Urban Sprawl and Regional Geographic Change: Insights from Florida and Texas

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Project Summary

1. Introduction: Background of the Reviewed Topic

Urban sprawl refers to the unchecked, low-density expansion of urban areas into surrounding rural landscapes. First conceptualized in mid-20th century urban planning discourse, it remains a widely debated issue in geography due to its significant impact on land use, environmental quality, infrastructure, and regional form. Unlike compact and planned urban development, sprawl is often characterized by single-use zoning, leapfrog developments, car-dependency, and diffuse city boundaries. The southeastern United States, particularly Florida and Texas, are prime case studies due to their rapid population growth and development trends over recent decades. This review synthesizes key literature examining the metrics, causes, and consequences of urban sprawl and applies those findings to the unique geographic and environmental conditions of Florida and Texas.

2. Bibliography: Summary of Key Articles Reviewed

Brody (2013):

Brody outlines the primary features of sprawl, including low residential density, single-use zoning, and the inefficiencies of disconnected development patterns. The article emphasizes environmental consequences—like habitat loss, increased runoff, and ecosystem fragmentation—and links sprawl to increased public infrastructure costs and pollution.

Resnik (2010):

Resnik approaches urban sprawl from a policy and ethics perspective. He explores the tension between smart growth initiatives and entrenched stakeholder interests (developers, residents, municipalities). His discussion highlights how democratic participation and local governance influence whether sprawling patterns are challenged or reinforced.

Ewing & Hamidi (2014):

This article introduces the Urban Sprawl Index, a composite metric used to quantify sprawl based on factors like density, land-use mix, and street connectivity. The authors compare metropolitan areas across the U.S., showing that sprawling regions tend to have longer commutes, greater vehicle dependency, and weaker downtown cores.

Gunther Maier (2006):

Maier challenges the negativity surrounding sprawl by discussing potential market rationales behind it. He considers consumer preferences and land affordability as possible justifications but ultimately underscores that such preferences can obscure the broader environmental and social costs.

Kii & Matsumoto (2023):

This study leverages nighttime satellite imagery to detect patterns of urban expansion over time. The methodology offers a geospatial, data-driven approach to monitor sprawl in real time, correlating light spread with development pressure at the urban fringe.

Staletovich (2020):

Focused on Florida, this journalistic study forecasts that if current growth continues, Florida will lose over 5 million acres of open land by 2070. The author draws attention to the threat posed to the Everglades and other environmentally sensitive areas, emphasizing the urgency for better planning.

3. Critical Thinking: Comments and Critique

The articles collectively reinforce the idea that urban sprawl is a multidimensional phenomenon, impacting everything from environmental quality to transportation behavior. A core strength of the reviewed literature is the interdisciplinary lens: planning scholars, geographers, economists, and environmental scientists all contribute unique perspectives.

However, there are notable gaps and limitations. For example, Brody (2013) and Resnik (2010) emphasize the environmental and social harms of sprawl, but they could benefit from a stronger empirical connection to regional case studies, especially in rapidly changing states like Texas. Gunther's article introduces useful economic nuance but risks underplaying the negative externalities of sprawl by focusing too much on market efficiency.

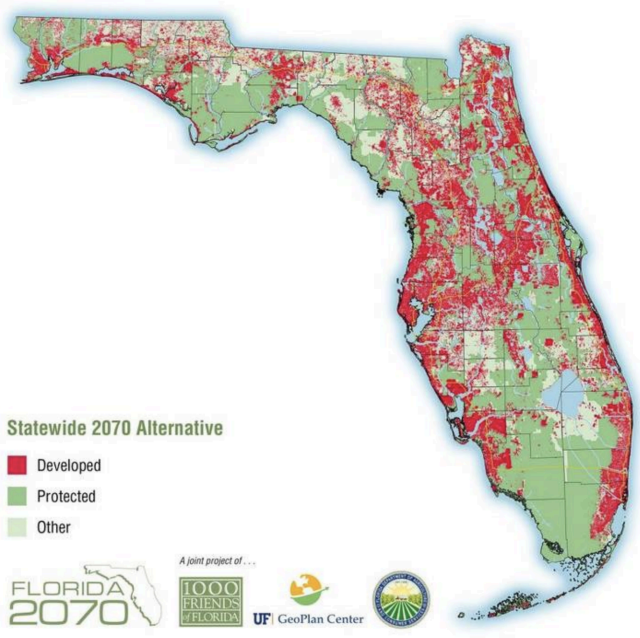
Ewing & Hamidi (2014) provide a metric for quantifying sprawl, but their index may overlook qualitative cultural factors influencing development, such as lifestyle preferences or racial segregation patterns historically tied to suburbanization in the South. The use of satellite imagery in Kii (2023) is innovative and provides a compelling tool for future studies to assess development patterns in real-time.

What's most striking is the convergence of findings: all sources, despite differing methodologies, agree that sprawling development is unsustainable. Yet political inertia and individual preferences continue to extend it. Florida and Texas exemplify these contradictions—residents and developers alike desire affordable space and suburban amenities, yet the long-term costs (especially environmental) are escalating.

In Florida, sprawl is tangibly visible in the encroachment on the Everglades and depletion of aquifer recharge zones. In Texas, it is expressed through the unrelenting growth of cities like Houston and Dallas, where infrastructure struggles to keep pace with decentralized growth. Both states exemplify the challenges of managing rapid population growth with limited statewide planning coordination.

Future work should explore stronger linkages between ecological modeling and urban planning strategies, particularly in high-risk regions like coastal Florida where land use is intimately tied to water management. Additionally, integrating participatory planning approaches could help align community preferences with sustainable growth objectives.

Maps & Figures



Projected land use in Florida by 2070 under a "business-as-usual" development scenario. Areas shown in red represent developed land, highlighting the significant expansion of urban and suburban areas, while green areas indicate protected lands. If unchecked, sprawling development could consume an additional 5 million acres of forests, farmland, and open space—posing serious threats to ecosystems like the Everglades.

References (APA-style):

- Brody, S. (2013). The characteristics, causes, and consequences of sprawling development patterns in the United States. *Nature Education Knowledge*, 4(5), 2.

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- Gunther, M. (2006). Urban Sprawl: How Useful is this Concept? *Congress of the European Regional Science Association*.

- Kii, M., & Matsumoto, K. (2023). Detecting Urban Sprawl through Nighttime Light Changes. *Sustainability*.

- Resnik, D. B. (2010). Urban sprawl, smart growth, and deliberative democracy. *American Journal of Public Health*, 100(10), 1852–1856.

- Staletovich, J. (2020). Sprawl could gobble up another 5 million acres in Florida by 2070. *Miami Herald*.