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ATTACKING SMART GROWTH

*Michael Lewyn**

REVIEW, *THE HUMAN CITY: URBANISM FOR THE REST OF US*, JOEL KOTKIN (B2 BOOKS, 2016)

I. INTRODUCTION

In the first half of the 20th century, American cities generally gained population.¹ But in the late 20th century, the rise of suburbia transformed American metropolitan areas.² Of the eighteen American cities that had over 500,000 people in 1950, all but four have lost population in the past six decades.³ Five of these cities (St. Louis, Detroit, Cleveland, Pittsburgh, and Buffalo) have lost more than half of their 1950 population.⁴ Post-1950 suburbs often adopted a form of development frequently referred to as “sprawl:” where houses are not within walking distance of jobs or shopping, and streets are too wide to be comfortably crossed on foot.⁵

In recent decades, the “Smart Growth” movement has endorsed redevelopment of cities and older suburbs.⁶ Smart Growth supporters

¹ See THE WORLD ALMANAC AND BOOK OF FACTS 2016 614 (Sarah Janssen ed., 2016) (showing that almost every American city gained population between 1900 and 1950) [hereinafter WORLD ALMANAC].

² See *People Urbanization of America*, THEUSAONLINE.COM, <http://www.theusaonline.com/people/urbanization.htm> (last visited Apr. 20, 2017).

³ The four exceptions were New York, Los Angeles, Houston and San Francisco. *Id.* Two of these four (New York and San Francisco) lost population for decades but bounced back after 1980. *Id.* One of the other two (Houston) gained population only because it annexed vast amounts of territory after 1950. See ALAN BERUBE ET AL., 3 REDEFINING URBAN AND SUBURBAN AMERICA: EVIDENCE FROM CENSUS 2000 61-62 (2006).

⁴ See WORLD ALMANAC, *supra* note 1, at 614.

⁵ See Todd Litman, *Evaluating Criticism of Smart Growth*, VICTORIA TRANSPORT POL’Y INS. 4-5 (Feb. 27, 2017), <https://www.vtpi.org/sgcritics.pdf> (describing sprawl development) [hereinafter *Evaluating Criticism*].

⁶ See Janice C. Griffith, *Green Infrastructure: The Imperative of Open Space Preservation*, 42-4 /43-1 URB. LAW. 259, 268-69 (2010/2011) (“The smart growth movement, which emerged in the 1990s, seeks to find new patterns of development to curb spreading residents over larger areas in a sprawling pattern . . . [through] the investment of time, attention, and resources in restoring community and vitality to center cities and older suburbs.”) (internal citations omitted).

argue that because most suburbs have inadequate public transit,⁷ more suburban growth means more driving, which in turn means more pollution from cars.⁸ And because drivers get less commuting-related exercise than walkers, bikers, or transit users (who must walk to and from transit stops), the growth of automobile-dependent sprawl means that Americans get less exercise than might otherwise be the case, contributing to a variety of health problems.⁹

To some extent, Americans seem to be heeding the call of the Smart Growth movement. As crime has declined,¹⁰ some cities have become safer, and thus more desirable, places to live. Several cities that lost population in the mid-20th century (including New York, San Francisco, Boston, Philadelphia, and Washington) have started to grow again in the 21st.¹¹ Even in regions with weaker central cities, downtowns have gained populations.¹² For example, while Chicago lost population during the 2000s,¹³ its downtown population nearly doubled between 1990 and 2012.¹⁴ Although this increase was

⁷ Cf. Adie Tomer et al., *Missed Opportunity: Transit and Jobs in Metropolitan America*, METROPOLITAN POL'Y PROGRAM BROOKINGS 16-17 (May 2011), https://www.brookings.edu/wp-content/uploads/2016/06/0512_jobs_transit.pdf (stating that even in the relatively transit-friendly New York region, the average commuter can reach only twenty-two percent of suburban jobs through public transit within ninety minutes).

⁸ See Roberta F. Mann, *The (Not So) Little House on the Prairie: The Hidden Costs of the Home Mortgage Interest Deduction*, 32 ARIZ. ST. L.J. 1347, 1370-71 (2000).

⁹ See Vasudha Lathey, et. al., *The Impact of Subregional Variations in Urban Sprawl on the Prevalence of Obesity and Related Morbidity*, 29 J. PLAN. EDUC. & RESEARCH 127, 132-34 (2009) (stating that residents of "walkable" neighborhoods, where places of entertainment, churches and schools are within walking distance of homes, tend to have less obesity, hypertension, heart disease and diabetes); Julia Koschinsky & Emily Talen, *From Sprawl to Walkable: How Far is That?*, in RETROFITTING SPRAWL: ADDRESSING SEVENTY YEARS OF FAILED URBAN FORM 11, 18-20 (Emily Talen ed., 2015) (explaining that urban neighborhoods tend to be more walkable than suburban neighborhoods). These are not the only arguments in favor of Smart Growth. See Litman, *Evaluating Criticism*, *supra* note 5 (briefly listing such benefits). However, I have tried to focus on the narrower subset of issues raised in Kotkin's book.

¹⁰ See WORLD ALMANAC, *supra* note 1, at 116; Lawrence Rosenthal, *Pragmatism, Originalism, Race, and the Case Against Terry v. Ohio*, 43 TEX. TECH L. REV. 299, 305, 320-21 (2010) (describing the decline nationally and in New York City).

¹¹ See WORLD ALMANAC, *supra* note 1, at 614 (stating that New York and San Francisco lost population between 1950 and 1980, and started to regain people after 1980). The other three cities did not begin to regain population until after 2000. WORLD ALMANAC, *supra* note 1, at 614.

¹² Tomer et al., *supra* note 7, at 3.

¹³ Tomer et al., *supra* note 7, at 3.

¹⁴ See Luke Juday, *The Changing Shape of America's Metro Areas*, U.V.A. (<http://statchatva.org/changing-shape-of-american-cities> (last visited Apr. 22, 2017))

atypical, downtowns generally gained population in the 2000s.¹⁵ Moreover, downtown residents now are more educated, and have higher per capita incomes, than suburbanites.¹⁶

In *The Human City*, journalist Joel Kotkin seeks to defend suburbia and sprawl against Smart Growth criticisms.¹⁷ While other Smart Growth critics have made libertarian arguments that landowners should have a right to develop suburban land without government interference,¹⁸ Kotkin views suburbia as a public good: one of his chapters is entitled “The Case for Dispersion.”¹⁹ He also seems to oppose new housing in central cities and already-developed suburbs, writing that “denser buildings . . . generate more congestion.”²⁰

Kotkin plays both offense and defense. He claims that suburbia provides greater benefits and lower costs than critics claim, and that Smart Growth is less beneficial than its advocates admit.²¹ His affirmative case for suburbia is based primarily on families’ needs: he argues that sprawl reflects basic human needs for larger homes and greenspace, while compact urban development discourages family formation.²² He also rejects the environmental and public health arguments against suburbanization, claiming that compact development creates a variety of pollution and public health problems.²³ Part II of this review discusses his affirmative case for suburbia, and Part III discusses his responses to the smart growth movement’s critiques.

(illustrating that during this period, the population one mile from city center increased from just over 31,000 to just over 61,000.).

¹⁵ *Id.* (demonstrating that in the fifty largest metropolitan areas, the population within one mile of city center increased from 1.3 million to 1.44 million.).

¹⁶ *Id.* (illustrating that forty-nine percent of downtown residents have bachelor’s degrees, and their per capita income is over \$40,000; by contrast, thirty-seven percent of adults living fifteen miles from downtown have similar degrees, and their per capita income is just over \$33,000).

¹⁷ JOEL KOTKIN, *THE HUMAN CITY: URBANISM FOR THE REST OF US* (2016).

¹⁸ See James A. Kushner, *Smart Growth, New Urbanism and Diversity: Progressive Planning Movements in America and Their Impact on Poor and Minority Ethnic Populations*, 24 U.C.L.A. J. ENVTL. L. & POL’Y 45, 50 (2002-03) (“The libertarian critique [of Smart Growth] argues for the deregulation of land development.”).

¹⁹ The Case for Dispersion, in KOTKIN, *supra* note 17, at 141-68.

²⁰ KOTKIN, *supra* note 17, at 13 (referring to new development in Los Angeles’s Hollywood neighborhood).

²¹ KOTKIN, *supra* note 17, at 160-64.

²² KOTKIN, *supra* note 17, at 133, 164.

²³ KOTKIN, *supra* note 17, at 9.

II. THE OFFENSIVE CASE FOR SUBURBIA

Kotkin correctly points out that the more affluent parts of the world are facing a “Birth Dearth:” birth rates have declined and populations have rapidly aged,²⁴ which means that in the future, there may not be enough working-age taxpayers to support old-age retirement programs and other social programs.²⁵ If birthrates do not recover, nations must ultimately either “accept large numbers of immigrants or face gradual demographic decline.”²⁶

Kotkin also notes that urban cores tend to have fewer children and smaller families than suburbs, and that American cities have fewer children than in past decades.²⁷ Kotkin therefore concludes that “[w]ithout places for people to move farther out in the periphery, these core cities, with their low birth rates . . . are hardly sustainable in the long run.”²⁸ In other words, Kotkin’s logic seems to be something like this:

Assumption 1: Society needs more children.

Assumption 2: Society cannot have more children without continued suburbanization, because parents refuse to bring up children in cities.

Assumption 3: By contrast, parents are willing to bring up children in suburbia.

Conclusion: Therefore, suburbanization is necessary for more children.²⁹

But as will be shown below, Assumption 2 is questionable.

²⁴ KOTKIN, *supra* note 17, at 130.

²⁵ See Barron T. Oda, *An Alternative Perspective to Battling the Bulge: The Social and Legal Fallout of Japan’s Anti-Obesity Legislation*, 12 ASIAN-PAC. L. & POL’Y J. 249, 260-62 (2010) (describing problems in both the U.S. and Japan). I assume for the sake of argument that declining birthrates in Western societies are not a good thing. *But cf.* Jorge Martinez, *Too Many Humans, Dwindling Resources, and Not Enough Space*, 6 BARRY U. ENVTL. & EARTH L.J. 108, 113 (2016) (arguing that the planet is overpopulated, and that the population growth exacerbates a variety of environmental harms).

²⁶ See KOTKIN, *supra* note 17, at 15.

²⁷ KOTKIN, *supra* note 17, at 16.

²⁸ KOTKIN, *supra* note 17, at 17.

²⁹ KOTKIN, *supra* note 17, at 17.

A. Can Cities Coexist with Children?

Kotkin correctly notes that housing prices have exploded in big cities,³⁰ and that “middle-income housing affordability constitutes a huge constraint on family formation in many cities Virtually all of the countries with ultra-low birth rates . . . suffer from very high housing prices.”³¹ Thus, housing prices have driven middle-class families out of the world’s more desirable³² cities.

It logically follows that if urban housing prices were lower, urban families would have more children and be more willing to stay in cities. Since prices tend to be governed by the law of supply and demand, it further follows that Smart Growth policies that allow more urban housing construction would make cities more appealing to families.

However, current law often precludes such policies. Zoning law generally limits the population density of neighborhoods - that is, the number of houses or apartments a landowner can build on an acre of land.³³ So a landowner who wishes to expand the housing supply must often ask a city for a rezoning (that is, a change in the code to allow more housing).³⁴ The landowner’s neighbors, however, often oppose such rezonings,³⁵ partially because they may suffer from any new traffic or other negative externalities caused by the new housing, but might not receive the benefits of the new housing (that is, newer and/or more affordable housing).³⁶ Because dense urban areas and

³⁰ KOTKIN, *supra* note 17, at 134.

³¹ KOTKIN, *supra* note 17, at 133.

³² Some cities are not very expensive, but suffer from other problems such as high crime rates and low-prestige public schools. *See, e.g.,* Michael Simoni, *Tuning up the Motor City: The Viability of Restructuring Detroit’s Oppressive Property Tax System Within the Boundaries of Michigan’s Constitution*, 51 WAYNE L. REV. 1309, 1314-16 (2005) (describing problems of Detroit). But because Kotkin focuses primarily on the problems of more prosperous and expensive cities, I shall do so as well.

³³ *See* Paul Boudreaux, *Lotting Large: The Phenomenon of Minimum Lot Size Laws*, 68 ME. L. REV. 1, 5-6 (2016) (citing examples).

³⁴ *See* Roderick M. Hills, Jr. & David Schleicher, *The Steep Costs of Using Noncumulative Zoning to Preserve Land for Urban Manufacturing*, 77 U. CHI. L. REV. 249, 269 (2010).

³⁵ *See* WILLIAM A. FISCHER, *THE HOMEVOTER HYPOTHESIS: HOW HOME VALUES INFLUENCE LOCAL GOVERNMENT TAXATION, SCHOOL FINANCE, AND LAND USE POLICIES* 229-30 (2001) (stating that Americans tend to oppose new housing near them, especially “higher-density development.”).

³⁶ *Cf.* BENJAMIN ROSS, *DEAD END: SUBURBAN SPRAWL AND THE REBIRTH OF AMERICAN URBANISM* 102 (2014) (noting infinite variety of anti-development arguments: “There’s too much parking or too little. If houses are proposed, offices are what the neighborhood needs;

inner suburbs tend to have more neighbors near a possible development site, they have more residents who might object to a new development.³⁷ So even if the text of a zoning ordinance is no more restrictive in a city than in its semi-rural, undeveloped suburbs, the government of the city or its inner suburbs may be more likely to resist rezonings.³⁸

Moreover, the cities with the highest housing costs often have *more* restrictive zoning laws than other places. For example, New York City has created neighborhood review boards which have the right to comment upon new development proposals, thus making “Not In My Back Yard” (hereinafter “NIMBY”) lobbying an official part of city government.³⁹ And while in other cities, a city council decides the fate of a rezoning petition,⁴⁰ in New York a borough president also has the right to review a rezoning, thus creating yet another avenue for NIMBYs to lobby to block new housing.⁴¹ Finally, the city bureaucracy on its own can propose downzoning a neighborhood, which means that the zoning code permits even less new housing than in the past.⁴² Between 2003 and 2007 alone, the city downzoned about 40,000 parcels of land.⁴³ State law also limits development in New York (and elsewhere in New York State): New York’s State Environmental Quality Review Act (hereinafter “SEQRA”) requires government to prepare an Environmental Impact Statement

if offices, houses would be better. Property values will go down; we will be priced out of our homes.”).

³⁷ *Id.* at 102.

³⁸ See Michael Lewyn, *How Environmental Review can Generate Car-Induced Pollution: A Case Study*, 14 SUSTAINABLE DEV. L. & POL’Y 16, 18 (2014) [hereinafter *Environmental Review*].

³⁹ Sheila R. Foster & Brian Glick, *Integrative Lawyering: Navigating the Political Economy of Urban Redevelopment*, 95 CALIF. L. REV. 1999, 2033 n.119 (2007) (describing boards, and noting that they may comment on all zoning actions).

⁴⁰ See, e.g., ST. LOUIS, MO., CODE OF ORDINANCES tit. 26, ch. 26.92, § 030 (showing the initial decision on rezoning made by the planning commission, which stated that it could be appealed to Board of Aldermen).

⁴¹ See John Mangin, *The New Exclusionary Zoning*, 25 STAN. L. & POL’Y REV. 91, 100 (2014).

⁴² See FISCHER, *supra* note 35, at 32 (explaining downzoning).

⁴³ See Amy Armstrong et al., *How Have Recent Rezoning Affected the City’s Ability to Grow?*, FURMAN CTR. FOR REAL EST. & URB. POL’Y 8 (Mar. 2010), http://furmancenter.org/files/publications/Rezoning_Furman_Center_Policy_Brief_March_2010.pdf (noting that 188,000 lots were rezoned; further, twenty-three percent of these were downzoned.). I noticed that on balance, the city upzoned slightly more land than it downzoned. However, some of the alleged upzonings added parking requirements that can reduce a site’s potential for new housing just as easily as a direct density restriction. *Id.* at 8.

(hereinafter “EIS”) for large-scale rezonings.⁴⁴ Although the EIS process does not generally prevent new development, it does make such construction more time-consuming and thus more expensive.⁴⁵

Similarly, San Francisco, a city even more expensive than New York,⁴⁶ also has unusually restrictive zoning policies.⁴⁷ For example, San Francisco allows the city bureaucracy to veto even development that conforms to the existing zoning code.⁴⁸ San Francisco also prohibits most buildings of more than two stories outside downtown.⁴⁹ Finally, California, like New York (and unlike most other states)⁵⁰ also has an environmental review statute that applies to rezoning, and thus has the potential to delay new construction.⁵¹

Because the most restrictive zoning laws artificially limit urban housing supply (and thus increase urban housing prices)⁵² it seems that eliminating those laws would increase the housing supply and, thus, reduce housing prices, making cities more family-friendly. So, one might think that Kotkin would favor allowing more housing in existing city neighborhoods.

But more housing in a neighborhood means, by definition, that the neighborhood becomes a little denser. And Kotkin implies that such density does not lower housing prices, because “higher-density

⁴⁴ Lewyn, *Environmental Review*, *supra* note 38, at 16-17.

⁴⁵ Lewyn, *Environmental Review*, *supra* note 38, at 19 (“For a developer, ‘time is money’ because a developer will often be paying interest on a construction loan while its project is being debated but will be unable to receive money from buyers or renters until the project is actually built. Thus, a developer suffers financially by waiting for government officials to review environmental impact statements and similar documents, some of which include hundreds of pages of analysis.”) (footnotes omitted).

⁴⁶ See Sean Capperis et al., *Renting in America’s Largest Cities*, NYU FURMAN CTR.: CAPITALONE 10 (May 28, 2015), http://furmancenter.org/files/CapOneNYUFurmanCenter_NationalRentalLandscape_MAY2015.pdf.

⁴⁷ See *Permit FAQ & Glossary*, CITY & COUNTY OF S.F.: PLAN. DEP’T, <http://sf-planning.org/permit-faq-glossary>.

⁴⁸ *Id.*

⁴⁹ See *Map of Building Height Ordinances in SF*, IMGUR, <http://imgur.com/Tn7CSTX> (last updated Mar. 29, 2014); John Wildermuth & John Cote, *S.F. Voters OK Prop. B on Waterfront Development*, SFGATE, <http://www.sfgate.com/bayarea/article/S-F-voters-OK-Prop-B-on-waterfront-development-5526983.php> (last updated June 4, 2014).

⁵⁰ See Lewyn, *Environmental Review*, *supra* note 38, at 16 (noting that only about half the states have environmental review statutes, and most of those do not require environmental review of rezoning).

⁵¹ See Kellen Zale, *Changing the Plan: The Challenge of Applying Environmental Review to Land Use Initiatives*, 40 *ECOLOGY L.Q.* 833, 860 (2013).

⁵² Cf. Michael Lewyn, *Deny, Deny, Deny*, 44 *REAL EST. L.J.* 558, 563-72 (2016) (noting that opponents of new housing argue that the law of supply and demand does not apply to urban housing, but explaining why these arguments are meritless) [hereinafter *Deny*].

housing is far more expensive to build . . . [because] the cost of developing a garden apartment is roughly one-third that of developing a high-rise.”⁵³ But Kotkin’s claim is based on a false dichotomy: he implies that “higher-density housing” is the same as high-rises, and thus that new housing must either be low-density suburbia or high-rises.⁵⁴ In fact, urban housing can be both compact and family-friendly without being high-rise.

Kotkin, of all people should know this, since he writes that his father grew up in Brooklyn’s Flatbush neighborhood when it was “very much a place for middle-class families,”⁵⁵ and describes the nearby Ditmas Park neighborhood as one where people move “to escape a culture dominated by childless people”⁵⁶ These neighborhoods are hardly low-density suburbs: both Flatbush and Ditmas Park have between 65,000 and 68,000 people per square mile (nearly twice the Brooklyn average).⁵⁷

If most cities built neighborhoods as dense as Ditmas Park, there would be no need for suburbs (or for that matter, high rises). For example, if all of New York City was built at the density of Ditmas Park, it could accommodate 20.3 million people⁵⁸ - more than twice its current population,⁵⁹ and more than the population of the entire New York metropolitan area.⁶⁰ New York City is not unique: if the city of Atlanta was built at the density of Ditmas Park, it could accommodate

⁵³ See KOTKIN, *supra* note 17, at 11 (footnote omitted).

⁵⁴ KOTKIN, *supra* note 17, at 11.

⁵⁵ KOTKIN, *supra* note 17, at 111.

⁵⁶ KOTKIN, *supra* note 17, at 112.

⁵⁷ See *Ditmas Park Neighborhood in Brooklyn, New York, 11226 Detailed Profile*, CITY-DATA.COM, <http://www.city-data.com/neighborhood/Ditmas-Park-Brooklyn-NY.html> (last visited Apr. 25, 2017) [hereinafter *Ditmas*]; *Flatbush Neighborhood in Brooklyn, New York, 11210, 11226 Detailed Profile*, CITY-DATA.COM, <http://www.city-data.com/neighborhood/Flatbush-Brooklyn-NY.html> (last visited Apr. 25, 2017) [hereinafter *Flatbush*].

⁵⁸ I calculate as follows: New York includes 302.6 square miles. See *Statistical Abstract of the United States: Section 1. Population*, U.S. CENSUS BUREAU, <http://www.census.gov/library/publications/2011/compendia/statab/131ed/population.html>; then click “27 - Incorporated Places With 100,000 or More Inhabitants in 2010—Population” [hereinafter *Statistical Abstract*]. 302.6 times 67,164 (the density of Ditmas Park) equals just over 20.3 million. See *Ditmas*, *supra* note 57.

⁵⁹ See WORLD ALMANAC, *supra* note 1, at 614 (noting that New York has just over 8.3 million residents).

⁶⁰ *Statistical Abstract*, *supra* note 58; then click “20 - Large Metropolitan Statistical Areas—Population” (noting that the New York metropolitan area has almost 18.9 million residents).

over 8 million people⁶¹ - about 50 percent more than the regional population.⁶² In sum, the notion that huge numbers of allegedly expensive high-rises are necessary to accommodate new residents is not correct.

More importantly, building at Ditmas Park-like density would lead to a massive increase in housing supply: if New York's housing supply doubled, obviously, housing would become less expensive. Thus, it is possible to increase urban housing supply and thus lower housing costs, and to do so without large numbers of high-rises.⁶³

But it is not clear that Kotkin is interested in *any* kind of urban development. After discussing NIMBY opposition to high-rises in New York, he writes:⁶⁴ “[I]n Los Angeles, neighborhood councils, notably Hollywood, have rallied against attempts to build denser buildings, *which generate more congestion and erode both the area's livability and its distinct urban identity.*”⁶⁵ If I am reading Kotkin correctly, he seems to be saying that *any* “denser buildings” (that is, any new housing that adds more density, i.e. more people) should be prohibited because they “generate congestion” and “erode livability.”⁶⁶ Since Hollywood has one-third the population density of Ditmas Park (and the rest of Los Angeles even less)⁶⁷ this policy would actually

⁶¹ Atlanta encompasses 133.2 square miles, so 67,164 times 133.2 equals a little over 8 million. *Statistical Abstract*, *supra* note 58; then click “27 - Incorporated Places With 100,000 or More Inhabitants in 2010—Population.”

⁶² *Statistical Abstract*, *supra* note 58; then click “20 - Large Metropolitan Statistical Areas—Population.”

⁶³ Having said that, even the construction of new high-rises would on balance reduce housing costs because of their effect upon demand for other housing. Suppose that a city has 10,000 households competing for 9,000 residences, creating a housing shortage. Then suppose that a developer builds enough expensive high-rises to house 2,000 of these households. The pre-existing 9,000 residences now have only 8,000 households competing for them, thus bringing costs down. Moreover, construction costs are only one of many factors governing housing prices, so the higher construction costs of high-rises are not as relevant to affordability as Kotkin suggests. See Edward L. Glaeser, Joseph Gyourko, & Raven Saks, *Why is Manhattan So Expensive? Regulation and the Rise in Housing Prices* 4 (Nat'l Bureau of Econ. Research, Working Paper No. 10124, 2003), <http://www.nber.org/papers/w10124.pdf> (stating that in Manhattan, housing costs per square foot are triple construction costs).

⁶⁴ See KOTKIN, *supra* note 17, at 13.

⁶⁵ KOTKIN, *supra* note 17, at 13 (emphasis added).

⁶⁶ Kotkin's suggestion that more compact development increases congestion is addressed in Part III-A-2. KOTKIN, *supra* note 17, at 13.

⁶⁷ See *Mapping L.A.: Hollywood*, LOS ANGELES TIMES, <http://maps.latimes.com/neighborhoods/neighborhood/hollywood/> (last visited Apr. 25, 2017) (demonstrating that Hollywood has 22,193 people per square mile, one of the highest densities in Los Angeles). This contrasts greatly to Ditmas Park and Flatbush in New York, where they have just over

make it impossible to build family-friendly urban places like Ditmas Park.

But such anti-housing policies contribute to high prices: if no new housing is built in a city because of NIMBY opposition, and that city's population (and thus demand for new housing) keeps growing, obviously housing costs will increase.

B. Can Suburbs Create Children?

Kotkin notes that both in the United States and elsewhere, fertility is higher in suburbs.⁶⁸ And he also notes that suburbs have grown faster than urban cores, both in the United States and Europe.⁶⁹ So if suburbs are growing everywhere and suburbs are good for fertility, birth rates would be rising everywhere, especially in the suburb-dominated United States.

But in fact, the opposite has occurred. In 1950, at the dawn of the suburban era, the U.S. birth rate (that is, the number of births per 1000 people) was 24.1; in 2013, the same number was 12.5.⁷⁰ Similarly, the American fertility rate (the number of live births for women between 15 and 44) declined from 106.2 per 1000 women to 62.9.⁷¹ This decline in birthrates, like suburbanization, has occurred in Europe as well as the United States.⁷² The French birthrate decreased from 20.5 births per 1000 people in 1950 to 12.7 per 1000 in 2010, the Swedish from 16.5 to 12.3, the Italian from 19.6 to 9.3, the Dutch from 22.7 to 11.0, and the British from 17.1 to 12.1.⁷³

In 1950, a reasonable observer might have guessed that suburban growth would protect the United States and other affluent

65,000 people per square mile. See *Ditmas*, *supra* note 57 and accompanying text; *Flatbush*, *supra* note 57 and accompanying text.

⁶⁸ See KOTKIN, *supra* note 17, at 118 (citing numerous European examples and noting that suburbs are dominated by families).

⁶⁹ KOTKIN, *supra* note 17, at 153-55 (describing similar patterns in affluent countries outside the United States and explaining that since 1950, ninety percent of metropolitan growth has been in the suburbs).

⁷⁰ See WORLD ALMANAC, *supra* note 1, at 165-66.

⁷¹ See WORLD ALMANAC, *supra* note 1, at 165.

⁷² See KOTKIN, *supra* note 17, at 138.

⁷³ See Max Roser, *Fertility*, OUR WORLD IN DATA, <https://ourworldindata.org/fertility/> (last visited Apr. 25, 2017).

nations⁷⁴ from declining fertility. But the verdict of history is in. Suburbia failed.

III. IN DEFENSE OF SUBURBIA

The growth of automobile-oriented suburbia tends to increase driving and reduce walking, thus, increasing pollution and health problems related to lack of exercise.⁷⁵ Kotkin argues, however, that suburbs actually generate less pollution, and are healthier, than cities.⁷⁶

A. Suburbia and Pollution

As Americans have moved to automobile-dependent suburbs, vehicle travel has exploded,⁷⁷ causing pollution to be higher than might otherwise be the case.⁷⁸ By contrast, if Americans can reach a wide variety of destinations without driving, they will create less automobile-related pollution than would otherwise be the case.

A study by Harvard economist Edward Glaeser and UCLA economist Matthew Kahn found that the least automobile-dependent regions emitted fewer greenhouse gases than other large metropolitan

⁷⁴ I argued in another article that European suburbanization is in fact less rapid than that of the United States: Europe is far less car-dominated than the United States, and some of its cities have recovered more rapidly than many American cities. See Michael Lewyn, *Sprawl in Europe and America*, 46 SAN DIEGO L. REV. 85, 91, 93, 95-96 (2009) (emphasizing that Europeans use public transit more than Americans, and walk and bike more than Americans; also noting growth in European urban population); but see Wendell Cox, *Examining Sprawl in Europe and America*, REASON FOUND., (Jan. 16, 2009), <http://reason.org/news/show/examining-sprawl-in-europe-and> (criticizing my argument, and in particular pointing out that in the late 20th century, even European cities lost population to their suburbs). To the extent that my argument is persuasive, it deflates Kotkin's argument: European nations are less "sprawling" than the United States, but even so some European nations' birthrates have declined less rapidly than those of the United States. While the U.S. birthrate declined by forty-eight percent (from 24.1 to 12.5) the Swedish birthrate declined by twenty-five percent (from 16.5 to 12.3). See Roser, *supra* note 73.

⁷⁵ See KOTKIN, *supra* note 17, at 12-13 (discussing these impacts in parts III-A and III-B).

⁷⁶ KOTKIN, *supra* note 17, at 11, 14.

⁷⁷ See Melissa G. Kramer et al., *Our Built and Natural Environments: A Technical Review of the Interactions Among Land Use, Transportation, and Environmental Quality*, 2 U.S. ENVTL. PROTECTION AGENCY 26 (June 2013), <https://www.epa.gov/sites/production/files/2014-03/documents/our-built-and-natural-environments.pdf> ("While the population roughly doubled between 1950 and 2011, . . . vehicle travel during this same period increased nearly sixfold . . .").

⁷⁸ *Id.* at 67 (noting that transportation-related American greenhouse gas emissions increased by nineteen percent between 1990 and 2010).

regions.⁷⁹ In particular, New York City, the most transit-oriented region in the United States,⁸⁰ had the lowest level of automobile-related carbon dioxide emissions among sixty-six regions surveyed.⁸¹ The five other regions where over ten percent of commuters used public transit (Washington, Chicago, Boston, Philadelphia, and San Francisco)⁸² also emitted less automobile-related carbon dioxide than the national median.⁸³ By contrast, among the six regions surveyed where one percent or fewer of commuters used public transit,⁸⁴ all had automobile-related carbon dioxide emissions higher than the national median.⁸⁵

Moreover, cities consistently created less carbon dioxide than suburbs: in every single one of sixty-six cities surveyed, transportation-related carbon dioxide emissions (including both emissions from automobiles *and* emissions from public transit) were higher in suburbs than in cities.⁸⁶

Environmental benefits from walkable urban development are not limited to greenhouse gases. A study by the Environmental

⁷⁹ See generally Edward L. Glaser & Matthew E. Kahn, *The Greenness of Cities: Carbon Dioxide Emissions and Urban Development* (Nat'l Bureau of Econ. Research, Working Paper No. 14238, 2008) [hereinafter *Greenness of Cities*].

⁸⁰ See Wendell Cox, *Major Metropolitan Commuting Trends: 2000-2010*, NEWGEOGRAPHY (Oct. 25, 2011) <http://www.newgeography.com/content/002500-major-metropolitan-commuting-trends-2000-2010> [hereinafter *Major Metropolitan*].

⁸¹ See Glaser & Kahn, *Greenness of Cities*, *supra* note 79, at 19. Even when public transit-related carbon dioxide emissions are added to this figure, New York's per-household emissions level of 24,467 was below the national median for driving-related emissions alone (26,744). *Id.*

⁸² See Cox, *Major Metropolitan*, *supra* note 80.

⁸³ See Glaser & Kahn, *Greenness of Cities*, *supra* note 79, at 41. The most-polluting region of the five, Washington, emitted 25,918 pounds of automobile-related carbon dioxide per household; twenty-eight of the sixty-six metropolitan areas created less pollution. Glaser & Kahn, *Greenness of Cities*, *supra* note 79, at 41.

⁸⁴ See Cox, *Major Metropolitan*, *supra* note 80 (listing Memphis, Raleigh, Birmingham, Nashville, Oklahoma City and Indianapolis as regions with transit shares of one percent or lower). Cox's tables also mention that only one percent of Jacksonville commuters used transit to get to work. See Cox, *Major Metropolitan*, *supra* note 80. However, Glaeser and Kahn did not include emissions data for that region.

⁸⁵ See Glaser & Kahn, *Greenness of Cities*, *supra* note 79, at 41. The lowest-emission region of this group, Memphis, produced more automobile-related emissions (28,440 pounds of carbon dioxide per household) than all but sixteen of the sixty-six areas surveyed. Glaser & Kahn, *Greenness of Cities*, *supra* note 79, at 41. The other five were Raleigh (29,922), Indianapolis (29,222), Birmingham (30,041), Nashville (30,495) and Oklahoma City (28,953). Glaser & Kahn, *Greenness of Cities*, *supra* note 79, at 41. Glaeser and Kahn did not include statistics for Jacksonville, a seventh major metropolitan area where only one percent of commuters used transit to get to work. See Cox, *Major Metropolitan*, *supra* note 80.

⁸⁶ See Glaser & Kahn, *Greenness of Cities*, *supra* note 79, at 44.

Protection Agency concluded that if five to ten percent of regional housing and employment was shifted from sprawl to walkable, transit-accessible locations, several forms of pollution would be reduced.⁸⁷ For example, if seventeen percent of Boston's development was shifted to such locations, emissions of carbon monoxide, volatile organic compounds, and nitrogen oxide⁸⁸ would all be reduced by between 4.8 and 8.1 percent,⁸⁹ primarily because many trips would be shorter.⁹⁰

In turn, reduced pollution would improve human health. One study by several scholars found that if vehicle miles traveled in the eleven largest Midwestern regions decreased by ten percent, the resulting decline in particulate matter⁹¹ pollution would lead to 525 fewer pollution-related deaths and an even larger reduction in the number of hospital admissions.⁹² Another study found that the least compact American regions have sixty percent more high-ozone days than the most compact regions.⁹³

Kotkin nevertheless argues that suburbia is less polluting than cities, because 1) emissions are in fact greater in urban centers; 2) dense development leads to congestion and thus to pollution; and (3)

⁸⁷ See *Measuring the Air Quality and Transportation Impacts of Infill Development*, U.S. ENVTL. PROTECTION AGENCY 11 (Nov. 2007), https://www.epa.gov/sites/production/files/2014-01/documents/transp_impacts_infill.pdf [hereinafter *Infill*].

⁸⁸ See Rachel H. Cease, *Adverse Health Impacts of Grandfathered Power Plants and the Clean Air Act: Time to Teach Old Power Plants New Technology*, 17 J. NAT. RESOURCES & ENVTL. L. 157, 160 n.24 (2003) (stating that volatile organic compounds can cause cancer, while nitrogen oxide and carbon monoxide may cause lung damage).

⁸⁹ See *Infill*, *supra* note 87, at 19; see also Todd Litman, *Can Smart Growth Policies Conserve Energy and Reduce Emissions?*, 5 CTR. FOR REAL EST. Q.J., 5-7 (2011), <http://www.vtpi.org/REQJ.pdf> (discussing numerous other studies) [hereinafter *Smart Growth Policies*].

⁹⁰ *Infill*, *supra* note 87, at 22.

⁹¹ See *Am. Trucking Ass'ns v. Env'tl. Prot. Agency*, 283 F.3d 355, 359 (D.C. Cir. 2002) (stating that particulate matter is "all solid particles and liquid droplets found in air" and is "associated with a range of adverse health effects such as coughing; shortness of breath; aggravation of existing respiratory conditions like asthma and chronic bronchitis; increased susceptibility to respiratory infections; and heightened risk of premature death.").

⁹² See Maggie L. Grabow et al., *Air Quality and Exercise-Related Health Benefits from Reduced Car Travel in the Midwestern United States*, 20 ENVTL. HEALTH PERSP. 68 (Nov. 2, 2011), <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3261937/>.

⁹³ See Kramer et al., *supra* note 77, at 90-93 (noting the study, but adding that within regions, high-ozone areas are sometimes more compact due to proximity to polluting industry).

compact development creates minimal environmental benefits.⁹⁴ Each contention will be addressed below.

1. Are Cities Cleaner than Suburbs?

Despite the evidence cited above, Kotkin argues that urban centers actually generate more pollution than suburbia.⁹⁵ He cites a newspaper article asserting that residents of downtown Halifax, Nova Scotia, have carbon footprints comparable to those of suburbanites.⁹⁶ However, the author of the study stated:

[P]art of the reason for the higher tha[n] expected carbon footprint in the core is that Halifax is not as dense as other cities, where assumptions about people living outside if the downtown core tend to have higher carbon footprints may hold true

. . . .

. . . [In Halifax] the square footage [per person] is very similar between the suburbs and downtown.⁹⁷

In other words, if downtown Halifax was significantly denser than the suburbs, downtown would have a *smaller* carbon footprint. Thus, the Halifax study actually supports compact, walkable development.

Kotkin also cites a document by an Australian environmental group (the Australian Conservation Foundation)⁹⁸ suggesting that urban cores may have higher environmental impacts than suburbs or rural areas.⁹⁹ However, the study goes on to state that the reason for this was that

⁹⁴ KOTKIN, *supra* note 17, at 11.

⁹⁵ KOTKIN, *supra* note 17, at 11.

⁹⁶ See KOTKIN, *supra* note 17, at 11 (noting that carbon footprint assumptions did not hold true for Halifax).

⁹⁷ *Carbon Footprint Assumptions Do Not Hold True for Halifax*, CBC NEWS: N.S., <http://www.cbc.ca/news/canada/nova-scotia/carbon-footprint-assumptions-do-not-hold-true-for-halifax-1.1371095> (last updated Apr. 29, 2013 5:56 PM AT).

⁹⁸ Although the link referred to by Kotkin, see KOTKIN, *supra* note 17, at 264, is broken, I suspect he is referring to: *Consuming Australia: Main Findings*, AUSTRALIAN CONSERVATION FOUND. (2007), https://d3n8a8pro7vnmix.cloudfront.net/auscon/pages/1433/attachments/original/1477284331/res_Atlas_Main_Findings.pdf?1477284331 [hereinafter *Consuming Australia*].

⁹⁹ KOTKIN, *supra* note 19, at 11; *Consuming Australia*, *supra* note 98, at 10.

the opportunities for relatively efficient, compact living appear to be overwhelmed by the energy and water demands of modern urban living, such as air conditioning, spa baths, down lighting and luxury electronics and appliances

. . . .

. . . These trends in are closely correlated with wealth. Higher incomes in the inner cities are associated with higher levels of consumption across the board.¹⁰⁰

In other words, Australian cities are more carbon-intensive than their suburbs not because of the evils of density, but because those cities are richer and thus buy and use more goods. In fact, the Foundation has *rejected* the use of its report to defend sprawl, stating, “[e]co-footprints in suburban areas in Australia are lower than in the urban core *in spite of, not because of*, lower residential densities.”¹⁰¹

¹⁰⁰ *Consuming Australia*, *supra* note 98, at 10.

¹⁰¹ Tim Halbur, *Smart Growth & Australia*, PLANETIZEN (Feb. 15, 2010, 9:00 AM PST), <http://www.planetizen.com/node/42941> (quoting Charles Berger, Director of Strategic Ideas at Australian Conservation Foundation) (emphasis added). Kotkin cites two other studies which seem to me to be even less noteworthy. He cited an article by Wendell Cox that cited a study by the energy company Energy Australia. KOTKIN, *supra* note 17, at 11, 264. However, when I clicked the link within Cox’s article, I found an error message; I assume that Energy Australia has withdrawn the study in question for some reason. Kotkin also cited a study pointing out that residents of the New York metropolitan area use more energy than do Los Angeles residents. See KOTKIN, *supra* note 17, at 11, 264 (citing Christopher A. Kennedy et al., *Energy and Material Flows of Megacities*, 112 PNAS 5985, 5986 (May 12, 2015), <http://www.pnas.org/content/112/19/5985.full.pdf>). But this statement is oversimplified for three reasons. First, the study refers to the entire New York region, Kennedy et al., *supra* note 101, at 5986, which in fact is *less* dense by some measures than Los Angeles. Cf. Wendell Cox, *America’s Densest Cities*, HUFFPOST, http://www.huffingtonpost.com/wendell-cox/americas-densest-cities_b_5888424.html (last updated Nov. 26, 2014) (noting that Los Angeles suburbs are twice as dense as those of New York, and as a result the Los Angeles region itself is more dense) [hereinafter *Densest Cities*]; Kyle Magnum, *The Role of Housing in Urban Carbon Emissions* 9 (W.J. Usery Workplace Research Group Paper Series, Working Paper No. 2016-9-1, 2016), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2863168 (pointing out that metro New York is less dense than metro Los Angeles.). Second, New York’s higher energy use is at least partially caused by its climate, which is less temperate than that of Los Angeles and thus requires more heating and cooling. Magnum, *supra* note 101, at 11 (noting that California was less carbon-intensive due to temperate weather); see also Kennedy et al., *supra* note 101, at 5987 (noting that the “majority of megacities are in warm to hot climates where demands for heating are relatively low” and that New York, but not Los Angeles, is an exception to this rule). Third, New York’s housing-related carbon emissions, although higher than that of temperate Southern California, are lower than that of most of the United States. See Magnum, *supra* note 101, at 15 (demonstrating that of the forty-nine regions listed, New York has the thirteenth lowest level of emissions; the six best are all in California, and two of the other regions with fewer emissions than New York are in the

2. *Density and Pollution*

As a matter of common sense, one might think that more compact places are more walkable and thus, less polluting. Where residences are close to each other, shops and jobs, people are more likely to live within walking distance of those destinations and of public transit. So, other things being equal, higher density should lead to less driving and thus less pollution.

Kotkin argues, however, that “[p]acking people into cities does not improve the environment; in fact, air pollution increases with density. There is consistent evidence that proximity to busy roads, high-traffic density, and increased exposure to pollution are linked to a variety of respiratory ailments”¹⁰² However, the suburban sprawl that Kotkin champions is the *cause* of urban air pollution, not a remedy.¹⁰³ When Americans move into car-dependent suburbs, they are more likely to drive to cities, which makes those cities more polluted. Less sprawl, by contrast, means fewer cars and, thus, less urban pollution.

Kotkin also argues that compact development increases pollution by increasing traffic congestion, which in turn increases fuel consumption.¹⁰⁴ But if this argument supported suburbanization, congestion-related fuel consumption would have decreased as low-density suburbia grew. This failed to occur: since 1982, the amount of fuel wasted due to American traffic congestion grew from four gallons per driver to nineteen.¹⁰⁵ Moreover, congestion increased not only in regions with growing central cities, but in rapidly decentralizing regions. For example:

also-temperate Pacific Northwest.). So it seems wrongheaded to single out New York as unusually wasteful.

¹⁰² See KOTKIN, *supra* note 17, at 66 (footnotes omitted).

¹⁰³ KOTKIN, *supra* note 17, at 66.

¹⁰⁴ KOTKIN, *supra* note 17, at 191 (“Increased densities, for example, increase congestion and create more ‘stop and go’ conditions that ultimately add to emissions [F]uel consumption per kilometer (and thus GHG emissions) rises nearly 50 percent as arterial street traffic conditions deteriorate.”) (footnote omitted).

¹⁰⁵ See David Schrank et al., *2015 Urban Mobility Scorecard*, TEX. A&M TRANSP. INST. & INRIX 1 (Aug. 2015), <https://static.tti.tamu.edu/tti.tamu.edu/documents/mobility-scorecard-2015.pdf> (noting that the only period during which fuel loss due to congestion decreased was between 2006 and 2009, presumably due to the American economic downturn during that period).

*Detroit lost over forty percent of its central city population between 1980 and 2014¹⁰⁶ - yet the amount of fuel wasted due to regional traffic congestion nearly doubled.¹⁰⁷

*Similarly, St. Louis lost thirty percent of its central city population between 1980 and 2014,¹⁰⁸ but the amount of lost fuel lost per driver more than quadrupled.¹⁰⁹

*Similarly, Buffalo lost about a quarter of its central city population between 1980 and 2014¹¹⁰ - yet its congestion-related wasted fuel per driver also more than quadrupled.¹¹¹

If density increased regional pollution, the densest regions would have the highest levels of transportation-related carbon dioxide (CO₂) emissions. Table 1 below suggests otherwise.

¹⁰⁶ See WORLD ALMANAC, *supra* note 1, at 614 (noting a decrease from over 1.2 million in 1980 to just under 700,000).

¹⁰⁷ See *Performance Measure Summary – Detroit MI*, TEX. TRANSP. INST., <https://static.tti.tamu.edu/tti.tamu.edu/documents/ums/congestion-data/detroit.pdf> (last visited Apr. 26, 2017) (demonstrating that fuel losses per auto commuter increased from fourteen in 1982 to twenty-five in 2014) [hereinafter *Performance Measure – Detroit*].

¹⁰⁸ See WORLD ALMANAC, *supra* note 1, at 614 (showing a decrease from over 450,000 million in 1980 to just over 317,000).

¹⁰⁹ See *Performance Measure –Detroit*, *supra* note 107 (demonstrating that fuel losses increased from five gallons per driver in 1982 to twenty-one in 2014).

¹¹⁰ See WORLD ALMANAC, *supra* note 1, at 614 (showing a decrease from just over 357,000 in 1980 to just over 258,000).

¹¹¹ See *Performance Measure Summary – Buffalo NY*, TEX. TRANSP. INST., <https://static.tti.tamu.edu/tti.tamu.edu/documents/ums/congestion-data/buffalo.pdf> (last visited Apr. 26, 2017) (noting that fuel losses increased from five gallons per driver in 1982 to twenty-one in 2014). I note that congestion did not increase any more rapidly in regions with growing cities. For example, New York fuel waste increased from ten gallons per commuter to thirty-five. See *Performance Measure Summary – New York-Newark NY-NJ-CT, TEX. TRANSP. INST.*, <https://static.tti.tamu.edu/tti.tamu.edu/documents/ums/congestion-data/new-york-city.pdf> (last visited Apr. 26, 2017).

Table 1: Density and Transportation-Related in U.S. Metropolitan Areas

Density (in Emissions (thousands of pounds of carbon Persons per square mile)¹¹² dioxide per household)¹¹³

Most Dense

Los Angeles	6999	24.6
San Francisco	6266	25.6
San Jose	5820	23.7
New York	5319	24.4
Miami	4442	28.7
San Diego	4037	25.4
Sacramento	3660	25.9
New Orleans	3579	25.5
Denver	3554	26.5
Riverside	3546	26.4

¹¹² See Cox, *Densest Cities*, *supra* note 101. I note that I have excluded two regions for which inadequate emissions data exists - Las Vegas (one of the most dense) and Jacksonville (one of the least dense).

¹¹³ See Glaser & Kahn, *Greenness of Cities*, *supra* note 79, at 41 (including both public transit emissions and auto emissions).

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Least dense

Birmingham	1414	30.2
Charlotte	1685	31.8
Atlanta	1707	30.5
Raleigh	1708	30.4
Nashville	1721	30.9
Hartford	1792	24.5
Pittsburgh	1916	27.6
Richmond	1937	30.2
Grand Rapids	2031	29.8
Louisville	2040	29.6 ¹¹⁴

Table 1 shows that high density in fact correlates with *low* levels of GHG emissions. Among the ten most dense regions, the most polluting is Miami (with 28,676 pounds of transportation-related carbon dioxide per household).¹¹⁵ All of the five least dense regions have higher emissions than Miami, as do eight of the ten least dense regions. Thus, low density correlates with more pollution, not less.

And if density led to congestion and pollution, dense central cities would be more polluting than sprawling suburbs. But as noted above, suburbs apparently emit more transportation-related

¹¹⁴ Cox, *Densest Cities*, *supra* note 101.

¹¹⁵ Cox, *Densest Cities*, *supra* note 101.

greenhouse gases than cities,¹¹⁶ and the most car-dependent cities apparently emit more greenhouse gases than the most transit-oriented, walkable cities.¹¹⁷

3. *Does Compact Development Matter?*

One recent study led by Reid Ewing of the University of Utah found that more compact, walkable development could reduce vehicle miles traveled by 20-40%, which in turn would reduce total transportation-related carbon dioxide emissions by 7-10% by 2050.¹¹⁸ Another study by two University of Illinois scholars concluded that doubling population density “is associated with a reduction in CO2 emissions from household travel and residential energy consumption by 48% and 35%, respectively . . . [and that] [d]oubling the per capita transit subsidy is associated with a nearly 46% lower VMT and an 18% reduction in transportation CO2 emissions.”¹¹⁹

Nevertheless, Kotkin claims that even if re-urbanization (as he pejoratively terms it, “cramming”)¹²⁰ is not affirmatively harmful, its impact is too minimal to affect climate change.¹²¹ He writes that “[c]ramming, notes a recent National Academy of Sciences report, can do relatively little to reduce U.S. greenhouse gas emissions - perhaps as little as reducing them by only 2 percent.”¹²² In fact, the National Academy study reached conclusions similar to those of the Ewing study, concluding that:

In an upper-bound scenario, which assumes that 75 percent of new and replacement housing units are built in more compact developments and that residents of those developments drive 25 percent less, the

¹¹⁶ Glaser & Kahn, *Greenness of Cities*, *supra* note 79, at 44 (noting that suburbs generated more transportation-related emissions in every single region surveyed, and generated more overall emissions in all but two of fifty-plus regions surveyed).

¹¹⁷ KOTKIN, *supra* note 17, at 190-91; WORLD ALMANAC, *supra* note 1, at 608.

¹¹⁸ Reid Ewing et al., *Growing Cooler: The Evidence on Urban Development and Climate Change*, SMART GROWTH AMERICA 9, <http://www.smartgrowthamerica.org/documents/growingcoolerCH1.pdf> (last visited Apr. 26, 2017).

¹¹⁹ Sungwon Lee & Bumsoo Lee, *The Influence of Urban Form on GHG Emissions in the U.S. Household Sector*, RESEARCHGATE 19 (May 2014), https://www.researchgate.net/publication/270952371_The_influence_of_urban_form_on_GHG_emissions_in_the_US_household_sector.

¹²⁰ KOTKIN, *supra* note 17, at 190.

¹²¹ KOTKIN, *supra* note 17, at 190.

¹²² KOTKIN, *supra* note 17, at 190.

committee estimates that [vehicle miles traveled] and associated fuel use and CO₂ emissions would be reduced by 7 to 8 percent below the base case by 2030, growing to between 8 and 11 percent below the base case by 2050.¹²³

Moreover, the study's definition of "compact development" is quite modest - merely "doubling the current density of new residential development"¹²⁴ The most aggressive version of this allegedly aggressive strategy would require that many new units be built at a population density of 5,399 persons per square mile¹²⁵ - less than *one-tenth* the density of tree-lined, family-friendly Ditmas Park.¹²⁶ So, if zoning laws allowed more housing at Ditmas Park-like densities,¹²⁷ then emissions might decline to an even greater extent.

He also argues that "requiring better mileage on cars . . . would be far more impactful"¹²⁸ than any policy that might limit suburban sprawl. Of course, this argument is a classic example of the "false dichotomy" logical fallacy: it implies that more fuel-efficient cars and limiting sprawl are mutually exclusive, even though there is no reason to believe this is the case.

Kotkin cites a McKinsey & Company study to support his conclusion that fuel efficiency is so important as to make compact development unnecessary.¹²⁹ However, this study does not reject the idea of reducing vehicle mileage, but merely assumes that it will not occur.¹³⁰ The report states: "[W]e did not evaluate demand-

¹²³ TRANSP. RESEARCH BD., DRIVING AND THE BUILT ENVIRONMENT: THE EFFECTS OF COMPACT DEVELOPMENT ON MOTORIZED TRAVEL, ENERGY USE, AND CO₂ EMISSIONS 181-82 (2009).

¹²⁴ *Id.* at 7.

¹²⁵ *Id.* at 228-29.

¹²⁶ Mary Bakija, *Is Ditmas Park the Last Place for the City's Middle-Class Families?*, BKLYNER (Aug. 2, 2013), <http://bklyner.com/is-ditmas-park-the-last-place-for-the-citys-middle-class-families-ditmas-park>; *Ditmas*, *supra* note 57 (noting the density of Ditmas Park).

¹²⁷ I note, however, that density is just one of many factors relevant to walkability. See Litman, *Smart Growth Policies*, *supra* note 89, at 1-2, 4-5 (explaining that other policies affecting commuting patterns include whether land uses are mixed, availability of sidewalks and public transit, and street design).

¹²⁸ KOTKIN, *supra* note 17, at 190.

¹²⁹ KOTKIN, *supra* note 17, at 190, 241 ("There is, McKinsey . . . conclude[s], simply no strong environmental case for a shift to denser urban housing.") (quotations omitted).

¹³⁰ See Jon Creyts et al., *Reducing U.S. Greenhouse Gas Emissions: How Much at What Cost?*, MCKINSEY & CO. 2 (Dec. 2007), <http://www.mckinsey.com/business-functions/sustainability-and-resource-productivity/our-insights/reducing-us-greenhouse-gas->

management schemes, such as incentives for mass transit use Nor did we assess the potential of urban designs that foster denser, more transport-efficient communities.”¹³¹ In fact, the report expresses concern over automobile-dependent development, stating that if its recommendations are not followed, improvements in fuel efficiency “would be more than offset by growth in vehicle miles traveled”¹³²

Kotkin also claims that “carbon emissions in low-density America are falling, largely due to the use of natural gas over coal, while much of the world’s increases in carbon emissions are occurring in densely packed places like India, China, and even supposedly ultra-green Europe.”¹³³ This claim has an element of truth: it is true that between 2007 and 2014, U.S. carbon emissions decreased from 6.1 million metric tons to 5.5, roughly a ten percent decrease.¹³⁴ But European Union emissions decreased by even more, from 4.2 million metric tons to 3.4.¹³⁵

B. Sprawl and Public Health

People in less walkable areas are more likely to be obese and to suffer from diabetes and other obesity-related diseases.¹³⁶ For example, one study by three Arizona State University scholars created a “walkability index” (measuring the distance of churches, schools, and entertainment from neighborhoods studied)¹³⁷ and found that a

emissions (noting that this report “[a]ssumed no material changes . . . in lifestyle preferences.”).

¹³¹ *Id.* at 42. Similarly, near the end of the paper the report speculates that smart growth policies might “motivate people to live in more compact communities near mass transit, substantially reducing driving” *Id.* at 71.

¹³² *Id.* at 11.

¹³³ See KOTKIN, *supra* note 17, at 190.

¹³⁴ See CO₂ Emissions, GLOBAL CARBON ATLAS, <http://www.globalcarbonatlas.org/?q=en/emissions>.

¹³⁵ *Id.*

¹³⁶ See, e.g., Vanessa Russell-Evans & Carl S. Hacker, *Expanding Waistlines and Expanding Cities: Urban Sprawl and its Impact on Obesity, How the Adoption of Smart Growth Statutes Can Help Build Healthier and More Active Communities*, 29 VA. ENVTL. L.J. 63, 75-88 (2011); Falk Muller-Riemenschneider et al., *Neighborhood Walkability and Cardiometabolic Risk Factors in Australian Adults: An Observational Study*, 13 BMC PUB. HEALTH 755 (2013), <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3844350/>; Lathey et al., *supra* note 9, at 137, 139-41 (finding that “walkability . . . is the strongest predictor of disease prevalence.”).

¹³⁷ Lathey, *supra* note 9, at 132.

1 percent increase in the walkability index of a neighborhood is associated with a 50 percent reduction in the likelihood that it will belong to a high disease as opposed to a low disease cluster for obesity . . . 49 percent lower likelihood for diabetes, 39 percent lower likelihood for hypertension, and 40 percent lower likelihood for heart disease¹³⁸

So, to the extent that suburbs are automobile-dependent, their growth seems to harm public health.

Kotkin responds by focusing on the problems of Asian cities.¹³⁹ In particular, he writes that “[e]xcessive concentration, according to a 2013 Chinese study, engenders more obesity, particularly among the young, who get less exercise”¹⁴⁰ Kotkin’s footnote refers to a *Huffington Post* article¹⁴¹ stating that many “Chinese are moving to cities where they may encounter worse pollution, less-healthy diets, sedentary lifestyles and jobs that demand long hours.”¹⁴² Since this article does not mention suburbs, it seems to me that the article is comparing urban desk jobs to rural life, not to suburban desk jobs. Thus, the article does not suggest that Chinese urbanites would be healthier if they drove to suburban jobs.¹⁴³

Kotkin also focuses on the idea that “[t]he maintenance of small, accessible green spaces, including backyards, has clear benefits . . . [because of the] strong relationship between good health and access to green spaces.”¹⁴⁴ In other words, Kotkin equates suburbia with greenspace, and greenspace with health.

¹³⁸ Lathey, *supra* note 9, at 134.

¹³⁹ See KOTKIN, *supra* note 17, at 66.

¹⁴⁰ KOTKIN, *supra* note 17, at 66.

¹⁴¹ KOTKIN, *supra* note 17, at 66, 271.

¹⁴² Agencie France Presse, *China’s Young Adults are Becoming More Obese*, HUFFPOST, http://www.huffingtonpost.com/2013/08/06/china-young-adult-obese_n_3711059.html (last updated Oct. 6, 2013).

¹⁴³ See KOTKIN, *supra* note 17, at 66 (“High density is associated with higher rates of coronary disease . . . notes a 2006 article evaluating the ecological consequences of the land use changes in Asia.”). The article Kotkin cited noted in one sentence that coronary disease is associated with urbanization, but did not discuss the issue in any more detail, nor did it compare dense cities with sprawling ones. KOTKIN, *supra* note 17, at 252; Shuqing Zhao et al., *Land Use Change in Asia and the Ecological Consequences*, ACADEMIA (Apr. 11, 2006), https://www.academia.edu/14055520/Land_use_change_in_Asia_and_the_ecological_consequences. In fact, the article disapproves of suburban growth, stating that “urban expansion [in Chinese cities mainly] . . . occur[ed] on (former) arable land.” Zhao et al., *supra* note 143.

¹⁴⁴ See KOTKIN, *supra* note 17, at 192.

This argument has a grain of truth; there is some reason to believe that people are healthier when they have contact with nature.¹⁴⁵ But such contact with nature is possible in all but the densest city neighborhoods; Flatbush (the *very* dense city neighborhood where Kotkin's father grew up)¹⁴⁶ is just south of a large park, and Flatbush houses often have yards and street trees.¹⁴⁷

By contrast, automobile-dependent suburbs have not always been successful at providing their residents with access to nature.¹⁴⁸ For example, imagine a commuter who spends her life going from an air-conditioned car to an air-conditioned house to an air-conditioned office. No matter how large her backyard, she certainly has less contact with nature than the city-dweller who walks and bikes through neighborhood parks. For both city-dwellers and suburbanites, access to nature is optional.¹⁴⁹

Children are especially harmed by the automobile dependence of American suburbia, because they have even less access to outdoor life than their parents.¹⁵⁰ In suburbs where a typical house is within walking distance of nothing but other houses, children are driven to most destinations; only thirteen percent of American children walk to school.¹⁵¹ In fact, American childhood has become so automobile-dominated that a parent who allows a child to be outdoors on his or her own might be arrested for child neglect. For example:

¹⁴⁵ See James D. Brown, *Biophilic Laws: Planning for Cities with Nature*, 34 VA. ENVTL. L.J. 52, 54-55 (2016) (describing the idea of "biophilia" and the human need for access to nature).

¹⁴⁶ See *supra* note 57 and accompanying text.

¹⁴⁷ For example, examine Prospect Park (the park in question) in Google Street View, as well as Crooke Avenue a few blocks south of the park. Prospect Park, Brooklyn, NY, GOOGLE EARTH, <https://earth.google.com/> (search Prospect Park, Brooklyn, NY, in destination field). Crooke Ave., Brooklyn, NY, GOOGLE EARTH, <https://earth.google.com/> (search Crooke Ave., Brooklyn, NY, in destination field).

¹⁴⁸ I also note that suburbanization actually reduces access to nature, as land that was once dominated by forests or fields is paved over and turned into housing and commercial buildings. See Todd Litman, *Urban Sanity: Understanding Urban Mental Health Impacts and How to Create Saner, Happier Cities*, VICTORIA TRANSPORT POL'Y INS. 38 (Jan. 2, 2017), <http://www.vtpi.org/urban-sanity.pdf> [hereinafter *Urban Mental Health*].

¹⁴⁹ Litman, *Urban Mental Health*, *supra* note 148, at 38.

¹⁵⁰ See *The Decline of Walking and Bicycling*, SRTS GUIDE, http://guide.saferoutesinfo.org/introduction/the_decline_of_walking_and_bicycling.cfm (last visited Apr. 26, 2017).

¹⁵¹ *Id.*

- Debra Harrell of North Augusta, South Carolina spent seventeen days in jail because she let her nine-year-old daughter play at a park while she was working.¹⁵²
- Nicole Gainey of Port St. Lucie, Florida was arrested and charged with child neglect because her seven-year-old was playing unsupervised at a nearby playground.¹⁵³
- Ashley Richardson of Winter Haven, Florida was jailed when she left her four children, ages six to eight, to play at a park.¹⁵⁴

Admittedly, these cases are (I hope) atypical. Nevertheless, it appears that just as the rise of suburbia has failed to prop up birth rates, it has also failed to bring children outside and thus failed to create access to nature.

IV. CONCLUSION

In *The Human City*, Kotkin addresses serious problems: high housing costs and the demographic imbalances caused by low birthrates. However, his endorsement of suburbia as the only possible remedy to these problems is not persuasive. Just as sprawl can meet housing demand and thus reduce housing costs for families, urban housing construction can do so as well. Moreover, his strategy has been tried and failed: suburbia has grown for decades, yet birth rates continue to decline.

Kotkin's attempts to defend suburbanization are even less successful; he acknowledges environmental concerns related to suburbia, but his interpretation of his sources is often unpersuasive.

¹⁵² See David Pimentel, *Fearing the Bogeyman: How the Legal System's Overreaction to Perceived Danger Threatens Families and Children*, 42 PEPP. L. REV. 235, 260 (2015).

¹⁵³ *Id.* at 260.

¹⁵⁴ *Id.* at 260.