

The Historian and the Photographer
Confronting Urban Sprawl in Data and Image

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Aerial Photography: Tracking Sprawl over Space

“A Tale of Two Manhattans”



Midtown Manhattan, **NYC** (2000 population = 1.537 million)
Source: Google Earth

Aerial Photography: Tracking Sprawl over Space “A Tale of Two Manhattans”



Manhattan, Illinois (2005 population = 5,169; increase of 55.2% from 2000)
Image source: Google Earth

Sprawl: What Is It, Anyway?

Cookie-cutter housing subdivisions and ugly strip malls

Multilane roads, big box retail,
chain stores/restaurants

Homogenized, auto-centric
landscapes of scattered subdivisions

Paved-over farmland

ANYWHERE, USA



Feeling “Experimental”? Joliet
Municipal Airport, IL, June 2006
Photo by L. Bryson

Growth in Will County, IL

- Population 642,813 in July 2005
- Fastest-growing IL county during that period (numerical increase)
- 11th fastest in nation (out of 3,141 counties)
- Joliet, county seat:
 - 1990 population: 76,836
 - 2005 population: 136,208

Sources: Northeast IL Planning Commission; "Joliet" (US Census)



Joliet, IL, June 2006 – Looking east toward
Cathedral Area and Downtown
Photo by M. Bryson



Chicagoland Speedway, Will County, IL, June 2006
Photo by M. Bryson



Farmland, Will County, IL, June 2006
Photo by M. Bryson

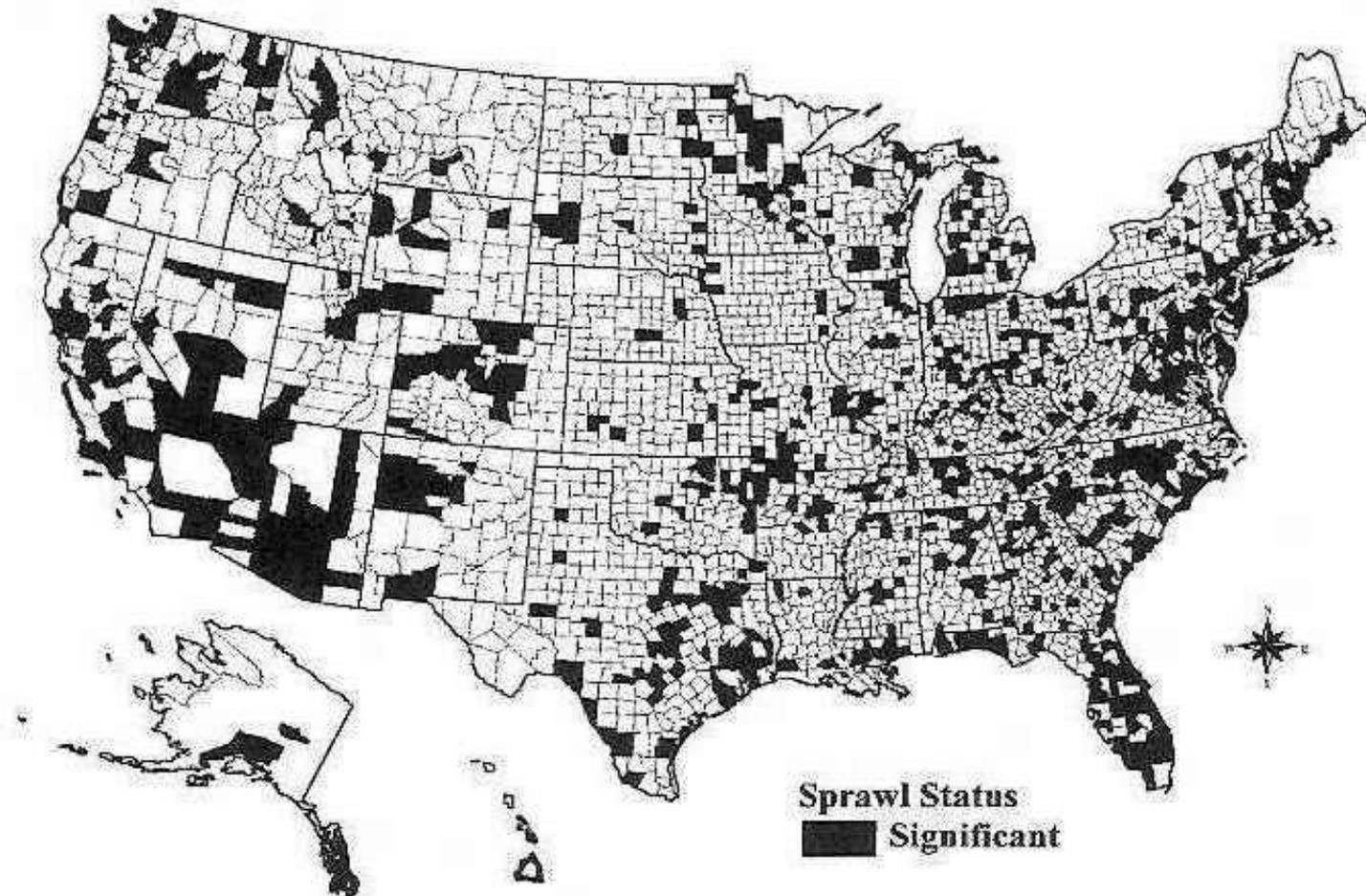


New Subdivision, Will County, IL, June 2006
Photo by M. Bryson



Mapping Projections of Sprawl

Identification of US counties projected to experience sprawl through 2025 under a “sprawl growth scenario” (i.e., status quo)



Source: Burchell, *et al.* 27

Sprawl: Two Working Definitions

“[L]ow-density, scattered, urban development without systematic large-scale or regional public land-use planning.”

-- Robert Bruegmann, *Sprawl: A Compact History*, 18

“(1) unlined outward extension into undeveloped areas, (2) low density, and (3) leapfrog development.”

-- Burchell, *et al.*, *Sprawl Costs*, 12

Sprawl: A Compact History (2005)

Robert Bruegmann

Bruegmann's Heresy; or,
Key Observations and Contentions about
S P R A W L

- Slippery to define, assumed to be bad
- Has a long history (evident across time and space) which provides context for understanding its present character
- Cannot be separated from inner urban processes (e.g., gentrification)
- Arises from multiple causes
- Reform efforts have met with little success
- Has perceived and concrete benefits

Sprawl: A Compact History (2005)

Robert Bruegmann

Methodological Approach

- Analyze sprawl using empirical data (e.g., population, land use, urban density measures), on-the-ground observation, historical records, and rhetorical analysis (of data and language)
- Critique common anti-sprawl arguments (about both the causes and cures for sprawl)
 - Lack of historical perspective, compelling evidence, and objectivity
 - Aesthetic values and class bias cloud academic analysis and popular discussions
- Strive to “redress the balance of opinion” about the benefits and drawbacks of sprawl

Density Gradient for London, 1801-1951

(Bruegmann 19)

Illustrates how population density decreases over space (distance from city center), yet increases over time

Note logarithmic scale on y axis

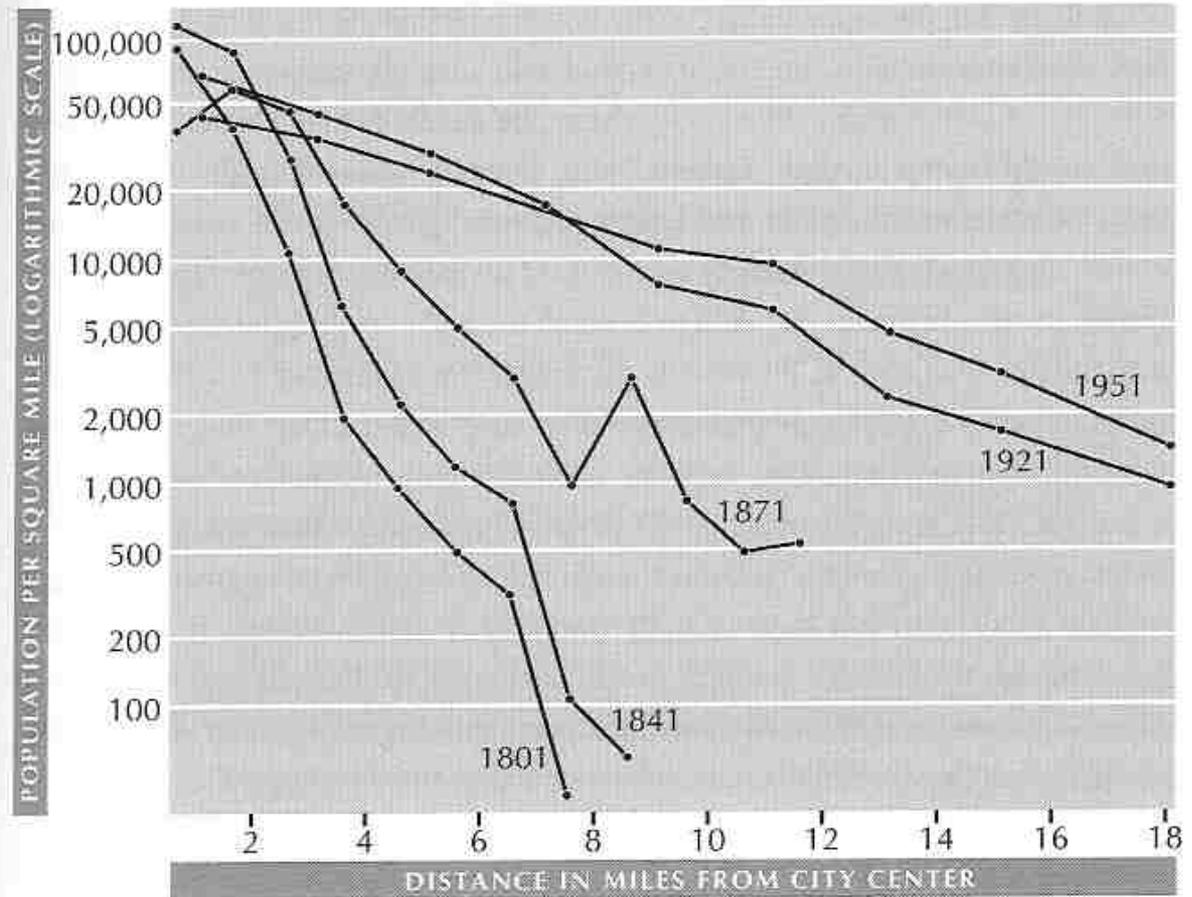


Figure 1. The density gradient for London, 1801–1951. The purpose of density gradient charts is to show the way density falls as one moves away from the center of a city. The vertical scale shows the density of population per square mile. The horizontal scale shows the distance from the center in miles. In the case of London, as in the case of virtually every economically mature city, the density gradient has become flatter over time as densities at the center have dropped and settlement has moved outward. The similarity in the movement of density gradients is one of the strongest indications of the essential similarity of decentralization and sprawl worldwide. (Redrawn by Dennis McClendon from a chart published by Colin Clark in "Transport: Maker and Breaker of Cities," *Town Planning Review* 28, no. 4 [1958], 237–50, chart on 247.)

Sprawl: A Compact History (2005)

Robert Bruegmann

Did Sprawl Accelerate in the Chicago Region, 1970-1990?

- Cited statistic: between 1970 and 1990, metro **population** increased by 4% while **land area** increased 35% (Northeast IL Planning Commission, 1995)
- Land developed for housing; therefore, better comparison is between **households** and land area
 - # households in Chicago area increased by 20%
 - Workforce increased by 21%
- Determining relevant **land area**: replace arbitrary political boundary markers (e.g., county lines) with unit of “urbanized area” to avoid inflating the land area estimate
- Need for larger context: 1970-90 decentralization rate < 1950-70 rate

Sprawl: A Compact History (2005)

Robert Bruegmann

Definition of “Urbanized Area”

“It includes all the land with a strong connection back to the central population centers and more than 1,000 people per square mile” (61).

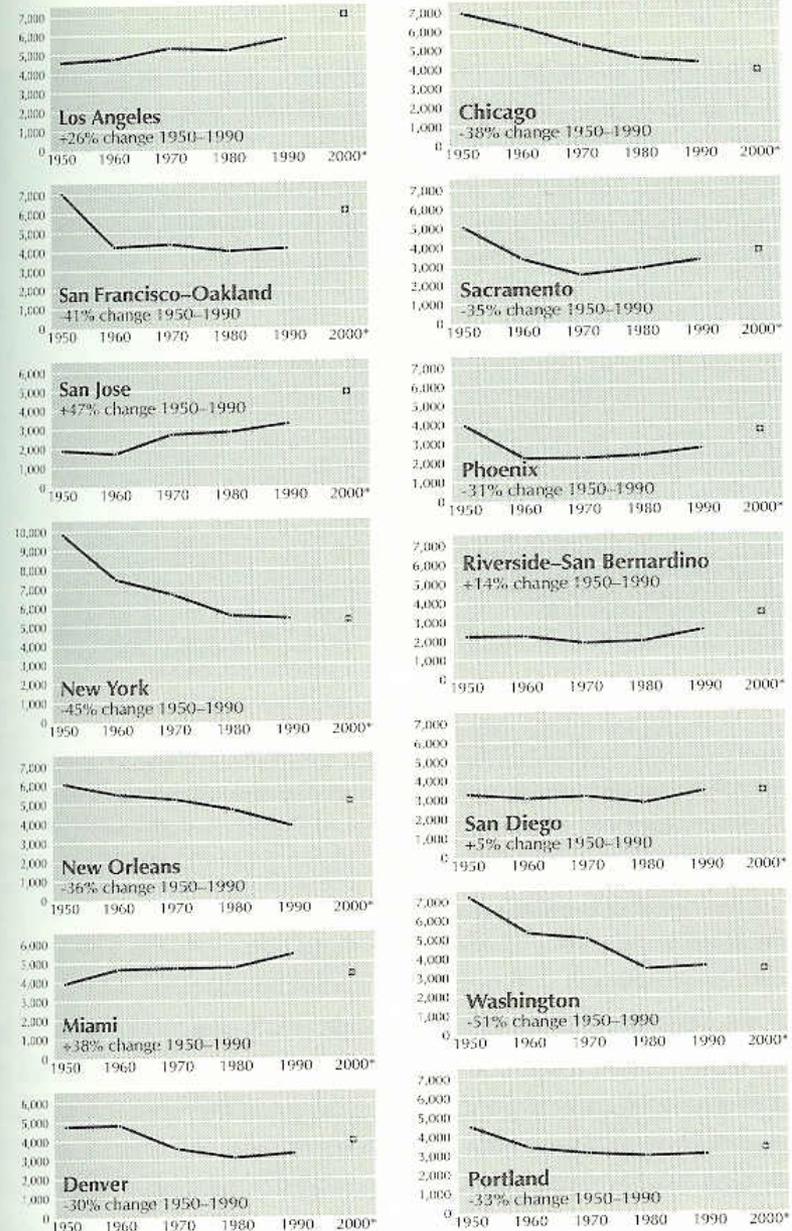
(strong connection = water supply and wastewater treatment, for example, are economically feasible)

Bruegmann notes:

“[A]lthough Chicago and many cities of the northern and eastern United States continued to decentralize in the late twentieth century, they decentralized more slowly than they had in the immediate postwar decades. In fact, they seem to be in the process of reversing this trend and actually becoming denser.”

(61)

At right: Densities of US urbanized areas, over time. (Bruegmann 63)



*2000 urbanized areas may not be comparable to earlier censuses

Sprawl: A Compact History (2005)

Robert Bruegmann

Benefits of B' s Analysis

- Provides historical perspective
- Synthesizes sprawl research
- Maps out relevant issues, arguments, and data gaps through rhetorical analysis
- Responds to subjective and/or reductive anti-sprawl bias
- Points to future role of literature and art in confronting/representing sprawl

Sprawl: A Compact History (2005)

Robert Bruegmann

Problems with B' s Analysis

- Appeal to objectivity conflicts with explicit defense of sprawl
- Historicizing sprawl provides vital context, but naturalizes the process
- Lack of evidence for selected key assertions
- **The “ecocritical gap” : weak analysis of environmental costs and critiques**

Sprawl: A Compact History (2005)

Robert Bruegmann

Environmental Gurus as “Exurbanites”

“Among the best documented inhabitants of exurbia are a number of the early American prophets of what we now know as environmentalism. **Henry David Thoreau**, in his shack at Walden Pond just beyond suburban Boston, **John Muir**, in a house across the Berkeley hills from San Francisco, and **Aldo Leopold**, at his weekend retreat just north of Baraboo, near Madison, Wisconsin, were actually exurbanites, individuals who loved what they considered rural life but who also wanted ready access to the city.”

(31-2; emphasis added)

Sprawl: A Compact History (2005)

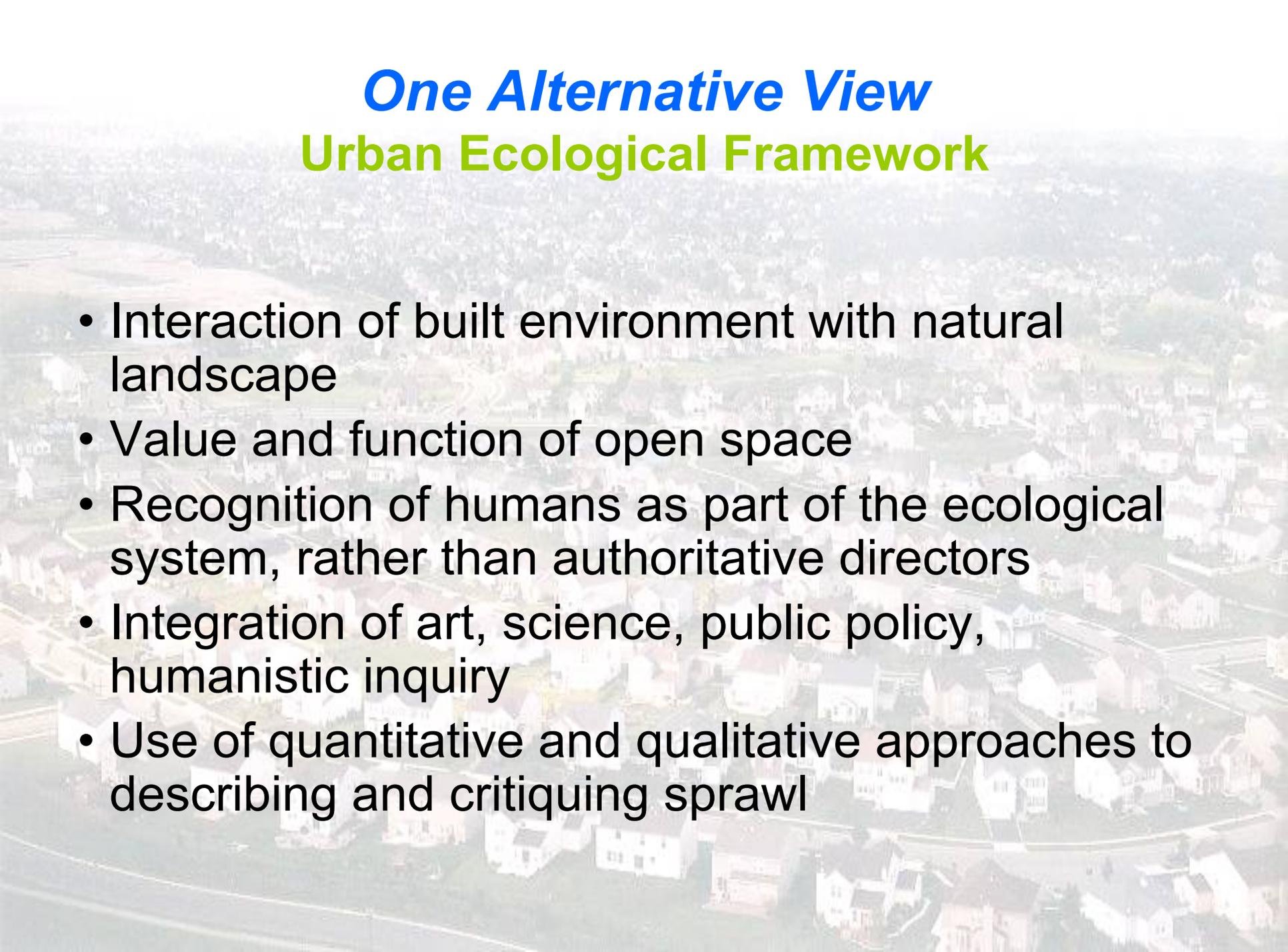
Robert Bruegmann

Problematic Claims about Sprawl and the Environment

- Advocates of sustainability “assume that the resources of today will be the resources of tomorrow”
- “At low enough densities, most citizens would probably be able to generate, using wind, water, solar, and geothermal power sources, a great deal of energy they need on their own land”
- Sprawl not definitively linked to global warming
- “[E]nvironmental history seems to suggest that as societies become more affluent, citizens are likely to be less and less willing to tolerate these [environmental] problems”

(Bruegmann 148-150)

Absent factors: open space, resource consumption, transportation, biodiversity . . .



One Alternative View

Urban Ecological Framework

- Interaction of built environment with natural landscape
- Value and function of open space
- Recognition of humans as part of the ecological system, rather than authoritative directors
- Integration of art, science, public policy, humanistic inquiry
- Use of quantitative and qualitative approaches to describing and critiquing sprawl

Revealing Chicago (2005)

Terry Evans

“I intend to highlight issues that concern everyone in Chicago, but that is not all. I want to share the beauty of this gorgeous, complicated city. Sometimes Chicago from above reminds me of looking at virgin prairie ground from waist level twenty-five years ago, when I photographed the rich interweaving intricacy of grasses. More than anything, I wanted to show the diversity and complexity of Chicago, yet I have not even come close. This is an incomplete portrait, a fraction of a second in the life of Chicago, and every picture contains more stories that the image reveals” (189).

Revealing Chicago (2005)

Terry Evans

A brief [interactive tour](#) . . .

- Fly-over: geographic orientation to terrain and political boundaries
- Thematic pairings of images
- Growth of the metropolis: past, present, future

Revealing Chicago (2005)

Terry Evans

- Personal exploration of urban space
- Representation of natural and built environments along several axes
 - Urban/suburban/rural
 - Residential/commercial/recreational/industrial/agricultural
 - Architectural/ecological
- Investigation of the shape, character, and aesthetics of the urban footprint
- Interactivity of website : : integration of art, geography, and information

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