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.”

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. 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”? 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. 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. 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. 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.  

[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. 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.

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. Following the 2008 financial crisis, large numbers of Black and Latino first-time homebuyers found themselves stranded by foreclosure in car-dependent exurbs. 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. 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.

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). 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. This framing places bicycling alongside guerrilla gardening, graffiti, and skateboarding as acts of hacking the dominant code of the capitalist city. Most importantly, because bicycling does not rely directly on fossil energy, it carries “an environmentalist message without a placard.”

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. 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. 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. As bicycle sharing becomes a main frontier of infrastructural investment, and interurban competition, research has followed suit as well. 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. These stories, however, are often
abstracted from political economy and social context, granting the designs themselves a quasi-
fetishistic power. They imply that with the right infrastructural treatments, and a little “urban
cupuncture,” the American city can become great again.

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. 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. 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. 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. This has led to pitched battles
over infrastructure, with neighborhoods of color pushing back against what they see as an
amenity that encourages gentrification. 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. 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. These struggles all occur, however, within a broader urban political structure
shaped by the hegemony of the automobile.

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. 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. 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.” 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. 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. 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. 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. 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 on 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. 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. In the process, it has become a central plank of both urban economic and environmental policy. “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.

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. 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. 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. 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. 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. 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. 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. 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. Over the same period, preserving and enhancing the qualities of place that Jacobs admired had become a potentially lucrative activity.

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. 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. 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. 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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{58} These amenities are part of the imagined ecology of competitiveness in the “new” economy.\textsuperscript{59} Meanwhile, while bicycle advocates do not usually directly benefit from gentrification \textit{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.”\textsuperscript{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.\textsuperscript{61} For instance, the \textit{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.\textsuperscript{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.\textsuperscript{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).\textsuperscript{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 \textit{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.

\textbf{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.\textsuperscript{65} This system is characterized by its “coercive flexibility;” automobility enables and \textit{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.\textsuperscript{66} From this perspective, automobility is an ecologically destructive, and totally avoidable, way of organizing human and non-human life.\textsuperscript{67}

A key infrastructure of automobility is the \textit{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.\textsuperscript{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.\textsuperscript{69} But it also instantiates the social order, and even underpins notions of self and nation.\textsuperscript{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. 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).

Shifting the organization of the street, however, involves confronting durable norms of expertise that favor the automobile. 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). But this conflict refractions a deeper contradiction: between the circulation of goods bearing exchange-value (profits on production) and enhancing site-specific exchange-values (rent). 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.

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. 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. 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. 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.
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. The bus in particular was marked by race, signifying sluggishness, confinement, and a fundamental lack of freedom, fit for “captive” rather than “choice” riders. 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.

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.

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. 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. 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. 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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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.”\textsuperscript{99} Cycling no longer signifies cultural rebellion or a vehicle of last resort, but the entrepreneurial subject.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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. 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.

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. 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. 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. 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. 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.” 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


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.”


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.


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).


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.


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).


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,”


40 Lerner, *Urban Acupuncture*.


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.


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.

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.


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).

57 Logan and Molotch, Urban Fortunes.
60 Logan and Molotch, Urban Fortunes.


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).


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.

One point of contradiction between these dual functions of the street that is already embedded within automobility, is parking. See Henderson, Street Fight.


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.

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.
Thomas Wald, “Personal Interview,” May 9, 2018.


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.nbtri.org/docs/pdf/Characteristics_BRT_Decision-Making.pdf.


90 Jackson, *Crabgrass Frontier*; Freund, *Colored Property*.


Katz and Wagner, “What A City Needs to Foster Innovation.”


Because I stress the role of grassroots advocates and critics in the creation of new technological forms, this is distinct from other uses of this term, such as Jason Chilvers and Jacquelin Burgess, “Power Relations: The Politics of Risk and Procedure in Nuclear Waste Governance,” *Environment and Planning A* 40, no. 8 (2008): 1881–1900.