



Cyclescapes of the Unequal City

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Chapter 1: The City and the Cyclescape

“The bike wars are over, and the bikes won,” declared Janette Sadik-Khan, New York City Department of Transportation chief under Mayor Michael Bloomberg, in a March 2016 column for *New York Magazine*. The piece, excerpted from her recent book *Streetfight*, outlined a series of high-profile battles from 2010 to 2011 over bicycle infrastructure in Brooklyn, including a particularly acrimonious fight over a protected bikeway in the gentrified neighborhood of Prospect Park West. “None of the bike-lane opponents’ predictions has come to pass,” she wrote. “City streets have never been safer, more economically thriving, or offered more transportation options than they do today.”¹ Sadik-Khan, a superstar in the increasingly high-profile world of bicycle planning, went on to chair the National Association of City Transportation Officials (NACTO) and serve as a principal at philanthropic consultancy Bloomberg Associates.² How did the ostensibly “progressive” bike movement come to idolize a billionaire mayor and a cohort of planners who presided over the solidification of New York as a “luxury city”?³ What led bicycle politics to settle on a reinvigorated urban capitalism as proof positive of winning the “bike wars”?

In the period straddling the Great Recession, cities across the United States massively expanded their bicycle networks. Organizations like NACTO and People for Bikes (a bicycle manufacturers’ lobbying organization) built sophisticated policy networks and now enjoy strong followings among mayors and planners. Since 2010, over fifty cities added bicycle sharing systems, short-term rental services that provide public access to bicycles that are electronically locked to docking stations.⁴ Beginning in 2016, “dockless” bike sharing using smartphone apps became a multi-billion-dollar industry in China, and by 2018 were joined by several Silicon Valley firms and launched in a number of American cities. Bicycle commuting rates, while still below 1% of commuters nationally, have leapt upwards in dozens of cities (Tables 1 and 2). The National Household Travel Survey estimated that in 2009 12.8% of Americans 18 and over used a bicycle at least once during a representative survey week, up from 6.8% in 2001.⁵ While bicycle sales have remained steady since the 1990s, manufacturers have expanded their “urban” product lines, selling commuter-specific bicycles that embrace a cosmopolitan aesthetic informed by the cycling cultures of Northern Europe.⁶ Most importantly, the reasons that advocates now give for investing in bicycle infrastructure are often quite far from the

environmentalist pieties and anti-corporate sentiments that politicized cyclists offered in the 1990s. Instead, consultants, advocates, mayors, and media all affirm that bicycling is good for business.⁷

[TABLES 1 AND 2 ABOUT HERE]

Over the same period, gentrification became increasingly widespread throughout the U.S., by some estimates affecting twice as many neighborhoods between 2000 and 2013 than in the previous decade.⁸ After the Great Recession devastated housing markets at the urban fringe, homebuyers and large investors turned to central neighborhoods, while many cities' most promising economic recovery strategy has become the booming field of "tech." By 2017, home price levels in metropolitan areas like the San Francisco Bay Area, Portland (Oregon), and Boston exceeded their pre-recession peaks, and the deepening affordability crisis in these areas is a matter of constant public debate.⁹

Meanwhile, concerns about the "suburbanization of poverty" have come to the fore even in booming regions, signaling that the model of extensive urban expansion that has predominated for well over a century is in crisis.¹⁰ Following the 2008 financial crisis, large numbers of Black and Latino first-time homebuyers found themselves stranded by foreclosure in car-dependent exurbs.¹¹ The resurgence of interest in cities has been accompanied by a dismissal of these places, under a broad consensus that the age of the car-highway-suburb is past--in spirit, if not in actual practice.¹² For this way of thinking, the bicycle represents the future. It enables infill development without adding traffic congestion or carbon emissions, addressing in one stroke the economic and ecological imperatives of contemporary urban growth. Because of the obduracy of the existing built environment, and the regional scale produced by the regime of automobility, we might equally see the bicycle, following Gramsci, as a "morbid symptom" of the mobility interregnum.¹³

Vehicles for a New City

The discourse on bicycling that has shaped planners, policymakers, and urbanists is largely framed around its inherently progressive nature, and its transformative implications for urban

life. Critical Mass was particularly influential in endowing bicycles with both an implicit and explicit political message: another way of movement was possible (see Chapter 3).¹⁴ As a marginalized form of mobility, bicycling escaped bureaucratic regulation like licensing, aligning it with the anarchist-inspired political culture of the post-1960s left.¹⁵ This framing places bicycling alongside guerrilla gardening, graffiti, and skateboarding as acts of hacking the dominant code of the capitalist city.¹⁶ Most importantly, because bicycling does not rely directly on fossil energy, it carries “an environmentalist message without a placard.”¹⁷

As bicycling storms the gates of the liberal urban mainstream, this tone has shifted from this critique of the capitalist city toward how bicycling can support the American urban “renaissance” underway. Many of these are journalistic case studies that trace the growth of bike culture and its significance for environmental sustainability, economic vitality, and social renewal. In this genre, authors often have quasi-religious “conversion experiences” in renowned bicycling cities like Amsterdam and Copenhagen.¹⁸ Blogs, “zines,” and the broader counterculture have served as avenues for some of these ideas as well, further reinforcing cycling’s underdog, “do-it-yourself” (“DIY”) identity.¹⁹ The titles themselves reflect the unbridled optimism of the moment: *Joyride: Pedaling Toward a Healthier Planet*; *On Bicycles: 50 Ways the New Bike Culture Can Change Your Life*, and *How Cycling Can Save the World*, for example, position bicycling as a personal choice that has far-reaching positive impacts. Most importantly, this discourse emphasizes that the *city* is the bicycle’s natural home, and the place where its transformative potential can be realized.

A more policy-oriented scholarly literature examines current trends in cycling and best practices in bicycle facility planning, with the goal of informing efforts to increase ridership.²⁰ As bicycle sharing becomes a main frontier of infrastructural investment, and interurban competition, research has followed suit as well.²¹ Organizations at all levels produce reports that circulate through the online channels of bicycle advocacy, from the national (e.g. the League of American Bicyclists, People for Bikes, and the Alliance for Biking and Walking) to the local and regional (the San Francisco Bicycle Coalition, Walk Oakland Bike Oakland, the Bicycle Coalition of Greater Philadelphia, and the Detroit Greenways Coalition, for example). Robust debates also increasingly take place online on sites like *Streetsblog*, *Next City*, and *CityLab*. A common feature of these forums is the circulation of infrastructural stories, particularly from Copenhagen, Amsterdam, and (increasingly) Bogotá.²² These stories, however, are often

abstracted from political economy and social context, granting the designs themselves a quasi-fetishistic power.²³ They imply that with the right infrastructural treatments, and a little “urban acupuncture,” the American city can become great again.²⁴

Recently, however, a growing cohort of scholars has critically examined the social, political, cultural, and institutional context within which this flowering of cycling has taken place.²⁵ This work has interrogated the racialization of bicycle advocacy and bicycle planning, which remains dominated by largely white, male professionals whose activities reflect a narrow set of interests aligned with gentrification.²⁶ By contrast, this work emphasizes subaltern cyclists’ invisibility to mainstream bicycle advocacy and their simultaneous overexposure to law enforcement and traffic violence, as well as the importance of the human infrastructure of collective learning that receive less attention than “world class” bicycle facilities do.²⁷ For this line of thinking, the bicyclist functions as what Melody Hoffmann calls a “rolling signifier,” refracting in daily practice broader relationships of social power.²⁸ This has led to pitched battles over infrastructure, with neighborhoods of color pushing back against what they see as an amenity that encourages gentrification.²⁹ Beyond imagery, the transformation of urban streets in the interest of “completeness” (better accommodation of cyclists, pedestrians, and transit) can materially exclude working people and the poor, rendering these streets “incomplete” from the perspective of mobility justice.³⁰ At the same time, the growing strength of advocates of color offers glimpses of new modes of solidarity that subvert the segregation of the contemporary metropolis.³¹ These struggles all occur, however, within a broader urban political structure shaped by the hegemony of the automobile.³²

There have been a number of moments in recent years in which the implicit entanglement of bicycle infrastructure and gentrification has been made explicit. In 2010, Black parishioners in North Portland, the city’s only African-American neighborhood, protested a bike lane project as a “white lane,” successfully altering the project and the process of community participation in planning.³³ The same year, in the DC mayoral primary, opponents of sitting mayor Adrian Fenty (who was Black) framed him as a supporter of “dog parks and bike lanes” who had abandoned his Black constituents.³⁴ In the African-American neighborhood of East Austin, a resident told bicycle project coordinator Adrian Lipscombe (who is Black herself): “When the bikes came in, the blacks went out.”³⁵ Thus, while a reactionary “bikelash” against bicycle planning driven by fear of change is a popular (and often accurate) trope, a parallel common sense has emerged

about the role of bicycle infrastructure in exclusionary urbanism.

Humor broached the topic of cycling and gentrification largely before advocates did, however. The website *Stuff White People Like* listed bikes at #61, between the Toyota Prius and “Knowing what’s best for poor people,” while popular blogger BikeSnobNYC poked fun at the “Great Hipster Silk Route” of Kent Avenue in Brooklyn.³⁶ Beyond this, the silence of bicycle advocacy on questions of difference has been most forcefully contested by cyclists of color themselves. Pressure from groups like Washington, D.C.’s Black Women Bike, Red Bike and Green in Oakland, Chicago and Atlanta, and Los Angeles’ Ovarian Cycos, as well as concerted advocacy work in cities like Los Angeles and Chicago, forced the issue of the whiteness of mainstream advocacy at a time when its complicity with gentrification could no longer be ignored.³⁷ In response to such agitation, the League of American Bicyclists appointed an Equity Advisory Council composed of high-profile advocates of color in 2013, which quickly disbanded, widening the contradictions of the moment.³⁸ At the same time, industry group People For Bikes dramatically increased its focus on equity in bicycling, funding research into better practices for planning bicycle sharing systems.³⁹ Thus, in many ways, advocates of color have decisively shaped the terms of discourse today, creating the political space to launch their own initiatives, such as The Untokening and Equiticity, which challenge mainstream bicycle advocacy’s tacitly pro-gentrification consensus. In a few short years, “equity” went from an occasional topic to an inescapable issue within the bicycle movement.

The contradictions that fuel these struggles have not been resolved. The current platform of American bicycle advocacy, with some deviations, holds to both promoting the economic benefits of bicycle infrastructure investment and affirming the need for greater equity. Growing attention is paid to the ways in which these come into direct contradiction through the process of gentrification, but this is a very recent shift. Furthermore, the contemporary celebration of streetscape changes as “urban acupuncture” tends to naturalize the neighborhood scale as the primary site of ethical action.⁴⁰ What emerges is a politics of urban mobility that rearticulates its radical influences into an ethos of liberal pluralism.

The entanglement of bicycle planning with urban development strategy over the past two decades was not simply an expression of the inherent value of bicycling, but neither was it imposed by the growth machine. Rather, it was the contingent outcome of the interaction between the following: the articulation of subcultural cycling practices with processes of

gentrification; the technical characteristics of bicycles and urban streets; and regional dynamics of political-economic restructuring and sustainable urbanism. The following sections will examine these elements in turn.

Gentrification, Daily Practice, and the Making of the Neighborhood Scale

Since the 1990s, gentrification has “scaled up,” as globally-connected investors redevelop disinvested neighborhoods for middle class residency at an unprecedented scale.⁴¹ In the process, it has become a central plank of both urban economic and environmental policy.⁴² “Livability” is the fulcrum of this link between the economic and the environmental, uniting the revaluation of *place* and a less carbon-intensive regime of *movement* through the transformation of the public realm, and the street in particular.⁴³

In the political economy of gentrification, the concept of the “rent gap” describes the difference between present revenues from a given parcel of land--“capitalized rents”--and the *potential* rents that parcel could yield, given prevailing rents at the metropolitan level. When this gap is great enough, it exerts an economic compulsion on the owner to bring the parcel up to its “highest and best use” through capital investment, typically displacing its current occupants.⁴⁴ Strictly speaking, while gentrification only directly involves privately-owned parcels, streets are a key mediator of *localized* potential rents at the neighborhood scale. The quality and characteristics of streets as infrastructure become effectively “inherent” to the parcels that they connect to the rest of the urban fabric.⁴⁵ Streets anchor urban practices, and even small-scale changes to their infrastructural characteristics allow new practices to flourish where they previously didn’t, even changing perceptions of neighborhood desirability.⁴⁶ The reverse is also true: practices change the meaning and potential of streets, and shape the kinds of amenities that generate value and spur further public investment.⁴⁷ These practices need not be *intended* to promote gentrification. “Marginal gentrifiers”--participants in but not leaders in the process--have become essential to the forms gentrification has taken, while larger, more powerful actors capture the lion’s share of profits.⁴⁸ In other words, both “hard” and “soft” infrastructures (physical investments and social bonds) guide the reinvestment of capital to particular places and not others.

Many of these practices are inspired by writers who sought to recapture qualities of place

that were eroded by suburbanization, midcentury high modernism, and the automobile. In *The Death and Life of Great American Cities* (1961), Jane Jacobs attacked contemporary planning orthodoxy, celebrating instead the “intricate sidewalk ballet” of ordinary residents in tight-knit neighborhoods as the foundation of urban vitality.⁴⁹ By the late 1970s, a new generation of planners like Donald Appleyard, Peter Calthorpe, Kevin Lynch, Jan Gehl, and Allan Jacobs, was learning from thinkers like Jacobs and William Whyte, the urban struggles of the 1960s, and the emerging environmentalist movement.⁵⁰ These planners reinterpreted the city by claiming not just a sociocultural but an economic value for densely settled, vibrant, and diverse urban centers, and slowly altered the normative basis for their line of work.⁵¹ Over the same period, preserving and enhancing the qualities of place that Jacobs admired had become a potentially lucrative activity.⁵²

Thus, the neighborhood is where leading forces in gentrification attempt to shape use-values--or “quality of life”--in ways that support increases in exchange-value. Property owners rarely settle for improving their own property by itself.⁵³ They enlist fellow rentiers, as well as the facilities of the state, in order to support redevelopment. As noted, this is most often considered in aesthetic terms: making an area more attractive for investors.⁵⁴ Bicycling works at this level, reinforcing a sense of the neighborhood as a coherent place, which adds value to its “brand” (Figure 4). But improvements in accessibility for wealthier populations can also be captured directly as rent. Infrastructural improvements at the neighborhood scale are also easier for municipalities to undertake and easier for local actors to organize around. Thus, land markets capitalize as amenities the nominally public goods activists win, exerting upward pressure on neighborhood-level potential rents and prying the rent gap wider. This form of gentrification delivers tangibly positive qualities--better parks, more pleasant, human-scale streets, and bicycle infrastructure--leading working class neighborhoods to oppose the very improvements that in previous years they may have sought.

[FIGURE 4 ABOUT HERE]

At the same time, gentrification depends on the prior devaluation of space through suburbanization, which was fundamentally a racial project that reallocated investment away from central cities.⁵⁵ From the perspective of urban elites, the revaluation of core neighborhoods

adjacent to the central business district is its own justification. But “smart growth” ideas have given this justification an added power. The disinvested neighborhoods to which poor people, immigrants, and people of color were relegated have become essential to the project of reducing carbon emissions by shortening and focusing trips. Bicycle infrastructure in this way fits both mandates.

The deeper implications are that practices like bicycling, once considered incidental urban capitalism, are now actually critical to its reproduction.⁵⁶ We find a “growth machine” of an unusual sort, in which the exchange-value sought by property interests is somewhat dependent on grassroots actors’ pursuit of use-value in urban space.⁵⁷ Neighborhood investments in livability and sustainable mobility have become fused to city-regional competitive strategies intended to leverage quality of life toward economic growth.⁵⁸ These amenities are part of the imagined ecology of competitiveness in the “new” economy.⁵⁹ Meanwhile, while bicycle advocates do not usually directly benefit from gentrification *per se*, they frame their infrastructural demands in the language of the general interest, and have convinced civic leaders and corporations that cycling part of a “good business climate.”⁶⁰ Bicycle infrastructure is therefore a key point of convergence between these interests, with powerful implications for the reorganization of capital investment across the metropolis.

Mobility Infrastructures and Social Space

A key contention of this book is that race, class, and gender are durably articulated with mobility practices in urban space.⁶¹ For instance, the *image* of the bicycle has shifted from a vehicle of last resort (signifying racialized urban poverty) to a symbol of choosing a cosmopolitan, less carbon-intensive life (making visible the return of the largely white middle class). But the shift goes beyond image. Rather, the materiality and spatiality of the body-bicycle-infrastructure ensemble forms the basis for how certain bicyclists come to be seen while others remain “invisible” but present nevertheless. This highlights the importance of the bicycle as a technological object, its relationship to the physical infrastructures of urban mobility, and its intersection with spatial patterns of social division.

The experiential dimension of cycling, and the rider’s relationship to the machine and the street, is a key thread in contemporary thinking on bicycling.⁶² Speed, flexibility, bodily

awareness, and urban “flow” are strong themes in this work. The figure of the cosmopolitan urban cyclist today (Figure 5, for example), however, increasingly represents a cyborg version of Walter Benjamin’s *flâneur*, a quintessentially modern subject who wandered the bourgeois city, consuming with the eyes.⁶³ Much like Michel de Certeau’s pedestrian, these new cyclists evade the rigid, hierarchical ordering of urban space, seeking experience and pleasure while recapturing fundamental freedom of mobility (see Chapter 3).⁶⁴ The accessibility, simplicity of use and repair, and minimal regulation that enable this freedom have always existed as a necessity for the poor, but have become an *option* for the new middle class. From this perspective, the freedom narrative of automobility is inverted: drivers are not freed by their purchase, they are trapped in it; bicyclists are freed by their machines, not confined by poverty to a lower class of mobility. The shifting sociotechnical meanings of cycling thus have very concrete material outcomes in urban space.

[FIGURE 5 ABOUT HERE]

For the above reasons, bicycles are often framed in contrast to what Mimi Sheller and John Urry call “automobility”: a large-scale sociotechnical system that encompasses the production, distribution, and consumption of cars and related support networks, as well as its cultural, environmental and political dimensions.⁶⁵ This system is characterized by its “coercive flexibility:” automobility enables and *enforces* the vast geographic dispersal of zones of home, work, and leisure. Automobility is also fundamentally a metabolic system, depending on and enforcing the utilization of massive flows of metal, concrete, plastic, and fossil energy to move people and goods through space.⁶⁶ From this perspective, automobility is an ecologically destructive, and totally avoidable, way of organizing human and non-human life.⁶⁷

A key infrastructure of automobility is the *technology* of the street itself. The configuration of the roadway--an arrangement of concrete, asphalt, paint, metal signage, traffic signals, electrical cables, storm drains, and (sometimes) planted greenery--enables certain forms of movement while restricting others, all through technical means.⁶⁸ The “hydraulic” nature of the automobile street--which privileges flow--speeds up the circulation of capital, allowing goods and people to course through the city’s arteries more quickly.⁶⁹ But it also instantiates the social order, and even underpins notions of self and nation.⁷⁰

Bicycle politics focus on fostering ways of life that counteract this malevolent ecology, particularly through “complete streets,” or streets that include all users, through technological means. Bicycling, walking, and transit have become part of urban climate initiatives as well, although climate tends more often to form the backdrop for such plans; specific carbon accounting involving these mobilities is rare.⁷¹ But the politics of complete streets have a more complicated relationship to automobility than many observers realize. On one hand, they seek the return of the street as a social space--what we might call “slow urbanism.” On the other, they claim the greater efficiency of designs that de-emphasize the car, in functional terms (showing the space efficiency of bicycles versus cars, for instance) and on economic grounds (in arguments about the “high cost of free parking” and the greater propensity of cyclists to spend on daily goods).⁷²

Shifting the organization of the street, however, involves confronting durable norms of expertise that favor the automobile.⁷³ For bicycle planners and advocates, the conflict between car-oriented traffic engineering and bicycle-pedestrian planning is one of circulation versus place (see Chapter 5).⁷⁴ But this conflict refracts a deeper contradiction: between the circulation of goods bearing exchange-value (profits on production) and enhancing site-specific exchange-values (rent).⁷⁵ As they argue with increasing persuasiveness for the value that bicycle access brings to place, livability advocates--often knowingly--cast their lot with the *rentier* class. To the extent that livable places also facilitate a less carbon-intensive way of life, the *value* of ecological renewal is partially captured by this class.⁷⁶

Bicycle advocates have not always been so focused on infrastructure, and the strategy of changing the technical characteristics of streets has often provoked acrimonious intergenerational debates among advocates.⁷⁷ The turn towards infrastructure does not just represent the changing of the guard, however. It reflects a sense, shaped by the rise of urbanism, that the struggle for complete streets is the struggle to improve and transform the city itself, by shifting travel behaviors away from cars.⁷⁸ In other words, contemporary advocates think of bicycle facilities not as for people who bicycle today, but for people who do not yet feel safe enough to bicycle.⁷⁹ Earlier advocates had no such goal. This means that the production of infrastructure has a *normative* dimension, with the planetary future at stake. “Complete streets” are not simply about meeting existing demand through technical innovations, but about transforming practices and thus subjectivities themselves.⁸⁰

As private, dispersed transportation by automobile became a national norm from the 1950s onward, urban mass transportation in turn became “differentially racialized” by its association with inner-city poverty.⁸¹ The bus in particular was marked by race, signifying sluggishness, confinement, and a fundamental lack of freedom, fit for “captive” rather than “choice” riders.⁸² Bus service is consistently subject to cuts, while investment is on the rise in light rail and other systems intended to attract a predominantly white, middle-class ridership.⁸³ Moving through urban space is thus an important site where difference is *made* both materially and affectively. Crucially, the bicycle signifies a rejection of the car, associated with the exclusionary white suburbs, but also freedom from the inefficient, crowded bus. For “choice” bicycle users, cycling also performs the recapture of an imagined lost urbanity, in a way that is more visible than the well-worn shoes of a pedestrian or the transit pass in the wallet of a subway rider. The bicycle and the complete street are the “appropriate technologies” for the contemporary urban renaissance.⁸⁴

Socio-spatial Restructuring and Environmental Governance in the American City

Since the crisis of 2008, infrastructural experimentation that had been brewing at the neighborhood scale has surged to become a municipal and even metropolitan priority. While many cities drew up comprehensive bicycle plans in the 1990s, advocates have more recently devoted great effort to innovating, demonstrating, and testing new designs, particularly the models imported from Amsterdam and Copenhagen that form the basis for “complete streets.” These “complete streets” models have become a key “fast policy,” applied both to individual corridors and, less commonly, adopted as a guiding principle for street design throughout the city. But advocates still grapple with messy local realities. Translating these infrastructure models to American streets, particularly with a resistant bureaucratic establishment, involves elements of “policy entrepreneurship” and participatory technocracy in which not all elements of the model travel.⁸⁵ In “muddling through,” American advocates have found that the symbolic value--both economic and environmental--of complete streets in many ways takes precedence over other features of Northern European urbanism like (relatively) spatially distributive justice and a high social wage.⁸⁶ The value of these features is rooted in their capacity to *redeem* the American city, which urbanists and (increasingly) policymakers see as having been wrecked by

the automobile.

What city is to be redeemed, however? For adherents to the livability discourse, the car and the highway violated the idealized convivial urban fabric of the early 20th century. But highways were also fundamentally racial projects.⁸⁷ They destroyed livelihoods, housing units, and property values, increased health hazards, and promoted extreme race-class segregation. Cities used Federal Highway Administration funds for “slum clearance,” destroying dense, multi-racial working class neighborhoods like West Oakland, the Bronx, and Miami’s Overtown, trapping people of color in areas with declining investment, including in mass transit.⁸⁸ Easy transportation by automobile further facilitated capital flight from central cities, while Federal Housing Administration policies reinforced segregation by favoring single-family homes in racially-restricted greenfield developments.⁸⁹ The combination of the car, the single-family house, and the quiet suburb shaped the *aspirational* economy of the middle class, which depended on constantly the urban footprint and expanding roadway capacity.⁹⁰ The *scale* of the American metropolitan region is not pre-given, but is a material artifact of how whiteness was invented through suburbanization.⁹¹

The push to make urban places less car-dependent also speaks to a broader process of restructuring currently underway in the most dynamic metropolitan areas, as the extensive “Fordist” metropolis gives way to the intensive, “post-Fordist” region. The “see-saw” motion of capital has partially reversed, flooding back into urban cores and a concomitant displacement of the working class and people of color to suburbs.⁹² While the process is still very uneven both within and across regions, some places have begun to demonstrate a classic “European” morphology, with wealthy centers and poor “*banlieues*” at their edges.⁹³ Moreover, movements for “urban quality” that emerged at the nadir of the central city now supply the ideas that fuel for its renaissance, and the places that successfully resisted the urbicidal 20th century are now victims of this success.⁹⁴ There is a mutually constitutive logic at play. Without the influx of population and investment, there would be no momentum behind efforts to reshape mobility, but without different ways of getting around, the class remake of central cities would create intolerable congestion. The “complete streets” paradigm is, in this sense, the neighborhood-scale complement to regional-scale political-economic restructuring. Within these processes, bicycling is in fact quite marginal, even as it becomes inordinately visible as a potential solution.

Sustainable urban development initiatives, what have been called the “new urban politics

of carbon control,” intensify these pressures by telescoping climate policy to the local level and turning decarbonization into competitive strategy.⁹⁵ Since the 1987 Brundtland Report on sustainable development, a wide range of actors have come to see cities as the only settlement form adequate to the challenge of climate change.⁹⁶ In the US, municipal governments (and in some places, metropolitan planning organizations, or MPOs) have taken tentative steps toward reducing emissions from car trips, such as: encouraging greater density in urban cores and around mass transit; promoting cycling, walking, and mass transit use; and shifting away from minimum parking requirements for new developments.⁹⁷ Some of these plans, such as the Washington, DC Metro’s Purple and Silver lines, or high-density multifamily housing near existing transit in Dublin, California, involve “retrofitting” suburban areas. But the areas that planners see as critical to meeting these goals, which have existing transit and multifamily housing, low car usage, and substantial brownfield development potential tend primarily to be working class neighborhoods in the urban core. The upshot is that pro-market low-carbon urbanization initiatives compound the pressure these areas already face from more conventional gentrification forces, with the added frame of sustainability, which supersedes political contestation.⁹⁸

Bicycle infrastructure also shores up cities’ competitive stances toward each other. Becoming the next Amsterdam, the next Portland, or the next New York in terms of bicycle infrastructure has surged upward on the list of competitive urban strategies, in part at the urging of advocates. Such amenities are now framed as part of the competition for “talent.”⁹⁹ Cycling no longer signifies cultural rebellion or a vehicle of last resort, but the entrepreneurial subject.¹⁰⁰ Thus, the flexible, enterprising posture of the city and the individual converge through the bicycle and the infrastructure provided to support it. Advocates’ strategic arguments about the value of bicycling--for commercial vitality, a productive workforce, and attracting jobs--have become pillars of urban economic policy.¹⁰¹

It is crucial to maintain a nuanced approach here. Bicycling is not an expression of neoliberalism, but the selective adoption of bicycling as an “institutional fix” is a key element of neoliberalization, a process that often combines contradictory elements into an unstable mix.¹⁰² This should not imply that the “livable” or ecological turns of urban capitalism are strictly functional for capital. Given conditions of austerity, plus the mandate to reduce cities’ ecological footprint through market-friendly solutions, the possibilities for change are circumscribed but the

latitude for *experimentation* is quite wide. Bicycling meets these requirements of neoliberal sustainable urbanism: bicycle infrastructure is cheap, bicycling reduces car usage, and the push for better cycling conditions comes from the very people cities need to attract in order to survive.¹⁰³ With the suburban ideal rejected by the new bourgeoisie, bicycles reflect and enact a new urban vision that has displaced it. A sanitized version of the city, constructed from a pastiche of European references and saturated with a localist romanticism inherited from Jacobs, with a dash of managed grit, constitutes the “fantasy city” of the contemporary urbanite.¹⁰⁴

The implications of these dynamics for metropolitan-level spatial justice are not encouraging. Jurisdictional fragmentation is an obstacle to more redistributive regional planning. Small, wealthy cities can shield themselves from change, while under-resourced cities are under pressure to encourage growth, even at the cost of social, economic, and environmental equity.¹⁰⁵ From this perspective, since the long half-century of automobility strangled investment in all other forms of mobility, the turn toward active transportation would constitute a just correction of resource allocation. Equally, a reversal of the urbicidal patterns of 20th century growth, and a renewal of dense urban places, would appear to serve the interest of justice. But the renewal of places is not equivalent to the restoration of the *capabilities* withheld from people of color and the working class through the past 80 years of urban policy.¹⁰⁶ The houses and streets they called home may return to glory without them.

Conclusion

The *value* claimed by bicycle and livability advocates is manifold: it encompasses safety, health, ecological well-being, *and* economic prosperity. However, once fragmented from a broader Left politics of the city, bicycle advocates’ pragmatic decisions to ally with business interests have developed into a mature narrative of cycling as a *necessary* component of urban competitiveness.¹⁰⁷ Such ideas have become an essential element of the capitalist city as it reinvents itself in the 21st century. In other words, the neoliberalization of bicycling practice is not a strategy imposed from above, nor is it a *fait accompli*.¹⁰⁸ Rather, it reflects the entanglement of attempts at emancipatory practice with the realities of a metropolis fragmented along lines of race, class, nativity, and the division of labor.

In particular, the trajectory of bicycle politics in the United States demonstrates the rise

of what we might call “participatory technocracy.”¹⁰⁹ By this, I mean the processes by which critiques of the car-dominated city achieve traction by building popular support among the new urban middle class for “better” technological fixes. Crucially, this does not take place in a temporal or spatial vacuum. Instead, urban space acts as a site where new spatial practices are worked out, new infrastructural arrangements are created, and changes are debated and contested. These processes in turn reshape urban space, and create new relations of mobility and belonging. The next chapter explores how bicycling practices at the political and social margins set this process in motion.

Notes

- ¹ Janette Sadik-Khan, “The Bike Wars Are Over, and the Bikes Won,” *New York Magazine*, March 8, 2016, <http://nymag.com/daily/intelligencer/2016/03/bike-wars-are-over-and-the-bikes-won.html>.
- ² One bicycle advocate I spoke to in Austin went so far as to say that seeing Sadik-Khan speak at the International Downtown Association conference in 2012 felt “exactly like a rock concert.”
- ³ Julian Brash, *Bloomberg’s New York: Class and Governance in the Luxury City* (Athens, GA: University of Georgia Press, 2011).
- ⁴ See <http://nacto.org/program/bike-share-initiative/> (accessed May 9, 2018).
- ⁵ Data calculated from the Federal Highway Administration, 2009 National Household Travel Survey (NHTS), available at: <http://nhts.ornl.gov>. The American Community Survey counts only the main form of transportation used for commuting to work by employed people. Meanwhile the National Household Transportation Survey (NHTS), which counts all trips regardless of purpose, is conducted less frequently, and can be unreliable below the state level.
- ⁶ “Interbike to Highlight Urban Cycling,” *Bicycle Retailer and Industry News*, August 29, 2011, <http://www.bicycleretailer.com/north-america/2011/08/29/interbike-highlight-urban-cycling>.
- ⁷ Carolyn Szczepanski, “How Bicycles Bring Business,” *Momentum Magazine*, April 10, 2013, <https://momentummag.com/how-bicycles-bring-business/>; People For Bikes, “Protected Bike Lanes Mean Business” (Washington, D.C., 2013), http://www.sfbike.org/wp-content/uploads/2014/04/Protected_Bike_Lanes_Mean_Business.pdf.
- ⁸ Mike Maciag, “Gentrification in America Report,” *Governing*, February 2015.
- ⁹ S&P/Case-Shiller Home Price Index data, via the Federal Reserve Bank of St. Louis. Available at <https://fred.stlouisfed.org/>.
- ¹⁰ Alan Berube and Elizabeth Kneebone, *Confronting Suburban Poverty in America* (Washington, D.C.: Brookings Institution, 2013); Christopher B. Leinberger, “The Death of the Fringe Suburb,” *The New York Times*, November 2011, <http://www.nytimes.com/2011/11/26/opinion/the-death-of-the-fringe-suburb.html>; Alex Schafran, “Origins of an Urban Crisis: The Restructuring of the San Francisco Bay Area and

the Geography of Foreclosure,” *International Journal of Urban and Regional Research* 37, no. 2 (March 5, 2013): 663–88. Exurban construction continues, but it no longer represents the frontier toward which builders are rushing. In California, for instance, units added in single-family homes no longer dramatically outpace multifamily construction as they did throughout the 1990s and 2000s. See the California Department of Finance at: http://www.dof.ca.gov/Forecasting/Economics/Indicators/Construction_Permits/ (accessed April 21, 2018).

- ¹¹ Elvin Wyly et al., “Cartographies of Race and Class: Mapping the Class-Monopoly Rents of American Subprime Mortgage Capital,” *International Journal of Urban and Regional Research* 33, no. 2 (June 2009): 332–54; Carolina Reid, “Sought or Sold? Social Embeddedness and Consumer Decisions in the Mortgage Market,” 2010, <http://www.frbsf.org/community-development/files/wp2010-09.pdf>.
- ¹² Alex Schafran, “Debating Urban Studies in 23 Steps,” *City* 18, no. 3 (2014): 321–330.
- ¹³ The passage reads: “[T]he old is dying and the new cannot be born; in this interregnum a great variety of morbid symptoms appear.” Antonio Gramsci, *Selections from the Prison Notebooks*, ed. Quintin Hoare and Geoffrey Nowell Smith (New York: International Publishers, 1971), 276.
- ¹⁴ Chris Carlsson, *Critical Mass: Bicycling’s Defiant Celebration* (Oakland, CA: AK Press, 2002); Chris Carlsson, LisaRuth Elliott, and Adriana Camarena, *Shift Happens!: Critical Mass at 20* (San Francisco, CA: Full Enjoyment Books, 2012). See also Susan Blickstein and Susan Hanson, “Critical Mass : Forging a Politics of Sustainable Mobility in the Information Age” (2001): 347–362; Eliot a. Cohen, John Arquilla, and David F. Ronfeldt, *Networks and Netwars: The Future of Terror, Crime, and Militancy, Foreign Affairs*, vol. 81 (RAND Corporation, 2002).
- ¹⁵ Jeff Ferrell, *Tearing down the Streets : Adventures in Urban Anarchy* (New York: Palgrave, 2001); Zachary Furness, “‘Put the Fun Between Your Legs!’: The Politics and Counterculture of the Bicycle.” (University of Pittsburgh, 2006); Zachary Furness, *One Less Car : Bicycling and the Politics of Automobility* (Philadelphia: Temple University Press, 2010).
- ¹⁶ Chris Carlsson, *Nowtopia: How Pirate Programmers, Outlaw Bicyclists, and Vacant-Lot Gardeners Are Inventing the Future Today* (Oakland, CA: AK Press, 2008).

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- ¹⁷ Dave Horton, “Environmentalism and the Bicycle,” *Environmental Politics* 15, no. 1 (2006): 41–58. Of course, because bicycles are also commodities with a global supply chain stretching from Singapore, Taiwan, China, and Thailand to North America and Europe, their carbon footprint is hidden by the lack of direct, personal emissions.
- ¹⁸ See for example Jeff Mapes, *Pedaling Revolution: How Cyclists Are Changing American Cities* (Corvallis, OR: Oregon State University Press, 2009); J. Harry Wray, *Pedal Power : The Quiet Rise of the Bicycle in American Public Life* (Boulder, CO: Paradigm Publishers, 2008); Peter Walker, *How Cycling Can Save the World* (New York: Penguin Random House, 2017).
- ¹⁹ Elly Blue’s *Bikenomics* started as a series of posts on *Grist.com* on the personal economics of cycling, and was published with the punk-affiliated imprint Microcosm Press, whose logo is a bicycle gear with a heart in the center. *Bike Snob* emerged from popular blogger Eben Weiss’ incisive and humorous critiques of bike culture. Influential musician and artist David Byrne’s *Bicycle Diaries* celebrated meditative wandering by bicycle in the city. Elly Blue, *Bikenomics: How Bicycling Can Save the Economy* (Portland, OR: Microcosm Publishing, 2013); Eben Weiss, *Bike Snob: Systematically and Mercilessly Realigning the World of Cycling* (San Francisco: Chronicle Books, 2010); David Byrne, *Bicycle Diaries* (New York: Penguin Books, 2010).
- ²⁰ Ralph Buehler and John Pucher, “Cycling to Work in 90 Large American Cities: New Evidence on the Role of Bike Paths and Lanes,” *Transportation* 39, no. 2 (March 2012): 409–432; John Pucher, Ralph Buehler, and Mark Seinen, “Bicycling Renaissance in North America? An Update and Re-Appraisal of Cycling Trends and Policies,” *Transportation Research Part A: Policy and Practice* 45, no. 6 (2011): 451–475; John Pucher and Ralph Buehler, *City Cycling* (Cambridge, MA: MIT Press, 2012); Jennifer Dill and Kim Voros, “Factors Affecting Bicycling Demand : Initial Survey Findings from the Portland, Oregon, Region,” *Transportation Research Record*. no. 2031 (2007): 9–17; Jennifer Dill, “Categorizing Cyclists: What Do We Know? Insights from Portland, OR” in *Velo-City Global Conference* (Vancouver, BC, 2012).
- ²¹ Susan Shaheen, Stacey Guzman, and Hua Zhang, “Bikesharing in Europe, the Americas, and Asia,” *Transportation Research Record: Journal of the Transportation Research Board* 2143 (December 1, 2010): 159–167; Susan a. Shaheen et al., “China’s Hangzhou Public Bicycle,”

Transportation Research Record: Journal of the Transportation Research Board 2247 (December 1, 2011): 33–41; Elliot W. Martin and Susan Shaheen, “Evaluating Public Transit Modal Shift Dynamics in Response to Bikeshearing: A Tale of Two U.S. Cities,” *Journal of Transport Geography* 41 (2014): 315–324.

- ²² Sergio Montero, “San Francisco through Bogotá’s Eyes: Leveraging Urban Policy Change through the Circulation of Media Objects,” *International Journal of Urban and Regional Research*, n.d. The influence of Latin American sustainability urbanism is particularly important in the current moment. Bogotá’s pioneering *ciclovías*, or open streets events, initially conceived under Enrique Peñalosa’s leadership, were direct antecedents to similar events in New York, Los Angeles, San Francisco, and Minneapolis today. See T. Angotti and C. Irazabal, “Planning Latin American Cities: Dependencies and ‘Best Practices,’” *Latin American Perspectives* 44, no. 2 (2017): 4–17.
- ²³ The “fetish” here refers to both Marx’s idea of commodity fetishism and the traditional anthropological concept. See Maria Kaika and Erik Swyngedouw, “Fetishizing the Modern City: The Phantasmagoria of Urban Technological Networks,” *International Journal of Urban and Regional Research* 24, no. 1 (2000): 120–38, doi:10.1111/1468-2427.00239.
- ²⁴ Jaime Lerner, *Urban Acupuncture* (Washington, D.C.: Island Press, 2014).
- ²⁵ This is distinct from the established literature in science and technology studies that focuses on the Victorian era, when the bicycle’s basic form achieved “closure” and it became the industrial commodity *par excellence*. See Wiebe E. Bijker, *Of Bicycles, Bakelites, and Bulbs: Toward a Theory of Sociotechnical Change* (Cambridge, MA: The MIT Press, 1997); Wiebe E. Bijker and Trevor Pinch, “The Social Construction of Facts and Artifacts: Or How the Sociology of Science and the Sociology of Technology Might Benefit Each Other,” in *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology*, ed. Wiebe Bijker, Thomas Hughes, and Trevor Pinch (Cambridge, Mass.: The MIT Press, 2012), 11–44; Nicholas Oddy, “From Practicality to Femininity: Gender and the Dropped Frame Bicycle,” in *The Gendered Object*, ed. Pat Kirkham (Manchester & New York: Manchester University Press, 1996); Iain Boal, “Toward a World History of the Bicycle,” in *Cycle History 11: Proceedings of the 11th International Cycling History Conference*, ed. Iain Boal and Andrew Ritchie (Osaka, Japan: Cycle Publishing, 2000).

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- ²⁶ Melody Hoffmann, *Bike Lanes Are White Lanes: Bicycle Advocacy and Urban Planning* (Lincoln, NE: University of Nebraska Press, 2016). Other work engaging these questions includes: Jeff Koehler, “Gentrification and Cultural Ownership in Denver, Colorado,” *Praxis: Politics in Action* 1, no. 2 (2014): 18–35; Timothy a. Gibson, “The Rise and Fall of Adrian Fenty, Mayor-Triathlete: Cycling, Gentrification and Class Politics in Washington DC,” *Leisure Studies* 4367, no. April 2014 (2013): 1–21; K. T. Smiley, W. Rushing, and M. Scott, “Behind a Bicycling Boom: Governance, Cultural Change and Place Character in Memphis, Tennessee,” *Urban Studies* (October 27, 2014); Amy Lubitow, Thaddeus Miller, and Jeff Shelton, “Contesting the North Williams Traffic Operations and Safety Project” (2013); Amy Lubitow, B. Zinschlag, and N. Rochester, “Plans for Pavement or for People? The Politics of Bike Lanes on the ‘Paseo Boricua’ in Chicago, Illinois,” *Urban Studies* no. September 2014 (2015).
- ²⁷ Adonia Lugo, “Body-City-Machine: Human Infrastructure for Bicycling in Los Angeles (Doctoral Dissertation)” (University of California, Irvine, 2013); Adonia Lugo and Allison Mannos, “Separate but Eco: Livable Communities for Whom?,” *Streetsblog San Francisco*, May 21, 2012, <http://la.streetsblog.org/2012/05/21/separate-but-eco-livable-communities-for-whom/>; Melody Lynn Hoffmann and Adonia Lugo, “Who Is ‘World Class’? Transportation Justice and Bicycle Policy,” *Urbanities* 4, no. 1 (2014): 45–61; Do Lee, “The Unbearable Weight of Irresponsibility and the Lightness of Tumbleweeds: Cumulative Irresponsibility in Neoliberal Streetscapes,” in *Incomplete Streets: Processes, Practices, and Possibilities*, ed. Julian Agyeman and Stephen Zavestoski (New York: Routledge, 2015), 77–93; Sahra Sulaiman, “Equity 101: Bikes v. Bodies on Bikes,” *Streetsblog Los Angeles*, September 28, 2016, <http://la.streetsblog.org/2016/09/28/equity-101-bikes-v-bodies-on-bikes/>; Emily Reid-Musson, “Shadow Mobilities: Regulating Migrant Bicyclists in Rural Ontario, Canada,” *Mobilities* 0101 (2017): 1–17, doi:10.1080/17450101.2017.1375397.
- ²⁸ Hoffmann, *Bike Lanes Are White Lanes: Bicycle Advocacy and Urban Planning*.
- ²⁹ Jeff Koehler, “Gentrification and Cultural Ownership in Denver, Colorado,” *Praxis: Politics in Action* 1, no. 2 (2014): 18–35; Timothy a. Gibson, “The Rise and Fall of Adrian Fenty, Mayor-Triathlete: Cycling, Gentrification and Class Politics in Washington DC,” *Leisure Studies* 4367, no. April 2014 (2013): 1–21; K. T. Smiley, W. Rushing, and M. Scott, “Behind a Bicycling Boom: Governance, Cultural Change and Place Character in Memphis,

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- ³⁰ Steven Zavestoski and Julian Agyeman, *Incomplete Streets: Processes, Practices, and Possibilities* (New York: Routledge, 2014).
- ³¹ Aaron Golub et al., *Bicycle Justice and Urban Transformation : Biking for All?* (London and New York: Routledge Earthscan, 2016).
- ³² Jason Henderson, *Street Fight: The Politics of Mobility in San Francisco* (Amherst & Boston: University of Massachusetts Press, 2013).
- ³³ Al Letson, “Portland, OR: A Tale of Two Cities,” *State of the Reunion [Radio Program]* (Portland, Oregon: National Public Radio, 2012), <http://stateofthereunion.com/portland-or-a-tale-of-two-cities/>; Lubitow, Miller, and Shelton, “Contesting the North Williams Traffic Operations and Safety Project”; Hoffmann, *Bike Lanes Are White Lanes*.
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- ³⁵ Jay Walljasper, “Bike Lanes in Black and White,” *People For Bikes [Blog]*, October 21, 2013, <http://www.peopleforbikes.org/blog/entry/bike-lanes-in-black-and-white>.
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- ³⁷ League of American Bicyclists, “The New Majority: Pedaling Towards Equity,” 2013.
- ³⁸ *Ibid.*; Hamzat Sani, “League Welcomes New Equity Advisory Council,” February 2013, <http://blog.bikeleague.org/blog/2013/02/league-welcomes-new-equity-advisory-council/>; League of American Bicyclists, “The New Movement: Bike Equity Today,” 2014. Adonia Lugo, who was hired as the League’s equity initiative manager, left the post after a year with the sense that it was created out of tokenism rather than a commitment to change the LAB’s practices. See Adonia Lugo, “Unsolicited Advice for Vision Zero,” *Urban Adonia [Blog]*,

September 30, 2015, <http://www.urbanadonia.com/2015/09/unsolicited-advice-for-vision-zero.html>.

³⁹ Michael Andersen, "Race on Wheels: 4 Lessons for Green Lanes amid Gentrification," *People For Bikes [Blog]*, April 9, 2013, <http://www.peopleforbikes.org/blog/entry/race-on-wheels-4-lessons-for-green-lanes-amid-gentrification>; People For Bikes and The Alliance for Biking and Walking, "Building Equity," 2015, <http://sfgreatstreets.org/2009/11/the-sf-great-streets-project-talks-with-tim-tompkins/>.

⁴⁰ Lerner, *Urban Acupuncture*.

⁴¹ Jason Hackworth and Neil Smith, "The Changing State of Gentrification," *Tijdschrift Voor Economische En Sociale Geografie* 92 (2001): 464–77; Loretta Lees, Hyun Bang Shin, and Ernesto López-Morales, *Planetary Gentrification* (Cambridge, UK and Malden, MA: Polity, 2016).

⁴² Ruth Glass, *London: Aspects of Change* (London: Centre for Urban Studies, MacGibbon and Kee, 1964); Neil Smith, *The New Urban Frontier: Gentrification and the Revanchist City* (New York: Routledge, 1996); Neil Smith, "New Globalism, New Urbanism: Gentrification as Global Urban Strategy," *Antipode* 34, no. 3 (2002): 427–50; Melissa Checker, "Wiped Out by the 'Greenwave': Environmental Gentrification and the Paradoxical Politics of Urban Sustainability," *City and Society* 23, no. 2 (2011): 210–29; Mark Whitehead, "(Re)Analysing the Sustainable City: Nature, Urbanisation and the Regulation of Socio-Environmental Relations in the UK," *Urban Studies* 40, no. 7 (June 1, 2003): 1183–1206.

⁴³ Streets have played a relatively minor role in theories of gentrification, and often appear in the context of the state excluding the poor from public spaces. See David Harvey, *Spaces of Hope* (Berkeley, CA: University of California Press, 2000); Don Mitchell, *The Right to the City: Social Justice and the Fight for Public Space* (New York: Guilford Press, 2003). For a "green" mutation of this dynamic, see: Susannah Bunce, "Developing Sustainability: Sustainability Policy and Gentrification on Toronto's Waterfront," *Local Environment* 14, no. 7 (2009): 651–667; Leslie Kern, "From Toxic Wreck to Crunchy Chic: Environmental Gentrification through the Body," *Environment and Planning D: Society and Space* 33 (2015): 67–83.

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- ⁴⁴ Neil Smith, "Toward a Theory of Gentrification: A Back to the City Movement by Capital, Not People," *Journal of the American Planning Association* 45, no. 4 (1979): 538–48. In essence, Smith theorized the reversal of the canonical "filtering" process in urban economics.
- ⁴⁵ Daniel Hammel, "Re-Establishing the Rent Gap: An Alternative View of Capitalised Land Rent," *Urban Studies* 36, no. 8 (1999): 1290. This is obvious with large, fixed transportation systems with controlled access points (freeways and rail transit, for example), which dramatically increase the accessibility of certain places over others. The creation of these infrastructures, usually by the state under the influence of local powerful capitalists, yields what Richard Walker calls "redistributive rents." See Richard A. Walker, "Urban Ground Rent: Building a New Conceptual Framework," *Antipode* 6, no. 1 (1974): 51–58.
- ⁴⁶ Jane Jacobs, *The Death and Life of Great American Cities* (New York: Vintage, 1992); Michel de Certeau, *The Practice of Everyday Life* (Berkeley, CA: University of California Press, 1984).
- ⁴⁷ This is often considered the "consumption" explanation of gentrification. David Ley, "Gentrification and the Politics of the New Middle Class," *Environment and Planning D: Society and Space* 12 (1994): 53–74.
- ⁴⁸ For Rose, these were white, middle-class, single mothers for whom a central location reduces the burden of social reproduction. See Damaris Rose, "Rethinking Gentrification: Beyond the Uneven Development of Marxist Urban Theory," *Environment and Planning D: Society and Space* 2, no. 1 (1984): 47–74.
- ⁴⁹ Jacobs, *The Death and Life of Great American Cities*, 12, 50.
- ⁵⁰ This current was especially strong in the Bay Area, where growth control had an early foothold. See Richard A. Walker, *The Country in the City: The Greening of the San Francisco Bay Area* (Seattle: University of Washington Press, 2008).
- ⁵¹ Writers like Ivan Illich, Theodore Roczak, and E.F. Schumacher added their appreciation of small-scale technologies to the cultural ferment as well. Appleyard's *Livable Streets* (1981) remains an influential handbook for making streets convivial spaces rather than high-speed car thoroughfares. See Donald Appleyard, M. Sue Gerson, and Mark Lintell, *Livable Streets, Protected Neighborhoods* (Berkeley, CA: University of California Press, 1981); Allan Jacobs and Donald Appleyard, "Toward an Urban Design Manifesto," *Journal of the American Planning Association* 53, no. 1 (1987): 112–20.

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- ⁵² Peter Hall, *Cities of Tomorrow* (Oxford & Malden, MA: Blackwell, 1996), 283-4, 462-7.
- ⁵³ Mark Gottdiener, *The Social Production of Urban Space* (Austin: University of Texas Press, 1985), 153; John R. Logan and Harvey L. Molotch, *Urban Fortunes: The Political Economy of Place* (Berkeley, CA: University of California Press, 2007).
- ⁵⁴ Sharon Zukin, *Loft Living: Culture and Capital in Urban Change* (New Brunswick, NJ: Rutgers University Press, 1989); David Ley, *The New Middle Class and the Remaking of the Central City* (New York: Oxford University Press, 1996); David Ley, "Artists, Aestheticisation and the Field of Gentrification," *Urban Studies* 40, no. 12 (November 2003): 2527-44.
- ⁵⁵ Kenneth T. Jackson, *Crabgrass Frontier: The Suburbanization of the United States* (New York: Oxford University Press, 1985); David Freund, *Colored Property: State Policy and White Racial Politics in Suburban America* (Chicago: University Of Chicago Press, 2010).
- ⁵⁶ Michael Hardt and Antonio Negri, *Commonwealth* (Cambridge, MA: Harvard University Press, 2011); Chris Carlsson, "Conundrums of the Commons," *The Nowtopian [Blog]*, June 2010, <http://www.nowtopians.com/book-reviews/conundrums-of-the-commons>.
- ⁵⁷ Logan and Molotch, *Urban Fortunes*.
- ⁵⁸ Hackworth and Smith, "The Changing State of Gentrification."
- ⁵⁹ Eugene McCann, "Inequality and Politics in the Creative City-Region: Questions of Livability and State Strategy," *International Journal of Urban and Regional Research* 31, no. 1 (2007): 188-96.
- ⁶⁰ Logan and Molotch, *Urban Fortunes*.
- ⁶¹ On the concept of articulation, see Stuart Hall, "Race, Articulation, and Societies Structured in Dominance," in *Race Critical Theories: Text and Context*, ed. Philomena Essed and David Theo Goldberg (Malden, MA: Wiley-Blackwell, 2001), 38-68. On mobility as a key site condensing these categories, see Tim Cresswell, "Towards a Politics of Mobility," *Environment and Planning D: Society and Space* 28, no. 1 (2010): 17-31.
- ⁶² Jeffrey Kidder, *Urban Flow: Bike Messengers and the City* (Ithaca: Cornell University Press, 2011); Justin Spinney, "Cycling the City: Movement, Meaning and Method," *Geography Compass* 3, no. 2 (March 2009): 817-835; Ben Fincham, "Bicycle Messengers and the Road to Freedom," *The Sociological Review* 54 (September 18, 2006): 208-222; Rachel Aldred,

“Incompetent or Too Competent? Negotiating Everyday Cycling Identities in a Motor Dominated Society,” *Mobilities* 8, no. 2 (May 2013): 252–271.

⁶³ Walter Benjamin, *Illuminations: Essays and Reflections* (New York: Schocken, 1968), 155–194. On the gendering of the *flâneur*, see Susan Buck-Morss, “The Flâneur, the Sandwichman, and the Whore: The The Politics of Loitering,” *New German Critique*, no. 39 (1986): 99–140.

⁶⁴ de Certeau, *The Practice of Everyday Life*; Ferrell, *Tearing down the Streets*; Lugo, “Body-City-Machine: Human Infrastructure for Bicycling in Los Angeles (Doctoral Dissertation).”

⁶⁵ John Urry, “The ‘System’ of Automobility,” *Theory, Culture & Society* 21, no. 4/5 (2004): 25–39; Mimi Sheller and John Urry, “The City and the Car,” *International Journal of Urban and Regional Research* 24, no. 4 (2000): 737–57. See also Alan Walks, *The Urban Political Economy and Ecology of Automobility: Driving Cities, Driving Inequality, Driving Politics* (London and New York: Routledge, 2015); Matthew Paterson, *Automobile Politics: Ecology and Cultural Political Economy* (Cambridge; New York: Cambridge University Press, 2007).

⁶⁶ Nik Heynen, Maria Kaika, and Erik Swyngedouw, *In the Nature of Cities* (New York, NY: Routledge, 2006).

⁶⁷ Walks, *The Urban Political Economy and Ecology of Automobility: Driving Cities, Driving Inequality, Driving Politics*; Paterson, *Automobile Politics*.

⁶⁸ By “technical,” here I mean in contrast to a social space governed more by rules and conventions, although even the most car-choked freeway is also this. The more “technical” the facilitation of movement, the more these conventions are embedded in the physical structure of the street. Many of the normal elements of streets in North America were laid down from 1910-1930 in battles over how the surge in cars should be incorporated into city streets. See Peter D. Norton, *Fighting Traffic: The Dawn of the Motor Age in the American City* (Cambridge MA: The MIT Press, 2011).

⁶⁹ David Harvey, *Paris, Capital of Modernity* (London; New York: Routledge, 2005).

⁷⁰ Urry, “The ‘System’ of Automobility”; Walks, *The Urban Political Economy and Ecology of Automobility: Driving Cities, Driving Inequality, Driving Politics*; Sheller and Urry, “The City and the Car.”

⁷¹ Matthew Paterson, “Governing Mobilities, Mobilising Carbon,” *Mobilities* 9, no. 4 (2014): 570–84, doi:10.1080/17450101.2014.961260.

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- ⁷² One version of the classic space efficiency argument is available at: <http://www.austinchronicle.com/news/2014-06-27/getting-off-the-road/> (accessed May 12, 2018). For arguments about the inefficiencies of parking, see Donald C. Shoup, “The High Cost of Free Parking,” *Journal of Planning Education and Research* 17, no. 10 (1997): 3–20; Jason Henderson, “The Spaces of Parking: Mapping the Politics of Mobility in San Francisco,” *Antipode* 41, no. 1 (2009): 70–91. On bicyclists’ propensity to shop more, see Szczepanski, “How Bicycles Bring Business.”
- ⁷³ In particular, level of service (LOS) guidelines evaluate street performance solely in terms of delay to cars. See Jason Henderson, “Level of Service: The Politics of Reconfiguring Urban Streets in San Francisco, CA,” *Journal of Transport Geography* 19, no. 6 (2011): 1138–44. In recent years, advocates have sought to overhaul LOS, proposing an alternative multi-modal level of service (MLOS) that would enable the construction of safer and more habitable pedestrian and cyclist environments.
- ⁷⁴ Jason Patton, “A Pedestrian World: Competing Rationalities and the Calculation of Transportation Change,” *Environment and Planning A* 39, no. 4 (2007): 928–44.
- ⁷⁵ One point of contradiction between these dual functions of the street that is already embedded within automobility, is parking. See Henderson, *Street Fight*.
- ⁷⁶ David Owen, “Green Manhattan,” *The New Yorker*, October 18, 2004, <https://www.newyorker.com/magazine/2004/10/18/green-manhattan>; Richardson Dilworth and Robert Stokes, “Green Growth Machines, LEED Ratings and Value Free Development: The Case of the Philadelphia Property Tax Abatement,” *Journal of Urbanism* 6, no. 1 (2013): 37–51, doi:10.1080/17549175.2012.692570.
- ⁷⁷ The old guard has long promoted “vehicular cycling,” an athletic approach that sees cyclists as safest when they behave like cars, and opposes as dangerous any bicycle facility that “segregates” cyclists from the rest of traffic. See John Forester, *Effective Cycling*, 7th Ed. (Cambridge, MA: The MIT Press, 2012). The ranks of vehicular cyclists are dominated by white, middle-class men and, until the 1990s, bicycle coalitions reflected this ideology and social composition. See “Quick Releases,” *Tube Times*, April 1999; Steven Bodzin, “SFBC Turns 30: A Look Back at Our Roots,” *Tube Times*, August 2001.
- ⁷⁸ Moreover, operating a bicycle on streets designed solely for car traffic is, for white, middle-class men, the first experience of structural oppression. Susan King, Personal interview, 2012.

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- ⁷⁹ Thomas Wald, “Personal Interview,” May 9, 2018.
- ⁸⁰ Michael Maniates, “Individualization: Plant a Tree, Buy a Bike, Save the World?,” in *Confronting Consumption*, ed. Thomas Princen, Michael Maniates, and Ken Conca (Cambridge, MA: MIT Press, 2002), 43–66; Bruce P Braun, “A New Urban Dispositif? Governing Life in an Age of Climate Change,” *Environment and Planning D: Society and Space* 32, no. 1 (2014): 49–64.
- ⁸¹ Laura Pulido, *Black, Brown, Yellow and Left: Radical Activism in Los Angeles* (Berkeley, CA: University of California Press, 2006).
- ⁸² Mark Garrett and Brian Taylor, “Reconsidering Social Equity in Public Transit,” *Berkeley Planning Journal* 13, no. 1 (1999): 6–27; Timothy F. Welch, “Equity in Transport: The Distribution of Transit Access and Connectivity among Affordable Housing Units,” *Transport Policy* 30 (2013): 283–293.
- ⁸³ Where bus service is expanding, it is often as bus rapid transit (BRT), a system that combines elements of streetcars with the low cost of buses. While BRT was pioneered in Bogotá for reasons of social equity, in the United States it is used as a way to offer a “premium-type service” and *distinguish* it from the old racialized bus. See Federal Transit Administration and United States Department of Transportation, “Characteristics of Bus Rapid Transit for Decision-Making,” 2004, sec. 2, http://www.nbrti.org/docs/pdf/Characteristics_BRT_Decision-Making.pdf.
- ⁸⁴ Langdon Winner, *The Whale and the Reactor: A Search for Limits in an Age of High Technology* (University Of Chicago Press, 1989).
- ⁸⁵ Jamie Peck and Nik Theodore, *Fast Policy* (Minneapolis, MN: University of Minnesota Press, 2015).
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