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Article *in* Environmental Justice · December 2008

DOI: 10.1089/env.2008.0506

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Volume 1, Number 4, 2008

DOI: 10.1089/env.2008.0506

How Planning and Zoning Contribute to Inequitable Development, Neighborhood Health, and Environmental Injustice

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ABSTRACT

In this commentary, we discuss the ways in which planning and zoning contribute to inequitable development and how this has implications for the design of neighborhoods, health and health disparities, and environmental injustice. We first discuss the history of zoning and planning in this country and their contribution to inequitable development and urban fragmentation. We then describe how the distribution of resources within and between neighborhoods has an impact on neighborhood health by linking neighborhood conditions to health outcomes such as obesity and cardiovascular disease. In this commentary, we also discuss the contributions of planning and zoning to environmental injustice and the production of riskscapes. We conclude with a discussion on the importance of social justice and equity in urban revitalization efforts and make recommendations that can be adopted to improve local social and physical environments and access to health-promoting resources in disadvantaged neighborhoods.

TODAY MANY OF the largest metropolitan regions within the United States are fragmented with municipalities who are in competition with each other for businesses and the most affluent residents. These municipalities utilize their police powers to control local land use through zoning and planning regulations. Zoning and planning contribute to inequitable development and this has important implications for the design of neighborhoods, health, and health disparities. In this article, we provide a brief history of zoning and planning in the United States and its contribution to inequitable development and urban fragmentation, how zoning and planning inequities have led to the differential distribution of resources across advantaged and disadvantaged neighborhoods, and negative public health outcomes. We conclude with a discussion on the importance of social justice and equity in urban revitalization efforts and make recommendations that can be adopted to improve the social and built environments and resource allocation in disadvantaged neighborhoods.[1]

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HISTORY OF PLANNING AND ZONING

The basis for many of our current zoning and planning regulations and standards stem from efforts during the sanitary movement of the industrialization era of the nineteenth century. Efforts to decrease the spread of infectious diseases were rooted in the dominant view that population concentration and the proximity between businesses and homes was unhealthy.[2] In the twentieth century, New York City pioneered the first comprehensive zoning ordinance in 1916 to separate land uses in order to limit human exposure to toxic chemicals and biological agents, improve environmental quality, and protect public health. The zoning approach established by the City of New York was implemented nationally through the Standard Zoning and Enabling Act (SZEA) and still provides the foundation of contemporary zoning regulations. In 1926, the landmark United States Supreme Court case of *Ambler Realty Co v. Village of Euclid* codified that zoning ordinances are a proper exercise of the state's police power because they protect the health and safety of the community. Thus, this case provided legal support for the segregation of land, usages, and people in neighborhoods and cities.[3] Schilling and Linton write that this case foreshadowed *exclusionary zoning*—the illegal practice of excluding low-income and minority residents under the

guise of zoning use classifications—which municipalities, planners, and the legal system are challenged by in contemporary community development and planning.[4]

EXCLUSIONARY ZONING AND NEIGHBORHOOD DEVELOPMENT

Presently, we observe exclusionary practices when many municipalities in fragmented metropolitan regions use both incorporation and zoning as a way to insulate their investment and enhance their property values. Specifically, these regions control local land use including schools and business development, and exclude undesirable populations (e.g., people of color, poor people, immigrants) and undesirable industries. They also employ exclusionary zoning to create special districts (e.g., residential, business, school, fire) to protect their political and economic self-interests. In most cases, the courts have upheld the rights of municipalities to craft their own zoning ordinances and planning standards allowing them to serve their community best and to define the public welfare for their own jurisdictions as they deem necessary. However, this further encourages municipalities to develop and implement planning and zoning regulations and standards that benefit advantaged populations and ignore the needs and concerns of disadvantaged populations. As a result, discriminatory planning and exclusionary zoning contribute to unequal development within metropolitan areas limiting access of all citizens to affordable housing, public transportation, good school systems, and economic infrastructure (e.g., high paying jobs in technology, health, and service sectors). This results in segregated communities along the lines of race and class and the creation of an urban underclass that is denied access to mainstream opportunities.[5]

PLANNING, ZONING, AND NEIGHBORHOOD HEALTH

Historically, there has been a natural connection between planning, zoning, and public health. During the sanitary movement, public health was a central goal of urban planning, but that changed during the middle of the twentieth century. After progress was made to control the spread of infectious diseases through advances in environmental health engineering, public health and urban planning diverged in mission and perspective. The planning of cities and zoning ordinances focused more on aesthetics, economics, and the property rights of the privileged and less on public health. Concurrently, public health professionals focus less on meso- and macro-level factors such as the built environment and metropolitan level planning and development and more on individual level risk factors (i.e., health behaviors, genetics). Current trends in the nation's health call for a reemergence of the public health ethic of urban planning present in the nineteenth and early twentieth centuries. The diseases that primarily kill Americans in the twenty-first century are not infectious diseases, but chronic diseases. In fact, seven of the top leading causes of death are chronic in nature (heart disease #1, cancer #2, stroke #3, chronic lower respiratory disease #4, diabetes #6, Alzheimer's disease #7, and nephritis #9).[6] One reason for this epidemiologic shift is the improvement in sanitary conditions (i.e., water and sewer services) that allowed for better control of infectious diseases. Additionally, while people live longer through medical advancements, more chronic health conditions have developed. Euclidean-based zoning and planning initiatives have been instrumental in separating unhealthy land uses from people, thus preserving the advancements made during the sanitary movement. However, current restrictive zoning and planning laws and practices have limited our ability to construct and maintain health-promoting built environments in neighborhoods across metropolitan regions.

For example, the nation's obesity epidemic may be a result of the lack of neighborhood and metropolitan level infrastructure that supports physical activity, active lifestyles, and equity in healthy food access. In addition, the culture of consumption and convenience related to the nation's overuse of automobiles as a means of transportation plays an important role in this epidemic. Americans spend a tremendous amount of time in their automobiles driving to work, school, and amenities which leaves little time for regular physical activity. According to *The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity*, the costs of the obesity epidemic in 2000 were more than $117 billion dollars. For the past twenty five years, obesity rates have increased in the United States. In 2006, more than 66% percent of American adults were overweight or obese, up from 47% in the late 1970s. The current adult obesity prevalence rate of 33% is two times greater than the Healthy People 2010 goal of less than 15%. Currently, 17% of children and adolescents are overweight. Since the mid-1970s, the prevalence for children aged 2–19 has increased from 5% to 17%.[7]

Furthermore, we observe disparities in physical activity and healthy food access between whites and nonwhites and affluent and disadvantaged populations. For example, more than 50% of whites obtain the recommended levels of physical activity, while only 40% of blacks and Hispanics obtain the recommended level. In addition, we observe health disparities in obesity. The CDC reports that among women aged 40–59, 53% of non-Hispanic black women and 51% of Mexican-American women were obese compared to 39% of non-Hispanic white women in the same age group. Latinos, African-Americans, and American Indians and Pacific Islanders are 1.9, 2, and 2.6 times more likely to have Type 2 diabetes than whites in the same age group, respectively. These statistics reveal a grim future for Americans particularly if steps are not taken to better understand the impact that zoning and planning has on the production and maintenance of neighborhoods that can have beneficial or deleterious effects on public health.[8]

EMERGING NEIGHBORHOOD HEALTH EFFECTS LITERATURE

An increasing interest in the impact of place on health by researchers in the public health and epidemiologic literature has the potential to help reconnect urban planning and public health. There has been an explosion of

public health literature investigating "neighborhood health effects." The neighborhood environment is one important context because it has both physical and social characteristics that may result in health consequences. Studies have shown that living in disadvantaged neighborhoods is positively associated with increased disease morbidity, mortality, and mental illness, independent of other individual-level factors. Most of these studies have defined neighborhoods as administratively defined areas (census tracts or block groups) and employ available US census indicators of neighborhood socioeconomic characteristics (SES) in health studies.[9]

Although neighborhoods have been studied in relation to a wide range of health outcomes, some of the most consistent evidence comes from the study of cardiovascular disease (CVD) related risk factors and outcomes. Cardiovascular disease is the leading cause of death in the United States killing approximately 700,000 people in 2002. Many of the CVD related risk factors stem from chronic conditions like obesity which itself is a condition linked to the quality of the neighborhood environment. We can use this body of literature to highlight two important points that elaborate on the importance of planning and zoning in the production of the neighborhood environment. First, associations between neighborhood disadvantage and poor CVD health begs the question of how and why neighborhood environments impact such outcomes. Neighborhood socioeconomic position is a proxy for specific features that may actually be relevant for CVD risk. For example, neighborhood SES may proxy characteristics of the built environment conducive to walking or physical activity and the availability and price of healthy foods. In addition, neighborhood SES may proxy features of the social environment such as neighborhood disorder, crime, social cohesion, and collective efficacy. Studies have begun to show associations between these specific features and insulin resistance, hypertension, obesity/body mass index, physical activity, and diet.[10]

A second important issue is how neighborhood environments contribute to health disparities across racial/ethnic and socioeconomic lines. Because of the severe and persistent degree of residential segregation in the United States, racial and ethnic minorities and poor individuals live in very different areas than their white and wealthier counterparts. Moreover, these poor and minority neighborhoods are often under-resourced with health promoting facilities such as supermarkets and recreational outlets (e.g., parks, gyms, basketball courts) to promote healthy diets and physical activity. These neighborhoods are also over-resourced with health-restricting facilities (e.g., liquor stores, fast food restaurants), chronic stressors (e.g., crime, physical disorder), and advertisements for risky behaviors (e.g., tobacco and alcohol billboards) that encourage unhealthy behaviors and limit ability of local residents to lead healthy lifestyles.[11]

PLANNING, ZONING, AND ENVIRONMENTAL JUSTICE

The issues presented in the neighborhood health effects literature also have been documented in the environmental justice (EJ) literature. A wealth of EJ literature has demonstrated that many low-income populations and populations of color live in neighborhoods that are differentially burdened by noxious land uses such as landfills, hazardous waste sites, incinerators, publicly owned treatment works (POTWs) (e.g., sewer treatment plants), Toxic Release Inventory (TRI) facilities, energy production facilities, petrochemical plants, and heavily trafficked roadways due to discriminatory and exclusionary zoning.[12]

Other literature has recognized the lack of access to parks, green space, recreational facilities, pedestrian-friendly residential environments, and the disproportionate burden of pathogenic infrastructure such as fast food restaurants, liquor stores, and check cashing facilities as environmental justice issues as well. This body of literature has shown that the disproportionate burden of noxious land uses and pathogenic infrastructure leads to higher exposure to unhealthy physical environments, increased health risks, negative health behaviors, deleterious health effects, and health disparities in diseases such as asthma, cancer, obesity, diabetes, and cardiovascular disease in urban environments. Exposure to such noxious conditions have been linked to the exacerbation of comorbid conditions, asthma related morbidity, premature adult mortality, infant mortality, low birth weight babies, psychological stress, and higher body burdens of toxic chemicals (e.g., lead).[13]

The lack of healthy and equitable planning and zoning in poor communities of color leads to their differential exposure to neighborhood stressors and unhealthy land uses and limited access to salutogenic resources (i.e., medical facilities, grocery stores, parks, open space, healthy schools); these high risk geographic settings have been classified as "riskscapes." Several researchers have discussed how "riskscapes" burden poor communities of color in New York, Southern California, Detroit, and other metropolitan areas. Living in or exposure to these riskscapes lead to poor populations of color being the most vulnerable to the effects of environmental hazards, air pollution, urban decay, man-made and natural disasters, and climate change.

URBAN REVITALIZATION, EQUITY, AND SOCIAL JUSTICE

Recently, urban revitalization has introduced an era of urban planning with the potential to benefit all citizens regardless of color or class by improving living and built environment conditions and providing new housing, educational, and job opportunities. Urban planners are using "smart growth," a planning framework that focuses on "the development of livable spaces where people can work, play, and shop without depending on automobiles."[15] Smart growth includes conservation of open and green space, mixed land use, diversity in housing options, denser development, and the construction of compact neighborhoods that are walkable, livable, and sustainable. Many affluent residents who either moved to the suburbs during the suburbanization era or are the progeny of suburbanites desire the benefits of city living. Several factors,

including the frustration of long commutes from bedroom communities to jobs in the big city and the draw of trendy "smart growth" and "sustainable" communities, are driving urban revitalization efforts in metropolitan regions nationally. Unfortunately, the planning philosophy that drives urban revitalization focuses predominantly on urban design and aesthetics and less on social equity and justice. Thus, revitalization is expanding the pattern of inequitable development and fragmentation in metropolitan regions that occurred during the suburbanization and urban renewal eras of the twentieth century, particularly in resource-poor and segregated neighborhoods where many disadvantaged populations reside. These neighborhoods are being replaced by upscale rental properties and homes for wealthier individuals and families without providing an adequate amount of public housing or mixed-income housing for current residents.

With the emphasis of urban planning on more "walkable and livable" neighborhoods without the inclusion of equity and social justice principles to improve the living conditions of disadvantaged residents, these groups are being priced out of communities and can not take advantage of new schools, economic opportunities, and health-promoting resources that accompany this development. Inequitable development is concentrating displaced disadvantaged residents in hypersegregated urban neighborhoods or decaying suburban neighborhoods. Furthermore, the consequence of the disproportionate burden of urban revitalization on disadvantaged urban populations and disproportionate benefit on suburban and affluent urban populations is the exacerbation of social, economic, and environmental inequalities. For urban planning to address these inequalities, undo metropolitan fragmentation, and provide more comprehensive and equitable development for all residents regardless of race and class, it must learn from other disciplines particularly public health.

ACTION STEPS

We make the following recommendations to improve the living conditions in urban environments and better quality of life and health outcomes for disadvantaged populations:

- Public health, urban planning, and environmental law must work together to understand how zoning reform can be used to decrease inequitable development, metropolitan fragmentation, and health disparities in urban environments.
- Following the model of economic development zones, communities that are overburdened by unhealthy land uses should have the opportunity to create healthy community zones that place limits on the number of noxious land uses and pathogenic, health-restricting facilities.
- Region-wide focused organizations such as metropolitan transportation organizations (MTOs) or association of governments (e.g., Association of Bay Area Governments) should focus on better regional governance and coordination of social services, development, infrastructure, transportation, housing, and protection of open space.
- Establish a regional tax sharing system like the one managed by The Metropolitan Council in Minneapolis-St. Paul.
- Pass land bank legislation similar to that passed in the State of Michigan in 1999 that led to the establishment of the Genesee County Land Bank (GCLB) to stabilize neighborhoods and revitalize the City of Flint and surrounding areas.
- Development of Environmental Preservation Districts (EPDs)[16] that would be modeled on historic districts created through the Federal Historic Preservation Act. These districts will help empower communities to have more control of land use, zoning and planning initiatives in the Environmental Preservation Districts.
- Green planning and zoning should be implemented in underserved urban neighborhoods. There are many examples of green zoning and planning initiatives in places like Boulder, Chicago, Portland, and Seattle to name a few. The greening process should go beyond buildings and include open space, public transit, and support of urban agriculture and farmers' markets, and green jobs.
- Smart growth and new urbanism for all, not just advantaged populations. Social justice and equity have to be at the core of all "smart growth" and "new urbanism" projects.
- Cities should expand the use of conditional use permits (CUPs) as the foundation for local "healthy zoning" initiatives (e.g., Los Angeles' use of CUPs to control alcohol outlets).

CONCLUSION

Planning and zoning are central to efforts to improve the physical and social environments in which individuals exist. We know that these environments are currently not designed to facilitate healthy behaviors and often promote sedentary lifestyles. Additionally, because zoning and land use policies are often discriminatory and exclusionary, the consequence is the inequitable distribution of health enriching resources to poor and minority communities. The time is now to challenge communities and cities across the country beset by fragmentation, environmental injustice, and health disparities to use zoning, planning, and community development to preserve urban landscapes, limit the distribution of pathogenic industries, and improve built environment conditions for urban populations. This requires a comprehensive strategy focused at mobilizing residents at the grassroots level and using research to address public policy. To improve the health of communities and to reduce racial, ethnic, and socioeconomic health disparities, we must consider comprehensive strategies that integrate the best of new urban planning approaches such as "smart growth," "sustainability," "new urbanism," and "active living" with the best evidence-based health and social justice practice that public health has to offer in order to achieve more equitable regional development and zoning and planning reform. Change cannot happen without the involvement of

public health officials, urban planners, citizen groups, and other stakeholders to perform community development that addresses public health issues that burden disadvantaged urban populations.

ACKNOWLEDGMENTS

We would like to acknowledge the Robert Wood Johnson Health & Society Scholars Program for funding research related to this manuscript.

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