tangshan earthquake in China in 1976 that killed over 290,000 people expanded the role of international donors in crisis situations. International institutions were also present to help with man-made crises. For example, aid for Cambodian refugees because of cruelty of the Khmer Rouge regime, or, in the same year and in a similar case, Afghanistan's refugees because of war

in 1979. These disasters are events that promoted the emergence of the "international disaster management" idea (Rosenthal, 2001).

Much like the CSOs, the role of international donors has also been criticized about its narrow relief-oriented approach. Instead of just giving aid for the postdisaster situation, such as food, water, shelter, or health care, now international institutions have started to have a more strategic approach to crisis management:

> The emphasis given to preparedness measures in operational considerations, the expansion of disaster management into prevention and mitigation issues, as well as the recognition of inherent linkages between disaster and development issues were further reflected in a number of disaster management manual issued during mid-1980s. UNICEF, UNHCR, The World Food Program, as well as larger global NGOs such as CARE, OXFAM, and Save the Children published emergency management manual. Organizations such as The International Committee of the Red Cross, and some bilateral emergency assistance organizations did the likewise during the same period. (Rosenthal, 2001, 318)

Since the 1980s, the importance of international disaster management has evolved. In 1980, International City Management Association (ICMA) conducted a survey about cities' preparedness for disaster around the world. This survey motivated cities surveyed to improve the quality of their crisis management system (Kartez in Sylves, 1990). The more concrete and significant action was taken when The International Decade for Natural Disaster Reduction (IDNDR) institution was founded in 1989, and then became a formal part of the U.N. (Ozerdem, 2006). Besides coordinating many international disaster donors, IDNDR also has important duties including "reduc[ing] risk of calamities, promotion to apply scientific, technical and other professional abilities to disaster prevention efforts" (Coppola, 2006; Rosenthal, 2001). These international institutions have played a very significant role. The supercyclone at Orissa, India, in 1999 was an accurate example (Samal, 2005).

However, there are still some problems with the role of international donors in crisis, especially for developing countries. First, there is the relationship between international donors and the government where the disaster happened. Sometimes there are "conflicts of interest between government and international institutions" (Coppola; 2006, 531; Rosenthal 2001). The Nargis Cyclone of 2008 case is an example: because of the political tension between Burma's government and the international community, the government refused aid. This kind of problem needs a high level of political reconciliation. The bottom line is good cooperation and relationships between international institutions and domestic government, which is extremely important. The second problem is related to the dependency of the people who receive aid from these

international donors. To avoid this problem, international institutions need to use the more sustainable approaches rather than a charity approach when providing aid (Samal, 2005). By using an empowerment approach, international institutions eventually increase the capacity of community and local institutions, which, at the end of the day, will reduce the dependency of local elements.

Case studies

This section will describe how the four elements (government, media, civil society, and international institutions) play their roles in the real world. The first case study is Hurricane Katrina in 2005 in the United States, and the second is the Lapindo hot mud spurt from 2006 to the present in Indonesia. The reason I have chosen Hurricane Katrina is that there are so many studies about this crisis event, so the validity of the findings is stronger. The Lapindo mud is the opposite: qualified reports and publications on this disaster have been hard to find. Hopefully, this article could attract wider attention from international communities and researchers to the crisis. The other reason I have chosen this disaster is not only because of the uniqueness of the disaster, but also the process of mitigation and response is still going on, so this paper could inspire the actors in the field for better actions. Therefore, this case study is not an attempt to compare those two events, but rather to see how the role of four elements actually works in those two places.

Hurricane Katrina This calamity happened on August 29, 2005, in the Gulf Coast area. It struck three states, Louisiana, Mississippi, and Alabama. This disaster killed around fifteen hundred people and caused 1.2 million residents to migrate to another places. Fifteen to twenty feet of floodwater covered 80 percent of New Orleans and caused total economic losses of more than one hundred billion dollars, not to mention the amount of infrastructure, houses, and buildings that were destroyed (Johnson, 2006; Gerber in Pinkowski, 2008).

One of the crucial questions is whether the crisis gave opportunity to a better situation after reconstruction. A group of scientists raised an important argument a couple months after Katrina, which emphasized that the trajectory of reconstruction should turn New Orleans into a safer and better city. In order to make the city safer, the reconstruction program should rebuild the new levees, a make limited effort to make buildings flood and wind resistant, and prepare a new evacuation plan. In order to make the city better, reconstruction trajectory should provide new and better schools, parks, houses, ports, infrastructure, tourism, economy, and investments (Kates et al, 2006).

However, three years after the disaster the accomplishments of the program still fell far short of the ideal plan. The Henry J. Kaiser Family Foundation released its survey about the evaluation three years after reconstruction. This survey found that 40 percent of the respondents said their lives were still disrupted, and more than 70 percent said there had been little or no progress in making housing affordable or in controlling crime, which they view as the city's top problem. The survey also showed majorities saw little or no progress in making medical services available, strengthening public schools, attracting jobs, or rebuilding neighborhoods. The results of this survey are largely consistent with an index of progress compiled by the Brookings Institution and the Greater New Orleans Community Data Center. Their third-year report found that the greater New Orleans area has recovered, but that recovery trends slowed during 2008. Tens of thousands of blighted properties, a lack of affordable housing, and thin public services continue to plague the city. Rents are 46 percent higher than before the storm (New York Times, 2008).

The performance of the government's role in Katrina was generally bad, especially during the crisis. Government did have the crisis management system (FEMA), but the system did not work as it should have. One of the failures of the system was related to preparedness. The federal government did not build proper levees for a level 5 hurricane, while many people had warned about the possibility of that level of hurricane happening in the area (Farazmand, 2007; Sylvester, 2007). The failure of the system can also be found in the inconsistency of the response system and poor planning.

According to national standards, the scale of this hurricane was categorized as an incident of national significance (INS) that should have automatically gotten a federal-level response. In fact, victims had to wait five days to get a federal government response (Farazmand, 2007; Gerber in Pinkowski, 2008). In this case, government failed to balance its bureaucratic norm with emergent norm. The situation required government to react quickly, as the victims could not wait for a long and bureaucratic federal government's decision-making process. In this situation, federal government should have used a recognition-primed strategy both in making the decision of sending aid to New Orleans and in reacting to the actual problem on the ground. In so doing, sending leaders who have a strong exposure to such a situation is more important than just sending those who have a good political relationship to the central power.

In general, the breakdown of the decision-making system at all levels was because FEMA was politicized. FEMA had been politicized by the federal government and by President Bush by "putting his close colleague as the leader without thoroughly considering the capacity" (Greber in Pinkowski, 2008, 71). The impact of this decision was that the capability of leadership of this institution became very poor. Following this weakness, FEMA also proved to have failed to manage the balance between the bureaucratic norm and emergent norm. The fact that federal assistance came five days

after the disaster was proof that there was a sense of a lack of urgency. The White House took too much time to decide whether or not a federal government intervention was needed. The impact was the government's failure to speed relief to thousands of victims at the Louisiana Superdome in New Orleans, or to rescue residents (Washington Post, 2005).

The role of international donors, however, had a better result in this disaster. It's true that there was poor coordination among them, but that was more likely due to government nonintervention. Total aid from international donors was around U.S. one billion dollars, not to mention in-kind help (Richard in Ferris, 2008; Coppola, 2006).

The role of CSOs was quite interesting because there were some contradictions. The CSOs, such as NGOs or church groups, performed well because they addressed basic needs. The government relied on these CSOs, especially in immediate service delivery to the victims (Richard in Ferris, 2008). However, in the areas that have stronger local CSOs, the process of rehabilitation went more slowly than in areas that have weaker ones. Providing shelter was the most important thing in rehabilitation; the research found that it was easier to put shelters in the areas in which local communities were weaker. On the other hand, it was more difficult to put shelters in the stronger local community areas.

> *"You can't rebuild a community if you are taking sacred parts of that community and destroying it" (quoted in Varney and Carr, 2005). New Orleans Councilman Jay Batt put up campaign posters with an image of a temporary FEMA trailer crossed out by a red circle with a line through it next to the heading, "He protected the integrity of neighbourhoods in district A by not allowing trailers to be placed in parks and playgrounds where our children play" (Batt in Aldrich, 2006, 380).*

Media had a very important role during the aftermath of Hurricane Katrina. ABC's Good Morning America on September 1, 2005, for instance, aired a statement from President Bush that said that nobody anticipated the breach of the levees. After that statement, the program showed the old news from the *Times-Picayune Special Report* on June 23, 2002, which said that the levees in New Orleans were not strong enough to handle category 4 or category 5 hurricanes. The other big media, NBC, also had concerns about the levees long before the calamity happened (Sylvester, 2007; Gerber in Pinkowski, 2008). The interesting part of the role of media was the different perspectives between the local and national levels of media. Local media, since they were also victims, tell the story about the suffering and survival of the people, while national media, such as the *New York Times* or *Dallas Morning*, "publish a regional and national perspective and were instrumental in keeping the country interested in displaced people from the Gulf Coast" (Sylvester, 2007).

Lapindo mud Since May 29, 2006, hot mud has been spurting at up to 150,000 cubic meters per day at Sidoarjo, East Java, Indonesia (Normile, 2007). The hot mud has covered four villages, killed thirteen people, and displaced fifty thousand inhabitants in the villages (Daily News, 2008). The location of the mud explosion is right in the center of the main transportation route of the East Java province. This disaster has disrupted the connection of the southern part and the eastern part of the province to the northern part. Therefore, the victims of the disaster are not only people who live in the location of disaster, but also people who live in the south and east part of the province. For example, from Surabaya (the capital of the province) to Malang (the second-largest city in the province), before the disaster it only took 1.5 hours driving, but now it could take more than four hours. "The disaster has been happening for two years, but the transportation problem is still the same, the hot mud still spurting, more sadly, thousands of people still live in tents" (Normile, 2008).

For the Lapindo mud explosion in East Java, Indonesia, there are two things that made this disaster unique. The first is this kind of disaster is very rare—volcanic mud spurting from the ground without any clear explanation. Second, regarding the unclear explanation of the cause, since the beginning there has been no agreement whether it is a natural or man-made disaster. Therefore, the policy actions and crisis management have been controversial.

Geologists all around the world have not yet clearly figured out the cause of this disaster. Richard Davies from Durham University said that a gas well from Lapindo Brantas Inc. is the cause. Some Indonesian scientists argued that it was caused by a magnitude 6.3 earthquake at Yogyakarta (280 km from the location) two days before the spurting started. This theory is refuted by Michael Manga, a geologist from Berkeley University, who said that the earthquake was too far and too small to cause this sort of phenomenon. On the other hand, Adriano Mazzini, a geologist from Oslo University, criticizes the scientists (Davies and Manga) who have never gone to the location. Mazzini said that either the earthquake (natural) or Lapindo Inc.'s mistakes (man-made) are still possibilities. Finally, James Mori, a seismologist from Tokyo University, says researchers cannot determine whether the volcano would have formed without drilling (Normile, 2008). However, an Indonesian court has ruled that this disaster is a natural disaster not caused by Lapindo Inc.'s mining activity. This decision has raised controversy since the majority shareholder of the company is Aburizal Bakrie, who is also the minister of welfare of Indonesia and a very influential elite of the Golkar Party, which is one of the largest political parties in the country.

The answer to the question of whether or not the crisis could become a triggering opportunity for improvement of the system is obviously no. The neighborhood has already been buried with mud, and there is no way to bring back the people to their houses and

rebuild the area. It is already hard for government to control the stream of the mud flood, not to mention to drain the five meters of frozen mud from the villages. Moreover, as mentioned earlier, three years after the disaster started, thousands of victims still live in tents.

The role of government in this case is actually quite problematic. It is unclear whether or not to declare that the disaster is Lapindo Inc.'s responsibility or declare it a national natural disaster (so the government is held accountable). This position became more complicated when many people tried to connect this problem with political issues. President Susilo Bambang Yudhoyono (SBY) in the early part of 2007 had ordered Lapindo Inc. to pay $420 million. From that order, it seemed that President SBY was quite sure that the cause of the disaster was the gas well of Lapindo Inc. But then the Indonesian court ruled that it is a natural disaster. All aspects of the disaster came under the government's responsibility with this move.

The central government formed a national body called "Badan Penanggulangan Lumpur Sidoarjo" (BPLS) on September 8, 2007, whose main duty is to handle all impacts of this volcanic mud spurt (Petroleum Watch, 2008). Along this line, the provincial-level government made a plan to actually deal with crisis. There are three actions that the provincial government will focus on, which are stemming the flow, minimizing social impact, and reducing environmental destruction. All of the details of these main goals were also well explained in the action plan document (UNDAC, 2006).

It is difficult to categorize this disaster into crises' typology, for there are no such typologies that it can be fit into because the beginning of the volcanic mud spurting was fast, but the explosion is still going on more than two years later (150,000 cubic meters per day). However, regardless of the many aspects that make this disaster unique, it seems that "slow burning" is the closest type to the crisis. Therefore, government actually have had quite enough time to rule based on analytical decision-making strategy in terms of coping with this crisis. Though, it does not mean that government has to spend three years only to give compensation to the victims. By April 2009, government still could not find the agreement of compensation between BPLS, Lapindo Inc., and the victims (Kompas, 2009). As a result, thousands of people will still live in tents for quite a while without clear certainty of the future.

The role of CSOs in this crisis can be categorized in several ways. An Indonesian NGO that engages in environmental issues, WALHI, filed a suit against Lapindo Inc., demanding that the company take responsibility (Normile, 2008). Mass organizations and people around the area help the victims by providing food and nonfood necessities (UNDAC, 2006). Local communities and the victims, with some help from outsider activists, organize themselves, especially to push government and the company to give them

compensation. This showed how significant a role the civil society played, although there are not yet positive results of this effort.

The media also did not help much in this crisis management. In fact, the biggest local media, Jawa Pos, and the largest national-level media, *Kompas*, do not publish articles about this disaster intensively anymore. The public seems to have forgotten about the disaster already. Apparently, there are still thousands of people who suffer every single day, and have been for more than two years. The media acts only based on market demand, so after a while their audience gets bored and they have to find another issue to write about. The absence of this media consistency does not help for crisis recovery, especially for the victims who are asking for justice.

The role of international donors has only been by experts, those who have done research about the cause of the disaster, and technical assistance from the U.N. On June 20, 2008, the Indonesian Ministry of Environment made a request for technical assistance to the United Nations Office of Humanitarian Affairs (OCHA), and then OCHA deployed a United Nations Disaster Assessment and Coordination (UNDAC) team from June 25 to July 6, 2006. The governments of Switzerland and the Netherlands provided the experts for this follow-up mission. Besides those institutions, there are no international institutions at all that help victims and provide basic needs. "No international organizations have been involved in the response activities of this disaster" (UNDAC, 2006).

Conclusion

These two cases (Katrina and Lapindo mud) prove that it is true that crises challenge basic structures and values of society. Hurricane Katrina displaced 1.2 million people, while Lapindo mud caused fifty thousand people to lose their land and properties. Both cases have taken a long time to move toward the precrisis situations and recover. This poor management of crisis occurred in the first case in a very wealthy country, and in the second in a developing country. Therefore, practitioners need to improve their skills to cope with crises, especially in public administration. The need to study crisis management more deeply is clear.

In the sense of typology of crisis, Hurricane Katrina fell into "long shadow" disaster typology because the speed of crisis development was fast and the speed of crisis termination has been slow. It is difficult to categorize the Lapindo mud case into any crisis type, but "slow-burning" seems to be the closest one. By this categorization, it seems that government has had plenty of time to react, because none of them fall into "fast-burning" crisis. However, it does not mean that the crises were easier to cope with. The cases studies provide very good examples of failures of crisis management even though the nature of the crisis did not give both governments severe time pressure.

Government has played an important role in both cases. In the Katrina case, FEMA had been politicized, and it affected the bad

performance of the institution during the crisis. In the Lapindo mud case, political nuance appeared because Aburizal Bakrie, as majority shareholder of the company, is one of the most influential political leaders in the country. Another aspect of crisis politicization results from the fact that the crisis is very politically attractive, as it gets a great deal of attention from the public. Politicization of the crises only resulted from the bad learning process of the two governments, as shown by the slow rehabilitation process, which after more than two years has not allowed recovery to precrisis condition. Therefore, in the future government has to avoid politicization of a crisis, no matter how attractive the crisis is for lifting up the political popularity of certain parties.

The role of media is quite different in both cases. In the Lapindo mud case, the media only perceives the disaster like regular news—after the audience got bored with the issue, the media stopped publishing this news even though the problem is not solved yet. In the Katrina case, the media gave good contributions, not only motivating a better recovery process, but also the media were actively giving warning long before the crisis happened. In this context, the Katrina case is the best practice that media should follow.

The role of CSOs in the Katrina case was interesting because there was a variation of contributions among some kinds of CSOs. NGOs and religious groups contributed very well in providing basic needs to the victims, while local communities, the stronger ones, tended to be resistant to certain crisis response programs. Nevertheless, in both cases, there was no good community-based disaster management (CBDM) implemented. In the future, the involvement of CSOs in crisis management should enable local communities to become directly involved in the formulation, implementation, and evaluation of crisis public policy.

As reported by UNDAC (2006), there has been no aid at all from international institutions in the Lapindo mud case, which is very different from the Hurricane Katrina case, where there was much aid from international institutions (more than one billion dollars) even though government (FEMA) failed in coordinating them. It might be true that in man-made crises (such as in the Lapindo mud case) the parties who cause the crises should be held accountable, so international institutions do not need to take part. However, completely ignoring the case is not the right decision to make. The very limited attention of international institutions in crisis, such as what has been happening in the Lapindo mud case, should not happen in the future.

FADILLAH PUTRA earned his second master's degree in Local Government and Economic Development at LBJ School of Public Affairs The University of Texas at Austin, in August 2009. In January 2001, he earned a Master's of Public Administration degree at the Post Graduate School of Brawijaya University in Indonesia and also received a Bachelor of Public Administration degree at the same university in September 1998. He has written six books on the topics of public administration, public policy, and local government in Indonesia. Since 2000, he has been actively engaged in NGO activities related to local government capacity building, poverty reduction, and democratization. He was awarded a grant from International Fellowship Program (IFP) of the Ford Foundation in August 2006.

Works Cited

Aldrich, Daniel P., and Kevin Crook. *Strong Civil Society as a Double-Edged Sword: Siting Trailers in Post-Katrina New Orleans.* Paper No. 06-11. The Weatherhead Center for International Affairs, Harvard University, December 2006.

Boin, Arjen, Allan McConnell, and Paul 't Hart, eds. *Governing After Crisis: The Politics of Investigation, Accountability and Learning.* New York City, New York: Cambridge University Press, 2008.

Boin, Arjen, Paul 't Hart, Eric Stern, and Bengt Sundelius. *The Politics of Crisis Management: Public Leadership Under Pressure.* New York City, New York: Cambridge University Press, 2005.

Coppola, Damon P. *Introduction to International Disaster Management.* Burlington, MA: Butterworth-Heinemann, 2006.

Drennan, Lynn T., and Allan McConnell. *Risk and Crisis Management in the Public Sector.* London and New York: Routledge Taylor and Francis Group, 2007.

Farazmand, Ali, ed. *Handbook of Crisis and Emergency Management.* New York: Marcel Dekker, 2004.

Sound Governance: Policy and Administrative Innovations. Westport, CT: Praeger, 2004.

Learning from Katrina Crisis: A Global and International Perspective with Implications for Future Crisis Management. Public Administration Review, December 2007, Special Issue.

Ferris, Elizabeth. *The Role of Civil Society in Ending Displacement and Peacebuilding.* Human Rights, Internal Displacement, Civil Society. UN Peacebuilding Commission, Lessons Learned Working Group posted March 13, 2008. <http://www.brookings.edu/speeches/2008/0313_civil_society_ferris.aspx> [15 October 2008].

Flin, Rhona, George Youngson, and Steven Yule. *How Do Surgeons Make Intraoperative Decisions?* Qual. Saf. Health Care 16 (2007): 235–239. doi: 10.1136/qshc.2006.020743

Johnson, David L. *Service Assessment.* Hurricane Katrina August 23–31, 2005. NOAA's National Weather Service, June 2006.

Kaldor, M. *The Idea of Global Civil Society.* International Affairs 79(3) (2003): 583–593.

Kates, RW., C. E. Colten, S. Laska, and S. P. Leatherman. *Reconstruction of New Orleans after Hurricane Katrina: A Research Perspective.* PNA 10(40) (2006): 14653–14660.

Kompas, Lapindo Tetap. *Personal Letter C dan Petok D.* Jakarta: Kompas 21 April 2009.

Laye, John. *Avoiding Disaster: How to Keep Your Business Going When Catastrophe Strikes.* New York: J. Wiley & Sons, 2002.

Nickson, David, and Suzy Siddons. *Project Management Disasters and How to Survive Them.* London and Sterling, VA: Kogan Page, 2005.

Normile, Dennis. *Indonesian Mud Volcano Unleashes a Torrent of Controversy.* Science 315 (2007): 586.

Two Years On: A Mud Volcano Still Rages—and Bewilders. Science 320 (2008): 1406.

Nudell, Mayer, and Norman Antokol. *The Handbook for Effective Emergency and Crisis Management.* Lexington, Mass: Lexington Books, 1988.

Ozerdem, Alpaslan, and Tim Jacoby. *Disaster Management and Civil Society: Earthquake Relief in Japan, Turkey and India.* New York: I.B. Tauris & Co Ltd., 2006.

Pinkowski, Jack. *Petroleum Watch.* Disaster Management Handbook. Boca Raton, London, NY: CRC Press Taylor and Francis Group, 2008.

Pemeriksa Keuangan Indonesia, Badan. *Laporan Pemeriksaan Atas Penanganan Semburan Lumpur Panas Sidoarjo.* Petroleum Watch Library, <http://www.id-petroleumwatch.org/wp-content/uploads/2007/12/06.bab_i_pendahuluan.pdf> [15 October 2008].

Rosenthal, Uriel, R. Arjen Boin, and Louis Comfort. *Managing Crises: Threats, Dilemmas, Opportunities.* Springfield, IL: Charles C. Thomas, 2001.

Rosenthal, Uriel, Paul 't Hart, Menno van Duin, R. Arjen Boin, Marceline Kroon, Marc Otten, and Werner Overdijk. *Complexity in Urban Crisis Management: Amsterdam's Response to the Bijlmer*

Air Disaster. London: James & James (Science Publisher) Ltd., 1994.

Samal, Kishor C., Shibalal Meher, Milakatha Panigrahi, and Srikanta Mohanty. *State, NGOs and Disaster Management.* New Delhi: Rawat Publications, 2005.

Schneider, Saundra K. *Flirting with Disaster: Public Management in Crisis Situations.* Armonk, NY: M.E Sharpe, 1995.

Schoff, James L., ed. *Crisis Management in Japan and the United States.* Herndon, Virginia: Brassey's Inc., 2004.

Smith, Dennis, and Dominic Elliot. *Key Readings in Crisis Management: Systems and Structures for Prevention and Recovery.* NY: Routledge, 2006.

Sylves, Richard T., and William L. Waugh Jr. *Cities and Disaster: North American Studies in Emergency Management.* Springfield, IL: Charles C. Thomas, 1990.

Sylvester, Judith. *The Media and Hurricanes Katrina and Rita: Lost and Found.* New York: Palgrave Macmilan, 2008.

Three Years after Katrina. Editorial. *New York Times.* 11 August 2008 <http://www.nytimes.com/2008/08/12/opinion/12tue2.html?scp=1&sq=three%20years%20after%20katrina&st=cse> [15 October 2008].

United Nations. *Environmental Assessment: Hot Mud Flow East Java, Indonesia.* Switzerland, UNEP/OCHA Environment Unit, 2006.

Uphoff, N. *Local Organizations for Supporting People Based Agricultural Research and Extension: Lessons from Gal Oya, Sri Lanka.* In Beyond Farmer First: Rural People's Knowledge, Agricultural Research and Extension Practice. London: Intermediate Technology Ltd., 1994.

Winham, Gilbert R. *New Issues in International Crisis Management.* Boulder CO: Westview Press, Inc., 1988.

Planning for Pollution

How planners could play a role in reforming the EPA's New Source Review Program

OLIVIA STARR

The U.S. Environmental Protection Agency's New Source Review (NSR) program is ripe for change. Since the late 1970s, when the United States began regulating air quality, NSR has been one of the EPA's key tools to enforce emission standards. It requires new or significantly upgraded stationary sources, a fixed-site producer of pollution, such as a factory, to adhere to stricter emission standards than existing stationary sources. At the inception of the program, policy makers argued that NSR was the most cost-effective method of imposing air quality regulations; significant long-term air quality improvements would come due to the "inevitable" retirement of old polluters (Edison Electric Institute, 2001).

These policy makers did not account for the fact that NSR increases economic incentives to delay upgrading technology and to extend the use of old stationary polluters beyond their expected life span. These new economic incentives are implicated in other problems with NSR: vague definitions of which upgrades trigger stricter emissions standards, delayed application processing times, and inconsistent permitting practices. In nonattainment areas, geographic regions defined by the EPA that do not comply with national ambient air quality standards (Callan and Thomas, 2007), NSR enforces lower technology standards (Edison Electric Institute, 2001). During the Bush administration, new rules created even more loopholes allowing polluters to avoid NSR, sparking a legal battle between multiple states and the EPA (*Chemical Week*, 2009).

Although many critics of NSR would like to see a move toward a national cap and trade market–based system, such as the Acid Rain Program, some powerful states and regions are pushing for individual trading programs for a variety of reasons. Some state regulators are not convinced the federal government will go far enough in restricting emissions; others insist that the revenue from pollution permits go straight into the states' coffers. For a variety of reasons, we cannot expect widespread support for a national trading program in the near future. What is critical is that the EPA embrace immediate changes to NSR that will serve to dramatically improve the quality of life for the more than 150 million Americans currently living in nonattainment areas (U.S. EPA, 2008).

To make an immediate improvement to NSR, the EPA can provide local and state officials a larger role in determining community-based approaches to mitigating the environmental impacts of stationary polluters, especially in nonattainment areas. By incorporating best practices from the "Smart Growth" program into an emissions review process, states and local governments could come up with environmental improvement plans; NSR would become part of a holistic program that does not include simply technology, but other mitigation techniques such as creating "green" jobs, providing employees with free passes for public transportation, and dedicating open space. Cities and states could sign off on a firm's mitigation plan before NSR even begins.

If the package of technology, mitigation techniques, and emission standards for NSR were more flexible, this would encourage firms to file for NSR more readily (if firms also have faith in the consistency and timeliness of the permitting process). This policy would help states and cities that are struggling to reach air quality attainment standards to work with firms and find mutually beneficial solutions that are less costly than higher technology standards. Firms would be motivated to participate in the creation of these mitigation plans not only for permitting, but also to reap the public relations benefits at a relatively low cost. Moreover, states are less likely to begin lawsuits over NSR if the states themselves have signed off on the emission mitigation plan.

How good ideas became bad policy

As part of the 1977 Clean Air Act Amendments, Congress first established the federal NSR program as an administrative mechanism to regulate emission of carbon monoxide, nitrogen oxides, volatile organic compounds, particulate matter, and sulfur dioxide. The premise of the program is that it is more cost-effective to phase in stricter emission standards by starting with new or significantly upgraded stationary sources rather than existing stationary sources. To implement the higher standards, EPA reviews proposals for construction and approves plans that employ certain technology. Technological thresholds are not constant for all permits; a proposal for a new or modified source located in an attainment area must meet the highest standards (Best Available Control Technology) to get a Prevention of Serious Deterioration permit, while in a nonattainment area, a new or modified source must use technology that results in lowest achievable emission rate, as defined by the State Implementation Plan (SIP) to get a nonattainment NSR permit (U.S. EPA, 2007; Callan and Thomas, 2007).

The reason NSR has survived now more than thirty years is not that the program has proven to be a clear success. The logic of NSR efficiently reducing pollution is intuitively appealing—and some proponents claim that it is a market-based approach—but the program only holds up if one makes the following assumptions: 1) existing polluters will have the same economic life span that they have had in the absence of NSR; 2) the permitting process does not

create inordinate barriers to entry or disincentives to upgrade existing technology; and 3) there is an objective, straightforward process for determining what modifications require NSR. Unfortunately, as evidenced by the slew of legal challenges to NSR, these assumptions do not hold true. The permitting process is inconsistent, time-consuming, and costly. It has created substantial barriers to entry and disincentives to upgrade currently in-use technology, while at the same time creating substantial incentives to extend the useful lives of existing polluters (Stavins, 2004).

The true advantage of NSR is its political viability. By enforcing more lenient standards on existing polluters, federal legislators avoid upsetting potential campaign supporters. Another important aspect of the program is the degree of control left to the states. If the EPA decided to implement a nationwide cap and trade program for emissions, individual states would have little say in how the program was enforced. But with NSR, states have been some of the key litigants in cases against companies that have violated NSR, such as in the recent American Electric Power settlement that resulted in the utility paying a $15 million penalty and spending $4.6 billion upgrading pollution controls in its plants (Cusick, 2007). In February 2009, New Jersey sued the EPA because of a perceived lack of oversight in its new federal reporting monitoring requirements (Boyle, 2008). States are clearly determined to maintain their power in emission regulatory enforcement.

Why planners should get involved with NSR

Since NSR has not been an effective or efficient method of emission regulation, despite numerous legal cases and revisions to the rules, it is time to rehaul the system. The lessons learned from NSR are that: 1) vintage-differentiated regulations—regulations that consider age as a primary criterion for eligibility—distort the "regulatory market"; 2) legislation needs to create specific guidelines for administrative decisions, such as precise criteria, timetables, and methods for administrative adjudication to avoid costly lawsuits; and 3) states need to have a degree of regulatory control. Although we now have a major shift in Washington's political climate that can create momentum for the massive restructuring that needs to occur, the following discussion focuses on short-term solutions that broadly fit within the existing NSR structure and offers some reforms that boost local and state control in enforcement strategies.

First, there needs to be a reversal of the more lenient regulatory policies in nonattainment areas. The logic of applying less-burdensome standards to nonattainment areas is that it would be more costly for those areas to live up to the same standards as areas of attainment—similar to the logic of vintage differentiation. What makes the nonattainment distinction more worrisome is that there are no grounds for assuming that more high rates of emissions will naturally fall out of use. According to the EPA's Web site, there are 150,861,931 people currently living in nonattainment areas throughout the United States. In 1997, that number was approximately 113 million, even though the number of nonattainment areas has actually decreased nationwide (U.S. EPA, 2008). More analysis of demographic trends in nonattainment areas is needed, but from these numbers one could assume that even as less space is designated nonattainment, the population density within these areas is increasing. Planners should work with policy makers to formulate a more aggressive approach to emissions regulation in nonattainment areas to protect these at-risk populations.

Stationary sources are not necessarily the most significant contributors to emissions in all nonattainment areas, but providing stationary sources in these areas with incentives for mitigating the impacts of their emissions will create greater short- and long-term benefits. This is also an opportunity to strengthen the role of state and local governments in setting and enforcing pollution regulations. Currently, if the EPA designates an area as nonattainment, the state must do an inventory of the excessive pollutant(s) in the area and integrate the findings into transportation plans, maintenance plans, and NSR regulations. The state must also submit reports to the EPA to demonstrate plans for reaching attainment. The penalties for prolonged periods of nonattainment can include denying the state its highway funding and higher standards for NSR; the federal government, in effect, punishes state and local governments, with little to no direct impact on the polluters themselves (U.S. EPA, 2007).

What is missing from the current model is the ability for state and local governments to incentivize environmental controls rather than simply suing the firms that do not meet nationally set emission standards, which is a reaction to the EPA's determination of an area's nonattainment. There are a few examples of local governments setting environmental criteria for granting tax breaks in economic development projects, which may help pass NSR, but this is not standard practice nationwide and does not provide comprehensive regulation.

If the EPA incorporates some of the best practices from its "Smart Growth" program into a more flexible review process involving state and local governments, the federal government could make NSR part of a more holistic program that targets the pollution sources directly. For example, new and existing stationary sources located within a nonattainment area could be required to submit mitigation plans to local or state authorities before submitting construction plans for NSR. Firms would determine the content of the mitigation plans based upon a locally determined set of preferred offsets detailed in an environmental improvement plan. These offsets would improve environmental standards for surrounding communities without significantly adding to the firm's implementations costs. Offsets could be installing green roofs on facilities,

providing transit passes for all of its employees, investing in storm-water retention pools, funding community gardens in low-income neighborhoods, locating new facilities in a vacant industrial complex, training inner-city residents for "green-collar" jobs, reducing chemical waste, et cetera.

It is naive to suggest that increasing requirements for cooperation between polluting firms, planners, and the EPA is a comprehensive or long-term solution to improving air quality, but it is crucial that planners assume a more proactive role in national policy making; planning is not only a defensive or coping mechanism for local and state authorities, but an integrative tool that allows communities to improve overall quality of life. This must be done in cooperation with the lowest and highest levels of government.

Works Cited

Boyle, Katherine. *N.J. Sues EPA Over Reporting Rule for Factories, Coal Plants.* Greenwire. 20 February 2008. <http://www.eenews.net/Greenwire/nsr/2008/02/20/3> (26 March 2008).

Callan, Scott J., and Janet M. *Thomas. Environmental Economics & Management.* 4th ed. Mason, Ohio: Thomson South-Western, 2007.

Cusick, Daniel. *AEP Settlement Ends Long Battle Over Power Plant Upgrades.* Greenwire. 9 October 2007. <http://www.eenews.net/Greenwire/nsr/2007/10/09/1> (26 March 2008).

New Source Review: A History. Edison Electric Institute. July 2001. <www.eei.org> (26 March 2008).

EPA Changes New Source Review Rules. Chemical Week. 19 Jan 2009.<http://www.chemweek.com/envirotech/regulatory/16489.html> (26 March 2009).

Stavins, Robert N. *Experience with Market-Based Environmental Policy Instruments.* Vol. I, in Handbook of Environmental Economics, by Karl-Göran Mäler and Jeffrey Vincent, edited by Karl-Göran Mäler and Jeffrey Vincent, 355-435. Amsterdam: Elsevier Science, 2003.

Stavins, Robert N. *Vintage-Differentiated Environmental Regulation.* Resources. Nov 2005. <www.rff.org> (26 March 2008).

New Source Review: Basic Information. U.S. EPA. 11 May 2007. <http://www.epa.gov/NSR/info.html> (26 March 2008).

Number of People Living in Areas Designated 'Nonattainment' by State. U.S. EPA. 12 March 2008.<http://www.epa.gov/airprogm/oar/oaqps/greenbk/stpop.html> (26 March 2008).

OLIVIA STARR is completing her Master's degrees in Community and Regional Planning and Public Affairs at The University of Texas at Austin. She has a B.A. in European History from Northwestern University. Her research interests include property rights and security.

Bloomingdale Trail
A Journey in Photographs

SARAH MORTON

Scattered throughout Chicago are dozens of elevated train tracks, the legacy of a formerly vibrant form of transportation. One of these abandoned lines stretches for three miles across Chicago, through gentrified neighborhoods on the east, and communities that are struggling economically and socially on the west. Presently, the trail is crumbling and overgrown and is a magnet for gang activity. The embankment also serves as a canvas for vibrant murals and spontaneous works of art. A group called Friends of the Bloomingdale Trail is working with the city and community members to create an elevated, multiuse park and trail that will connect these varied neighborhoods and create much-needed open space. But this dream is still many years and millions of dollars away. All photos taken in 2006.

1. FRIENDS OF THE BLOOMINGDALE TRAIL IS OCCASIONALLY GRANTED PERMISSION FROM CANADIAN PACIFIC RAILWAY, THE CURRENT OWNER OF THE RIGHT-OF-WAY, TO GIVE TOURS OF SECTIONS OF THE TRAIL. ANYONE WHO CLIMBS ONTO THE EMBANKMENT WITHOUT PERMISSION IS TRESPASSING.

2. RICH VEGETATION HAS GROWN OVER THE TRACKS SINCE THE EARLY 1990S WHEN ACTIVE RAIL USE WAS DISCONTINUED. NEIGHBORS OF THE TRAIL HAVE DELIBERATELY PLANTED DECORATIVE PLANTS, MAINLY ON THE EASTERN END.


3. THE BLOOMINGDALE LINE RUNS UNDERNEATH THE BLUE LINE ONE OF CHICAGO'S FAMOUS ELEVATED PASSENGER TRAINS. IF MADE INTO A BIKING TRAIL, THE BLOOMINGDALE TRAIL WOULD SERVE AS AN IMPORTANT TRANSPORTATION LINK. THIRTY-EIGHT VIADUCTS WERE BUILT IN TO ACCOMMODATE CROSS TRAFFIC ON THE STREET GRID, MANY OF WHICH COULD SERVE AS ACCESS POINTS.

4. THE TRAIL DIRECTLY ABUTS FIVE
SCHOOL GROUNDS AND A YMCA. THE TRAIL
COULD BECOME A SAFE WAY FOR CHIL-
DREN TO WALK TO SCHOOL, AS WELL AS
PROVIDING MUCH NEEDED GREEN SPACE
TO NEARBY NEIGHBORHOODS.

5. THE BLOOMINGDALE LINE WAS ORIGI-
NALLY BUILT IN 1873, THEN ELEVATED
IN THE 1910S TO REDUCE DANGEROUS
AT-GRADE CROSSINGS. THE STEEL
REINFORCED CONCRETE INFRASTRUC-
TURE IS BADLY DETERIORATED IN SOME
PLACES AND WOULD REQUIRE MASSIVE
RECONSTRUCTION BEFORE BEING OPENED
TO THE PUBLIC.
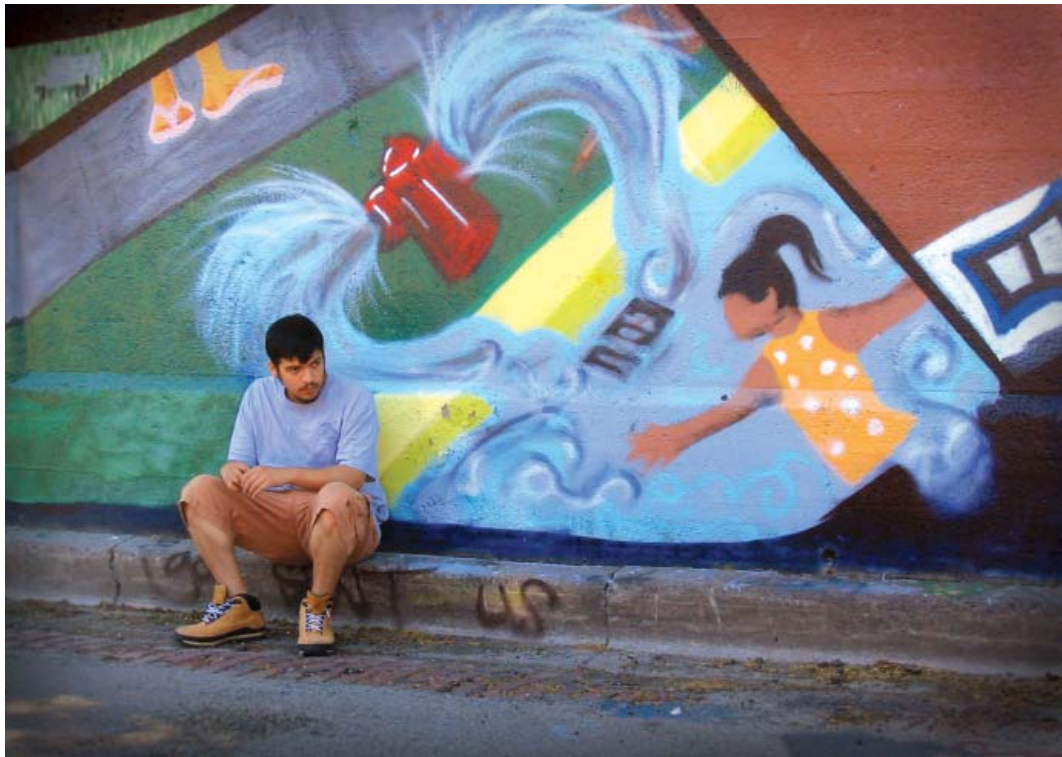
6. THE EMBANKMENT SERVES AS A
THREE-MILE LONG, 15-FOOT HIGH CANVAS
FOR ARTISTS IN LOCAL SCHOOLS AND
COMMUNITY GROUPS. PRESERVING THE
MURALS WILL BECOME AN ISSUE AS THE
CRUMBLING INFRASTRUCTURE IS REIN-
FORCED OR REPLACED.

7. COMMUNITY MEMBERS STAKE THEIR
CLAIM ON THE TRAIL IN A VARIETY OF
WAYS, FROM BUILDING SHRINES TO WEED-
ING AND HAULING OUT GARBAGE.

8. SOME PARTS OF THE WESTERN END OF THE TRAIL ARE COVERED WITH TRASH AND THE EVIDENCE OF TENTS AND CAMPFIRES.

9. WITHOUT A PROPER TRAIL AND ACCESS POINTS, VERY FEW PEOPLE ARE AWARE THAT A LUSH, GREEN ENVIRONMENT EXISTS JUST OVERHEAD.

10. THE TRACKS ARE STILL USED TO TEMPORARILY STORE FREIGHT AND PAS-SENGER TRAINS AT THE WESTERN-MOST END OF THE TRAIL. THE FUTURE OF THE TRAIL REMAINS UNCERTAIN, BUT WITH SUPPORT FROM THE CITY AND COMMUNITY MEMBERS, THERE IS HOPE THAT IT WILL EVENTUALLY BE TRANSFORMED INTO A USABLE PUBLIC SPACE.

Zoned Out: Regulation, Markets, and Choices in Transportation and Metropolitan Land-Use

by Jonathan Levine

Published by Resources for the Future

REVIEWED BY CHANG YI

Urban sprawl is a ubiquitous form of our built environment in metropolitan America, which planners as well as the public have recognized as being a product of household choices *vis-à-vis* land use and transportation. Local zoning regimes have been perceived as the guardians of such "market outcomes," translating preferences for suburban living into their corresponding realities. In light of this perception, advocates for compact developments cast their arguments for planning transit- and pedestrian-friendly neighborhoods in terms of the negative consequences of sprawl versus travel behavior benefits of the proposed alternative developments (e.g., reduced automobile use). In *Zoned Out*, Levine takes a critical stance toward such a framework, pointing out that it is groundless and inadequate. The author claims that the negative consequences of sprawl are not an outcome of market failure, but rather of planning failure, pronounced in exclusive zoning that prohibits high-density and mixed-use developments. Levine states, "Despite its pervasiveness and academic pedigree, the re-interpretation of municipal land-use regulation as a kind of market force is unwarranted." The tendency to equate zoning with market preferences dates back to the 1920s. Since the *Village of Euclid v. Ambler Realty* case established the constitutionality of zoning, Levine argues, the legal community has granted zoning a special exemption from judicial scrutiny with regard to its public purposes. Although zoning was based on police power state regulation of land use, judges have accepted the notion that zoning is a collective property right inherent to municipalities. This reasoning, prevalent in the judicial community, has resulted in the favorable treatment of zoning and in municipal governments being granted prerogative on local land use matters. "Viewing land-use regulation as a property right held by the municipality serves to legitimate parochial ends as long as these are the preferences of the locals."

When zoning is interpreted in this way, urban sprawl is seen as a natural outcome of unrestrained household choices driven by real estate markets, and the promotion of compact developments becomes equivalent to a planning intervention that acts as a restraint on the market process. In such a case, establishing the transportation benefits of compact developments is assumed to be a necessary condition to legitimize governmental intervention

(e.g., the subsidizing of compact developments). *Zoned Out* offers an alternative perspective: Levine argues that sprawl is not a market outcome, but rather a consequence of municipal zoning favorable to low-density built environments. Planning for dense urban forms, therefore, is not an intervention; instead, it rather diversifies choice sets in the housing market by allowing such development options. Thus, Levine argues, there is no burden of proof necessary to justify such a widening of the market horizon; "the first order of business is the elimination of regulatory obstacles to compact development, a search for the travel behavior benefits that would justify governmental intervention is poorly matched with the policy task at hand."

In *Zoned Out*, Levine supports this idea with empirical evidence drawn from his research in Atlanta and Boston. His study indicates that Atlanta households with preferences for transit- and pedestrian-oriented developments are less likely to be able to satisfy their desires than Boston households. On the other hand, given the diverse sorts of neighborhoods found in Boston, Bostonian households have greater opportunities to act on their transportation and land use preferences. That is, the supply of alternative developments is not meeting the demand in Atlanta's sprawled metropolitan area. In essence, the study contends that zoning is not an instrument for ensuring market efficiency, but rather is a form of regulation that distorts market forces, since it prevents households from matching their preferences to actual choices. Then, Levine's argument to "eliminate regulatory obstacles" is justified.

These findings shed new light on the problem of selection bias in transportation research. For more than two decades, in transportation research circles, isolating the pure effects of urban forms on travel from self-selection has been a difficult issue for researchers. For instance, to determine whether a transit-oriented neighborhood elicits greater transit ridership, researchers seek to separate the impact on travel behavior of average individuals from individuals who moved to the area because of their preference for taking public transit. Levine suggests that "the view that self-selection is inherently a source of bias to be measured and eliminated presupposes that these market preferences for transit- and pedestrian-oriented neighborhoods have already been satisfied." As Levine finds in the study on Atlanta and Boston, this is not the case. He claims that the bias is, in fact, an evidence of the travel benefits of dense and mixed-use urban forms, since that bias (households moving into transit-oriented neighborhoods to satisfy their travel preferences) represents a fulfillment of the previously unmet demands of residential choices. To land use and transportation research communities, this discussion provides new provoking arguments and insights.

Overall, Levine offers a critical understanding of the nature of zoning, in particular the ways in which it prevents alternative developments, and presents a new perspective for future research. Yet, the book raises some questions. Implicitly, Levine makes the fundamental assumption that expanding market choices for individuals does not require proving travel behavior benefits. Nonetheless, proving such benefits still matters when encouraging scarce development forms whose societal impact is still not clearly identified. What if an unconstrained creation of high-density and mixed land use developments generates negative by-products? In the last chapter of his book, Levine describes the state planning mandate in Oregon as an exemplary solution for fostering alternative developments. However, Oregon's statewide growth management scheme drove up Portland's housing prices as well as population density within its urban growth boundary. Though research on this issue is inconclusive, it would appear that due to the lack of affordable housing in the central city, low-income households have been displaced to more peripheral areas with lower land prices. This may have resulted in longer commutes to the city center, while causing heavier traffic congestion within the inner city. At this juncture, when the impact of high-density and mixed-use developments is uncertain, research efforts to establish the travel behavior benefits of alternative developments are indeed meaningful.

Notwithstanding this criticism, *Zoned Out*, taken as a whole, successfully challenges the commonly accepted belief regarding the role of zoning in shaping metropolitan America. The implications for future research are substantial. By reading Levine's work, transportation planners and researchers will be exposed to a new and intelligent perspective with which to form strong arguments for justifying smart growth.

Planet of Slums

by Mike Davis

Published by Verson

REVIEWED BY MARTIN THOMEN

In his recent book, *Planet of Slums*, Mike Davis takes the reader into a place where no human should ever have to venture, but one that is home to many: the slums of the world. Unfortunately, slum life is the daily reality for millions around the world, and the numbers are growing.

Davis, a professor of history at UC-Irvine and an editor of *New Left Review*, introduces the reader to the prevalence and growth of slums in the first two chapters. Taking the reader on what sometimes seems like a worldwide tour from hell to places like Ajegunle, Dadaad, and Campos Eliseos, Davis stuns the reader with a roll call of growth and demographic facts. He seeks to establish the fact that slums are widespread, growing rapidly, and expected to grow more.

In the following chapters the author seeks to delve deeper into the issue by debunking widely held myths about slum proliferation. His third chapter, "Treason of the State," focuses on his contention that the rally cry of capitalism around the globe to ease restrictions and create an environment acutely attuned to business growth has served to undermine state structures that formerly mitigated the worst causes and effects of slums. For instance, the housing crisis in inner cities fueled by migration or population growth was formerly absorbed by public housing, but today public housing is the exception rather than the rule in most countries.

Davis later outlines the fact that squatters' settlements originally occupied lands at no financial cost, but that this is not the case in slums today. Today, slum housing is a very highly controlled sector and is usually a profit-making venture for many upper-class citizens who own the land, gangs who control it, or corrupt officials who illegally rent out public land. Instead of romanticized "built from the ground up" or "community building" ideas of slum construction, traditional landlord/lessee relationships are the norm. Far from freeloading off the land, slum dwellers pay a relatively high price for their housing, in addition to high transportation costs because of the peripheral location of many slums. Davis punctuates these disgraceful facts by describing the horrible conditions in which the residents must live.

Chapter 6, "Slum Ecology," describes how slum dwellers face floods, gas explosions, raw sewage, and air pollution in addition to poor housing conditions. Davis explores transportation issues much more deeply in this chapter. The vicious cycle of less government funding for public transportation, poorer transportation service, and increased congestion caused by more private cars does not only mean a longer commute and higher prices for slum dwellers; for many, it is a deadly situation. Because these settlements are not "developed areas" in a legal sense, they are frequently the first to experience public transit service cuts and are seen by many in power as ideal sites to build new superhighways to whisk the car owners from the suburbs into the city center. This creates a dangerous situation where pedestrians seeking to board transit or walk to their destination must cross multilane superhighways and other infrastructure which, while benefiting the wealthier classes, is a lethal obstacle course for those who will never benefit from them. The author cites high-profile incidents to underscore his point like a gas explosion in Mexico City that killed over two thousand people and the infamous Union Carbide poisoning an estimated twenty-five thousand people in Bhopal.

In the following chapter, smartly called "SAPing the Third World," Davis returns to myth-busting mode and studies the role that international organizations and the Washington Consensus play in slum growth. SAP is the International Monetary Fund's acronym for its Structural Adjustment Programs. Using debt and political pressure from Washington and its allies, the IMF and World Bank have used SAPs to restructure the economies of debt-owing countries. This restructuring usually comes in the form of deregulation, selling off of valuable state assets, and an unweaving of the social safety net in the name of government efficiency. While SAPs may benefit wealthier countries that wish to collect debt, they spell doom for debtor countries and especially slum dwellers, who rely on the social safety net and state help that are undermined by "structural adjustment." Davis points out that those areas where slum growth is fastest are also where SAPs have had the most devastating effects. He writes that urban Africa and Latin America have been hit with artificial depression, characterized by falling wages, increased unemployment, regressive taxation, and collapsing public health structures caused by SAPs. Furthermore, many autocrats supported by the West, like General Pinochet of Chile, not only commit egregious human rights abuses against their political enemies, but also promote neoliberal policies favored by Washington that leave millions of citizens resorting to slum living.

Davis's last chapter, which asks the question, "A Surplus of Humanity?," does not leave the reader with a rosy picture of a happily ending story. He uses these pages to denounce the rise of the informal work sector, which provides grim jobs for slum dwellers. This work—which includes rag picking, petty labor, and scavenging—never creates opportunities for the "up-by-the-bootstrap promotion" embraced by neoliberal theorists. Davis also explores the sociocultural

effects of slum life as he enumerates mental and spiritual survival tactics such as sorcery, witchcraft, and evangelism that have spread throughout slum areas, sometimes with negative consequences.

As he does throughout the book, Davis ends the chapter with a blunt truth-and-consequences commentary aimed squarely at the neoliberal capitalism that has defined world politics and urban policies for the past fifty years. His epilogue, "Down Vietnam Street," quotes Western sources such as the CIA and RAND Corporation as proof that even Western institutions are aware of the pending crisis caused by the broken promises to the slum dwellers and lower classes of the world. He points out that the "homeland versus evildoers" paradigm is ill-equipped to handle the demographic and ecological realities that must be faced in the decades to come as millions who have been handed a raw deal by neoliberal capitalism may overwhelm those who choose to defend the Orwellian status quo.

Overall, *Planet of Slums* is an embracing, if at times dispiriting, and truthful exposé of the urban world today and emerging trends for the future. The author does not seek to paint an optimistic view of the future, but he surely presents a wicked challenge and some paths to solutions for those who seek to create a more promising future for all humans, especially those millions who are crowded together and living in terrible conditions.

MARTIN THOMEN is a recent CRP graduate (May 2008). He earned a master's degree in CRP with a transportation planning specialization and also has a BA and BS from UT Austin. He currently works as a transportation planner.
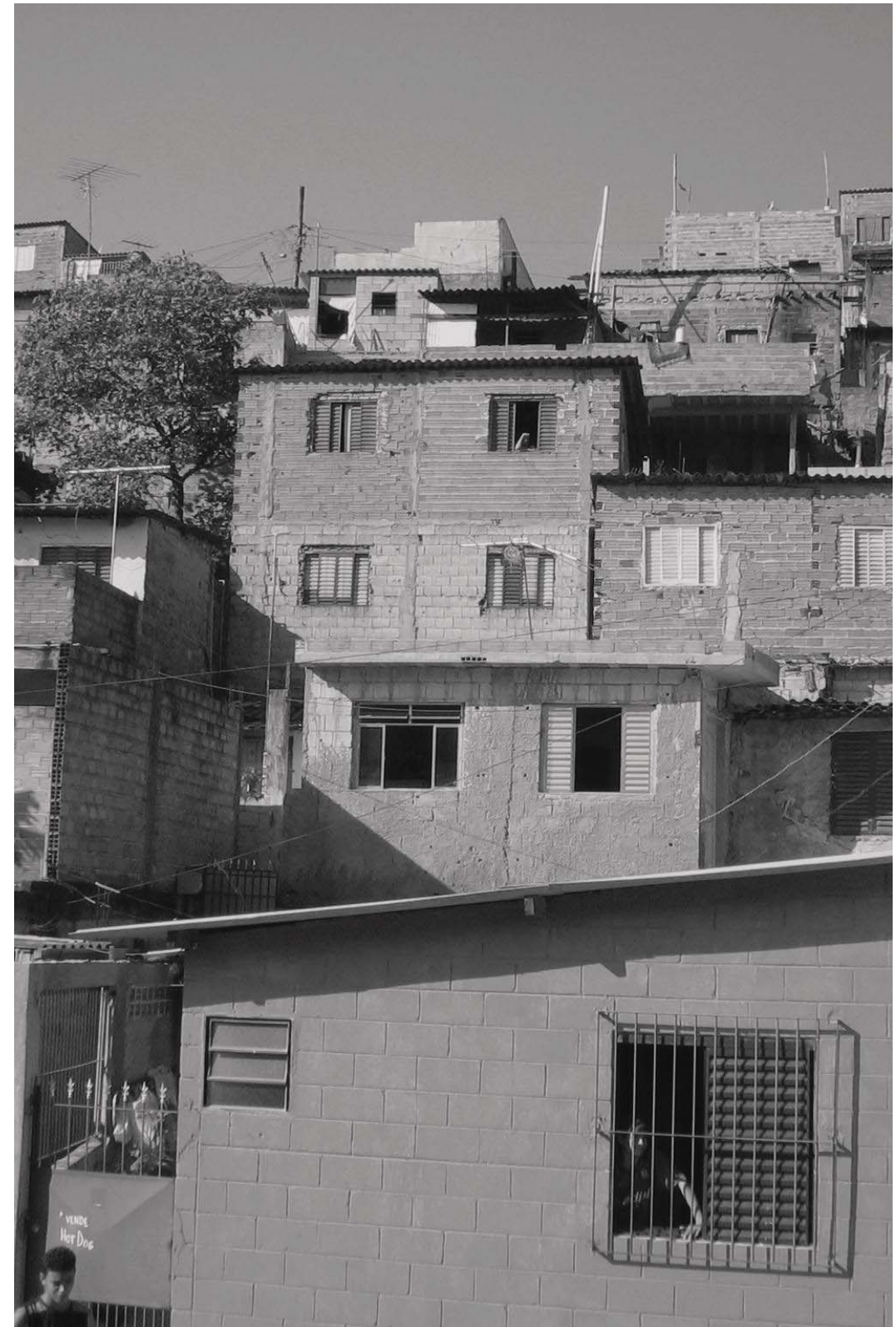
Large Parks

Edited by Julia Czerniak and George Hargreaves
Published by Princeton Architectural Press

REVIEWED BY ERIKA HUDDLESTON

A "large park" as defined in *Large Parks* as 500 acres or greater, sited in an urban environment. The assonant title has no subheading, but rather flings open debate for the seven essays within to converse among themselves. Each essay included by editors Julia Czerniak and George Hargreaves in *Large Parks* elaborates ideas first voiced at a Harvard Graduate School of Design conference in 2003. To read through the book is an engrossing dissection of large-scale landscape architecture's current theories.

A defining assumption among the authors is that the designed landscape as park is not static, but a complex dynamic process. As Elizabeth K. Meyer writes in her essay, "there has been a shift from spatial to temporal preoccupation in landscape architecture theory and practice since the late 1980s." In his foreword, James Corner of Field Operations and the University of Pennsylvania writes that "the designer of large parks can only ever set out a highly specified physical base from which more open-ended processes and formations take root; . . . the trick is to design a large park framework that is sufficiently robust to lend structure and identity while also having sufficient pliancy and give to adapt to changing demands and ecologies over time." Corner conceptualizes parks as frameworks and systems, with emphasis on the practice of more extensive site analysis than existed in the past to develop landscape designs. He writes that a site is best inscribed with design when it is considered as a vast swirling flow of epoch processes acting on one another with ingrained flexibility for future change. He challenges designers to design with this construct in mind while not allowing the built to be dehumanized out of people scale—or even worse, diluted by politics, programming, and cost when large parks are planned. Using the theme of parks as systems, Nina-Marie Lister discusses new ties of ecology and landscape, Anita Berrizbeitia writes on strategies of creating park design, George Hargreaves titles his essay "A Designer's Perspective," Linda Pollak discusses the matrix as tool for park analysis, and John Beardsley writes of large-scale park management and funding practices. The distinct ideas layer and overlap with each other in interesting ways, spurring the reader to think of new threads and connections.

The dialogue among essays also is a wonderful study of aging urban infrastructures and the choices made when cleaning them up. Large parks in the twenty-first century will be formed increasingly from "disturbed" sites within cities—industrial landfills, brownfields, old airports, and decommissioned military bases—and the authors believe that new large parks will continue to be created because every U.S. city has a piece of disturbed land in its limits that can be redeveloped. Three parks on reclaimed sites—Downsview Park in Toronto, Ontario; Fresh Kills in New York City; and Landschaftspark in Duisburg, Germany—are mentioned repeatedly throughout the essays as examples of recent international design competitions that encouraged interdisciplinary teams and exemplify process flexibility in their winning designs. Graphics from the finalist team entries to these competitions are included and are extraordinary examples of design representation. Students will gain many ideas from Corner's Field Operations' winning entry renderings for Fresh Kills.

Large Parks encompasses old, new, far, and near urban parks that are "large." The editors based this parameter on Andrew Jackson Downing's suggestion in nineteenth-century New York that "five hundred acres is the smallest area that should be reserved for the future wants of a city." With this land acreage as its starting point (as defended in Julia Czerniak's "Speculating on Size" essay), the book provides access to the recent reflections of famous design critics, historians, and field practitioners. It would be helpful if an index were included for research, since the authors reference the same parks scattered throughout while making different points. Also, it would be thought-provoking if there were one essay in *Large Parks* applying the tenants expressed for these grand-scale parks to small parks. How do the concepts of flexibility and process apply to the small park? Are they exclusive to the needs of large swaths of land? As a theory manual, *Large Parks* gives nuanced thoughts of how large parks are conceptualized, designed, built, and then managed. Any architect, planner, geographer, or landscape architect will benefit from thinking about the reuse of aged land for parkland and the rhetoric of "process = park" embodied theatrically in a large park.

ERIKA HUDDLESTON is completing her master's degree in Landscape Architecture. She received a BA in Art History from Vanderbilt University and a Certificate in Interior Design from Parsons School of Design. She has worked in textile design in New York and for the Trinity River Waterfront Project in Dallas with Wallace, Roberts, and Todd Landscape Architects. She is interested in grottos and rocaille in landscape and the history of landscape architecture education.

Road, River, and Ol' Boy Politics:
A County's Path from Farm to Supersuburb

by Linda Scarbrough
Published by Texas State Historical Associations

REVIEWED BY SARA PIERCE

In her book *Road, River, and Ol' Boy Politics*, Linda Scarbrough explores the controversies and political maneuvering that accompanied two federal engineering experiments that transformed Williamson County, Texas, from an agricultural empire with a diverse and democratic population into one of the fastest-growing conservative counties in the nation. Scarbrough tells the story of Austin's northern neighbor by dividing its history into two parts, The River and The Road. In the first section, she tracks the controversies and political maneuvering that accompanied a fifty-year dispute resulting in the construction of two dams along the San Gabriel River. The region was drastically reconfigured by a new agenda of flood control set in 1921, in the wake of mass destruction caused by one of the greatest of all continental U.S. rainstorms. Although federally funded dams and highway projects were typically geared toward the support of agrarian economies, the recipients of these projects often shifted toward massive suburban development; Williamson County was no exception. Although water wasn't everything, it was pivotal in the early 1970s, when Round Rock began a trend of recruiting blue chip companies. The population grew 500 percent during that decade in response to the city's pursuit of postindustrial technology.

Scarbrough suggests that only a handful of people suspected the real impact that U.S. Interstate Highway 35 would have when combined with a new source of surface water. The second part of the book follows the implementation of Interstate 35 through Round Rock from its first proposed route in 1917. The fifteen-mile difference between where the highway was built and the original proposed route that ran east near Taylor had the consequence of overturning the economic and political power structure in the county. Scarbrough reveals the underlying influence of local forces that impacted federal policy and ultimately redefined national agendas to more suitably fit their needs. She believes that academics often misinterpret infrastructure projects happening to a powerless public in the sole name of state interest. She uses the term "gilded democratic action" to describe the pressure politics led by unusually forceful, politically talented individuals who challenged established powers. The characters that shaped Williamson County by altering road and river projects were each motivated by their own personal and public vision. Scarbrough credits these rural leaders with "anticipat[ing] the future far more accurately, and with more panache, than did the professional planners."

Scarbrough regrets that despite efforts that will provide minimal preservation, much of Williamson County has lost its sense of place. The interstate highway culture that defines America's growth has led to a homogenization of form that subsumes local and regional contexts. Scarbrough's account serves as a testament to the need for consideration of how large-scale public work projects will affect both the physical and cultural environment on a local level. By thoroughly detailing the social, environmental, economic, and political circumstances surrounding the construction of these federally funded infrastructural works, Scarbrough unravels the complexities and unintended consequences of a pattern of fast-track development being replicated across America's Dry Sun Belt.

SARA PIERCE is pursuing her master's degree in Landscape Architecture at the University of Texas. She recently completed a MA in anthropology and holds a BA in geography with an emphasis on landscape ecology. Her educational background and professional experience working in planning and design at the City of Austin Parks Department inspired her to research the relationship between water, urban infrastructure, and Austin's rapid growth.
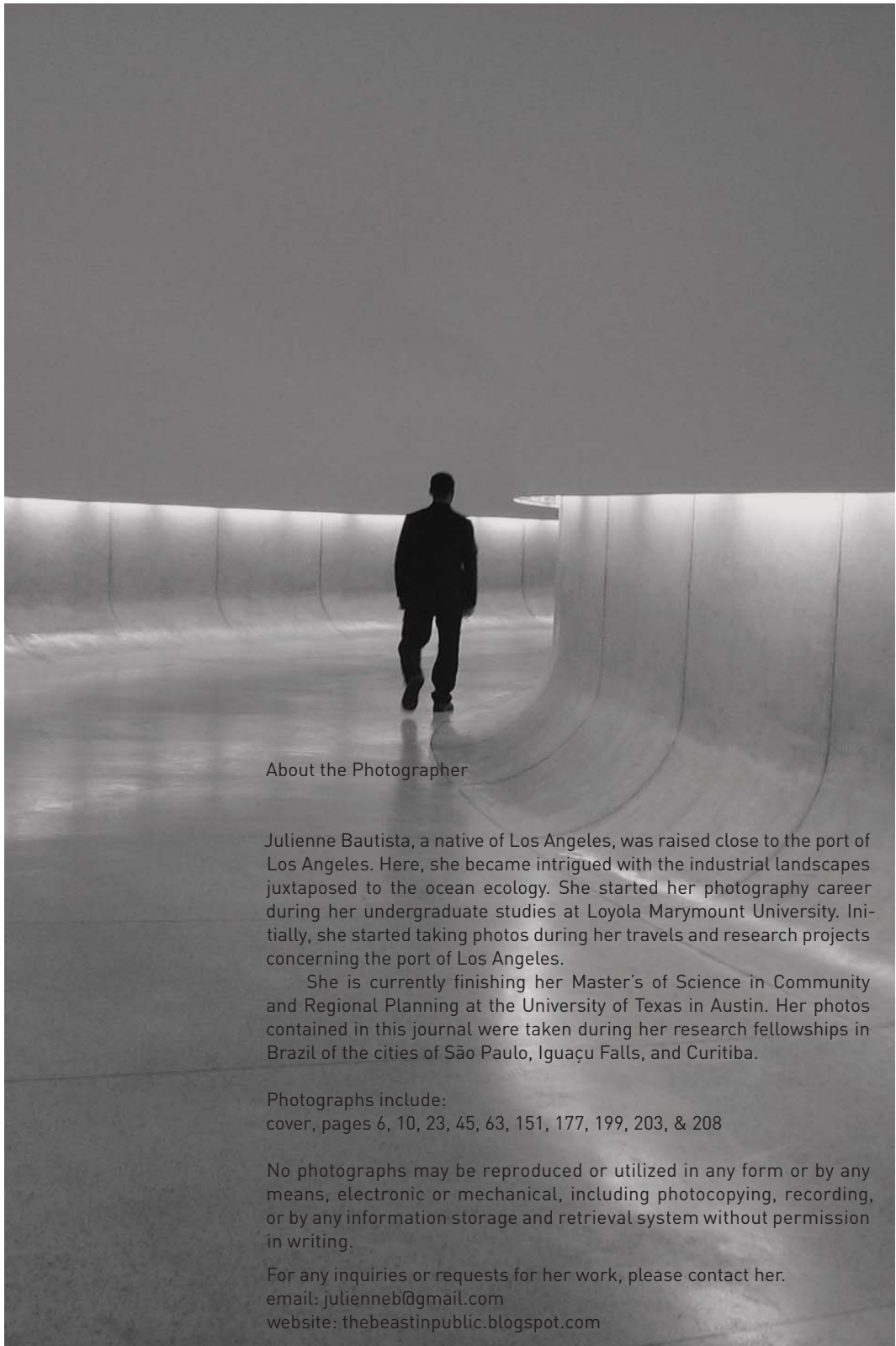
About the Photographer

Julienne Bautista, a native of Los Angeles, was raised close to the port of Los Angeles. Here, she became intrigued with the industrial landscapes juxtaposed to the ocean ecology. She started her photography career during her undergraduate studies at Loyola Marymount University. Initially, she started taking photos during her travels and research projects concerning the port of Los Angeles.

She is currently finishing her Master's of Science in Community and Regional Planning at the University of Texas in Austin. Her photos contained in this journal were taken during her research fellowships in Brazil of the cities of São Paulo, Iguaçu Falls, and Curitiba.

Photographs include:
cover, pages 6, 10, 23, 45, 63, 151, 177, 199, 203, & 208

For any inquiries or requests for her work, please contact her.
email: julienneb@gmail.com
website: thebeastinpublic.blogspot.com

Planning Forum serves as an outlet for the multidisciplinary exchange of ideas regarding the workings of social, political, built, and natural environments. The journal welcomes submissions of original research papers, current book reviews, and discussion of current debates.

Submission guidelines The editorial staff is currently accepting abstracts of articles to be published in *Planning Forum*, Volume 15. An abstract is a brief description (maximum five hundred words) of your proposed article. It should include your topic, research methodology, and relevancy to the field of planning. Graduate students and faculty from various planning-related disciplines are encouraged to submit their work. If the submission is found both interesting and relevant, the editors will ask the author to submit his or her article.

Suggested length for articles is five thousand to ten thousand words, including notes and references. Please indicate the number of words on the cover sheet. Book reviews on relevant, recently published works should be no more than one thousand words.

Authors should follow the style requirements of the *Chicago Manual of Style*, 14th Edition, and use parenthetical author-date referencing. Papers are reviewed anonymously, and authors should therefore refer to themselves in the third person ("the author") in text and notes. Each illustration, chart, table, or graph to be included in the text should be submitted on a separate sheet, with desired text locations clearly indicated.

Submissions will be evaluated by the student editorial staff and faculty reviewers according to the following criteria: clarity of purpose or thesis, clear and effective writing or visual narrative, and use of sound and appropriate methods. All submissions are subject to final content and style editing with the acquiescence of the author before publication.

Contact information Please direct any correspondence or questions to the editorial staff at: ut.planning.forum@gmail.com.

Abstracts and articles should be submitted as an MS Word or PDF attachment. Images, maps, graphs, and tables should be submitted as TIFF or JPEG files.