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# Contesting sustainable transportation: bicycle mobility in Boston and beyond

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## Abstract

*This article traces the social and political aspects of cycling mobility in the Boston area. For some, attracting a certain desirable demographic by investing in bicycle infrastructure is problematic because it could lead to gentrification. Not investing in low-income neighborhoods, however, could be seen as a perpetuation of an unjust distribution of resources. While the bicycle is a common cost-efficient choice among low-income residents, it also symbolizes a privilege for new urban elites, although for very different reasons. Drawing on interview data gathered between 2015 and 2016 with city officials, cycling associations, and transportation planners, the article details the different narratives that unfold in the construction of bicycling infrastructure: First, bicycling has often been conceptualized in the rhetoric of Boston city officials in terms of economic growth. The promotion of cycling helps satisfy the city's ostensible need to attract or retain a well-educated, young and mobile workforce for whom good bike infrastructure is a criterion when choosing places to work and live. Second, some have observed that bicycle infrastructure in the US is often included in neighborhoods that are undergoing processes of gentrification or have recently been gentrified. Third, bicycle infrastructure improvements have been met with suspicion or resistance by residents in neighborhoods where displacement – or the fear of it – is an issue. This article shows that bicycle mobility in the US is charged with social dynamics which influence the way bicycle mobility is conceptualized, both as a social practice and as a political strategy.*

## Zusammenfassung

Dieser Artikel zeichnet die politischen und sozialen Dimensionen nach, die im Zusammenhang mit dem Aufbau einer Fahrradinfrastruktur im Großraum Boston in den vergangenen Jahren entstanden: Während mit Investitionen in Fahrradmobilität eine spezielle demographische Gruppe angezogen werden soll, werden diese von Quartiersbewohner\*innen im Zusammenhang mit Gentrifizierungsprozessen diskutiert. Gleichzeitig wird das Zurückhalten von Investitionsmitteln zum Ausbau von Fahrradwegen und -infrastruktur in Quartieren unterer Einkommensschichten als Verfestigung einer ungerechten Verteilung von Ressourcen gesehen. Im US-amerikanischen Kontext ist das Fahrrad nicht nur eine kostengünstige Fortbewegungsmöglichkeit für untere Einkommensschichten, es steht auch für das Privileg neuer urbaner Eliten. Empirische Erhebungen zwischen den Jahren 2015 und 2016 mit Verantwortlichen der Stadtverwaltung, Fahrradvereinen und Verkehrsplaner\*innen in Boston zeigen, dass sich drei unterschiedliche Narrative mit dem Aufbau eines Fahrradsystems und entsprechender -infrastruktur ergeben: Erstens wird Fahrradfahren in Boston mit einer Rhetorik des ökonomischen Wachstums und der Wettbewerbsfähigkeit verknüpft, die die Attraktivität der Stadt für gut ausgebildete, junge

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und mobile Arbeitskräfte stärken möchte, für welche bei der Wahl von Wohn- und Arbeitsort auch das Vorhandensein von Fahrradinfrastruktur und -kultur eine Rolle spielt. Zweitens besteht die Beobachtung, dass in den USA Fahrradinfrastruktur oft in Stadtvierteln verbessert wird, welche sich derzeit in Gentrifizierungsprozessen befinden oder kürzlich solche durchlaufen haben. Drittens wird gezeigt, dass Maßnahmen zur Verbesserung der Fahrradinfrastruktur in Quartieren, wo wohnliche Verdrängung (oder die Angst davor) Thema sind, zum Teil mit Vorbehalten oder Widerstand begegnet wird. Der Artikel zeigt auf, wie Fahrradmobilität in den USA mit sozialen Dynamiken verbunden ist, welche beeinflussen, wie Fahrradfahren sowohl als soziale Praktik, als auch als politische Strategie konzeptionalisiert wird.

**Keywords** bicycling, Boston, urban development, sustainable transportation

### 1. Introduction

In many cities, petrol-powered and car-centered mobility is expected to come to an end soon (Gössling 2013). In the search for alternative and sustainable means of transportation, the bicycle has experienced a renaissance in urban planning (Hickman et al. 2013). Bicycles are considered to be a cheap and accessible means of transportation and therefore promise to bridge the gap of socioeconomic inequalities. Although the emergence of bicycle transportation seems promising, researchers have proven that this is not always the case. Cycling can exacerbate inequality because it fits into the sustainable lifestyles of new urban elites who are closely associated with re-urbanization and gentrification processes. Some researchers also argue that bicycling is still limited to a few cities: "A bicycle renaissance has indeed been underway over the past two decades. The boom [...] has been limited to a few dozen cities which have implemented a wide range of programs to aggressively promote cycling [...] [T]hey are islands in a sea of car-dominance" (Pucher et al. 2011: 471).

One of the cities that has recently taken various efforts to promote cycling for daily transportation is Boston, the capital of the state of Massachusetts and the major metropolis of New England. This is surprising insofar as Boston has been labeled a particularly bicycle-unfriendly city in the past. Therefore, in response to these labels, the city's long-term mayor Thomas Menino started the Boston Bikes program in September 2007 and announced: "The car is no longer king in Boston". As such, the program would aim to "make Boston a world-class bicycling city" (Boston Bikes 2008a: 1; McGroary 2012).

While the ecological and health benefits of bicycling remain largely undisputed (Garrard et al. 2012; Meschik 2012), there has recently been more concern about the social sustainability of this mode of transportation. In the context of Boston, this concern is multi-faceted. First, in the US, bicycling has often been promoted through rhetoric related to economic growth. From the perspective of some city officials, economic growth is related to an ostensible need to attract or retain a well-educated, young, and mobile workforce for whom good biking infrastructure is a criterion when choosing a place to work and live. Second, bicycle infrastructure (e.g. bike lanes or bike racks) is mostly concentrated in economically prosperous neighborhoods and in neighborhoods which are currently undergoing processes of gentrification. Last, bicycle infrastructure improvements have evoked suspicion or even resistance by residents from lower income neighborhoods where social displacement – or the fear of it – is an issue.

Empirical findings illustrate that bicycle mobility in Boston is charged with social dynamics. These dynamics influence the way bicycling is conceptualized and spatialized, both as a social practice and as a political strategy. The article attempts to analyze two discourses that have recently emerged around cycling: cycling for the creative class and the fragmented spatialities of cycling infrastructure. It does so by drawing on ten in-depth interviews conducted with transportation advocates, transportation planners, and transportation planning officials. These interviews took place between 2015 and 2016. Additionally, the article draws upon empirical material such as newspaper articles, planning documents, and blog posts. In doing so, this article contributes to a body of critical transportation literature which situates cycling in a social context.

## 2. The transportation transition in the US

### 2.1 The decline of car-dependent modes of transportation

When it comes to traditional car-friendly societies, the US has always played a unique role by placing a particularly high societal value on car mobility. However, the bicycle was a main mode of transportation in the US at the end of the 19th and the beginning of the 20th century. It was later pushed into insignificance by mass-motorization and policies favoring suburbanization. As a result of post-war “parasitic urbanization” (Beauregard 2006) and intense suburbanization processes (Jackson 1985), the car was an important asset in order to mask profound dissimilarities and inequalities that came along with urbanization patterns since the 1950s. In contrast to existing social polarizations, the car was socially constructed as equally accessible, affordable and mobilizing for all parts of working society. As such, it could be used to facilitate vertical economic mobility. The car became *the* symbol of freedom and self-determination in the US, as well as in many other countries. “Green light for free citizens” (Original: Freie Fahrt für freie Bürger), a prominent slogan by the German Car Association ADAC in 1974 (Schümann 2011: no page given), promoted resistance against the speed limits on German highways. This symbolized the societal understanding which equated cars with universal human rights. Beyond symbolizing human rights, for many, the ownership of a car expresses the owner’s wealth and societal position. In the US, car-ownership increased from 2% to 82% between 1910 and 1970 (Kopecky and Suen 2010), and reached almost 90% of all households by 2015.

The prevalence of car-centric mobility first received criticism in the 1970s due to insecurities in the mineral oil market (Furness 2010; Mapes 2009). In the search for an alternative to petrol-powered cars, bicycles re-appeared as a suitable mode of transportation. Poorer households are especially affected by the discontinuation of car-dependent tax benefits, in addition to the higher costs of car-based mobility. The transition to sustainable mobility is struggling to deal with these new inequalities and the social change that accompanies them. Bicycling is discussed in this context as a low-cost, low-tech and just mode of transportation that is accessible for people of various ages and abilities.

### 2.2 Commodifying cycling

It has been argued by various scholars that bicycling was – and still is – a crucial means of transportation for low-income residents (Golub et al. 2016; Hoffmann 2016; Stehlin 2015). Some academics state that this demographic uses the bike because of its affordability, rather than for fashionable or environmental reasons. Moreover, most surveys indicate that lower-income residents are an already big and still growing proportion of the body of urban cyclists (Hoffmann 2016).

As bicycle mobility is increasingly returning to American urbanism, it does not enter the field free of any class attribution, but is, to the contrary, symbolically charged. Hoffmann argues: “The bicycle is not an apolitical, neutral form of mobility. It carries with it a diversity of signification depending on its location in time and space” (2016: 4). Prominently, bicycle mobility is connected to young, privileged people and “the signifiers of an ecologically responsible and cosmopolitan lifestyle” (Stehlin 2015: 121).

Besides the hope that biking might contribute to socially just transportation for lower-income residents, it seems to be increasingly favored because of its economic benefits for upwardly mobile individuals. According to Florida’s highly controversial writings, members of the desirable so-called ‘creative class’ are more likely to bike (Florida 2011). In an article in *The Atlantic*, Florida presents his statistical analysis: “[M]etros where more people cycle to work are more affluent. [...] Cycling to work is positively associated with the share of creative class jobs [...] and negatively associated with working class jobs” (Florida 2011: no page given). Florida is very clear in his message that succeeding in attracting the “creative class” will make the difference between winners and losers. Despite the harsh criticism of his ideas in academia (among others: Krätke 2012; Peck 2005), Florida’s enterprise has been commissioned by many municipalities around the US and the globe (Creative Class Group 2016).

It seems apparent that there is an attitude among city officials in the US that predominantly considers bicycling as economically beneficial. The “creative class” ideology brought a shift to bicycle planning: “Cities that once built bicycle infrastructure to promote environmentally friendly lifestyles now build it to attract young, educated workers” (Hoffmann 2015: 139; see also Lugo 2015). This signifies the striking commodification of livability in contemporary urbanism

(Stehlin 2014), where livability is considered a way to make places interesting for investment and therefore becomes a part of the politics of urban growth.

When cities started to think about bicycle infrastructure as an economic factor, this image was also very noticeably employed by bicycle advocacy. In 2014 the two influential national advocacy groups Alliance for Biking & Walking and PeopleForBikes published a report called *Protected bike lanes mean business: How 21<sup>st</sup> century transportation networks help new urban economies boom*. Rather than mention environmental or equity reasons for promoting cycling, the report discusses the economic benefits of cycling without a critical approach to urban 'revitalization' and the gentrification that comes with it. Moreover, it even seems to be keen to promote cycling on the basis of economic improvements for some, but not all of urban residents. Bicycling is presented as a key component which makes a place more interesting and thus increases its economic value. Andersen and Hall appear to lack a critical perspective when they state: "Today's cities are actively creating vibrant city life to attract top talent and economic development" (2014: 15). As a seeming response to a generally negative reception of the report, the very same organizations published another report the following year which highlighted equity questions related to bicycle mobility in the US (Andersen and Hall 2015).

### 3. The Boston Bikes program

The Boston Bikes program was started in the fall of 2007 by the city's former long-term mayor Thomas Menino. In the first newsletter, the city council stated its ideas about the undertaking: "The program is just part of the administration's vision for a vibrant and healthy city that benefits all its citizens. It seeks to make Boston a world-class bicycling city by creating safe and inviting conditions for all residents and visitors" (Boston Bikes 2008b: no page given). This step was in response to Boston's longstanding reputation as one of the worst cities for cyclists in the United States (Zezima 2009). A lack of biking infrastructure, heavy car traffic, and a famously aggressive driving style among motor-vehicle drivers granted the city multiple negative awards from bicycle magazines (c.f. Boston Bikes 2014). Since the beginning of the Boston Bikes program, considerable effort has been made to make the street network more suitable for cyclists, some of which will be discussed in the following sections.

In 2011, the city of Boston started a bike share scheme called *Hubway*. It was modeled after the popular *Vélib'* bike share in Paris. The Metropolitan Area Planning Council (MAPC) helped to turn *Hubway* into a trans-local project which would go beyond the city limits of Boston. One year after *Hubway's* start in Boston, the neighboring municipalities Brookline, Cambridge, and Somerville joined the program and installed stations as well. Since the start of the program, the number of users has grown continuously (Motivate 2016).

The Boston Bikes program seems to be aware of the social contradictions it produces. While still catering to a predominantly white and male creative class, several programs are developed under the umbrella of Boston Bikes that seek to actively include those social groups which were often underrepresented or even excluded from biking: The *Women Bike!* program was launched in order to deal with the uneven gender ratio among cyclist, particularly addressing female or gender-nonconforming riders who never learned to ride a bike or have not practiced cycling for a long time. It offers two free learn-to-ride classes led by women. Through *Roll it Forward*, Boston Bikes tries to distribute bicycles among the city's low-income residents, because the initial purchase of a bike could be too big a financial barrier. According to its own statement, the city has distributed around 4,400 bikes since the start of the program. Additionally, the program offers bike safety workshops for program participants. The *Youth Cycling Program* offers workshops to students at school grades 2 to 12, teaching them how to bike safely. Around 35,000 kids and young adults have participated in workshops so far. Furthermore, the city offers subsidized *Hubway* memberships for low-income residents, shifting the annual membership costs from 85 to 5 USD and the time frame for free use rises from up to 30 minutes to up to one hour (Boston Bikes 2017).

With bicycling making up roughly two percent in the modal split (Boston Transportation Department 2015), the success of the city's efforts appears to be rather modest in terms of cyclist numbers. When confronted with the seemingly low impact the program has had on the number of cyclists, a city official responded:

It's also about getting the next generation to bike, which is something else that Boston Bikes has worked really hard on. (Interview, 06.01.16-A)

Even though the number of cyclists in Boston is not yet significant enough to argue for a fundamental change in Boston's modal split, the Boston Bike program has successfully transformed the city's former negative image in relation to cycling. Only recently, *Bicycle* magazine announced Boston to be one of the most "bike-friendly" municipalities in the US (Dille 2016). Although the image of Boston has improved from the perspective of cyclists, the small increase in ridership demonstrates that various communities throughout Boston do not benefit from the program.

#### 4. Cycling along the social divides

##### 4.1 "Cycling is part of an eco-system of creative people and buzz and young people and art"

A repeated issue that came up during the interviews was that a certain demographic ('young talent', 'creative talent', 'millennials') prefers not to be dependent on the car or, sometimes more particularly, prefers to live in cities with good bike infrastructure and strong bike culture. Furthermore, cycling and bicycle infrastructure are considered to be indicators for good quality of living and progressiveness. Investing in modes of transportation like biking or walking as well as making streets more livable would thus help to attract and retain a certain kind of demographic in the city. The following passage from an interview exemplifies this attitude:

[P]eople who do have choices [where to live] see places that support bikes as being the kind of places they want to live in, even if they aren't biking. It's part of an eco-system of creative people and buzz and young people and art. [...]. [T]o see bikes, biking, to see a cool bike rack is a sign that you're in a certain kind of neighborhood, a certain kind of city. (Interview, 06.01.16-A)

There seems to be no doubt that the bicycle goes beyond its function as a means of transportation. It serves as a signifier for an urban culture that strives for livability, vitality, density, and proximity. It thereby runs the risk of being involved in a vision of economic development that benefits from the favorable image of biking. As *Stehlin* concludes, "[...] bike culture has become intertwined with accumulation strategies that capitalize on the framing of cycling as one commodity among many which make up the lifestyle of livability" (2014: 35).

The notion of good urban planning and a thriving, livable city is presented as intertwined with population growth and economic progress. In this context, bicycling is intended to contribute to creating a place that attracts not just new people, but also employment opportunities and economic improvements. Furthermore, there is an unmistakable connection between bicycle mobility and a progressive, creative, and economically innovative environment.

I think investing in bicycling is an investment in your residents, [...] in creating a place that feels like a city, where, yes, new people are going to move and yes, new jobs are going to come. And yes, this is a place where we're coming up with new technology and new innovations. (Interview, 06.01.16-B)

This was contrasted by voices from advocacy and administration which claimed that Boston already has a unique ability to attract the 'creative class' because of its extremely high density of higher education. The resulting availability of college graduates would make it unnecessary to particularly target educated young people as residents for the city. As a leading Boston Transportation Department official put it during the interview:

[Promoting cycling] is a way of making a place more livable. I think that it no doubt can sort of retain talent [or] attract talent. [...] I'm not a giant believer in the Richard Florida research, but maybe it's also because I live in a city that has thousands and thousands of college students already. [...] So we already have tens of thousands of the creative class. (Interview, 11.02.16)

On a different note, some interviewees stressed that Boston had to invest in bicycling in order to prevent a transportation crisis due to a dilapidated public transportation system, steady population growth, and a street grid that already fails to cope with automobile related transportation. Traffic jams and infrastructure in need of repair demonstrates that it is already difficult to manage the transportation system in Boston. If Boston as a city doesn't reduce its share of automobiles or promote other modes of transportation, it is unclear how functional the city could be in the long run.

### 4.2 “Traditionally transportation investments have gone to some communities, not to others”

Boston is not just facing a significant population growth, but also increasing property values in various parts of the city. Consequently, there are strong concerns about affordability and displacement in many neighborhoods (Bluestone et al. 2015; Loth 2016). Bicycle mobility becomes part of this discussion on different levels. In many interviews, a concern for bicycle-related gentrification was expressed, although this topic is discussed less openly in Boston than in other cities. The city of Boston does face criticism for focusing their bicycle infrastructure improvements on wealthier neighborhoods (Rios 2016) and for upholding patterns of an unequal urban development. In response, city officials working in the field of biking argued that their small budget for bicycle investment would make it hard to undo years of uneven investment in different neighborhoods. Following another line of argument, they stated that the focus of improvements for cyclists in wealthier parts of the city was unintended and pragmatically based on factors like density or proximity to downtown. Interviewees who work for or with the city administration acknowledged this imbalance, but offered different explanations for this situation. One of them was of a financial nature, arguing that it was difficult to overcome this pattern of imbalanced public investment.

My feeling is that traditionally transportation investments have gone to some communities, not to others. And that bicycling, the bicycling program, the money that it has, is not enough to overcome decades of neglect. (Interview, 06.01.16-B)

A second explanation that came up was the idea that the city installed more bike facilities in wealthier neighborhoods rather unintentionally by picking the ‘low hanging fruits’ first. Following this line of argument, the density of various places and/or their proximity to the city’s downtown would make some neighborhoods more suitable to install bike facilities.

I think in our city [...] the places where we probably invested more in bike infrastructure have been in places that are in our densest areas, the places that are most proximate to downtown and consequently are places [...] where there are higher property values. (Interview, 11.02.16)

Another point of criticism was the uneven expansion of the *Hubway* bike share. Just recently the city has taken efforts to expand *Hubway* into parts of Roxbury, North Dorchester and East Boston. These are all neighborhoods that are relatively centrally located but historically underserved, with higher proportions of people of color (Herndon 2016). It appears that there is some pragmatism involved in setting up stations in the city center, since dense and highly frequented areas are more likely to reach a desirable number of users. Moreover, a station-based bike share scheme makes it necessary to take proximity between stations into account when it comes to the question of where to set up new locations for rental stations. However, this can only partially explain an uneven distribution pattern in a bike share scheme. A critical reading of the situation has to take into account how those actions are reinforcing a questionable distribution of resources among different neighborhoods.

As shown, bicycling policies in Boston diverge significantly from the common image of cycling as a just form of transportation. They seem to reproduce a fragmented social landscape of transportation that has been established by traditional transportation policies in the past. While other cities seem to more explicitly attempt to target the ‘creative class’ with their urban planning policies, the city of Boston’s rhetoric concerning bicycle mobility also fits into a narrative of attracting young, educated people for economic prosperity.

### 4.3 Discussing equity questions and resistance

As previously stated, there seems to be a rather uncritical promotion of cycling in the light of economic development. This is in turn related to attracting certain desirable demographics. As a result, questions about equity connected to bicycle planning have increased in importance. The installation of bike infrastructure has been progressively discussed in the context of social disparities in different neighborhoods. During one interview, a public administration official stated:

There’s also a real concern about gentrification and what that means when you do get that bike lane. Does that mean that suddenly no one can afford to live in the neighborhood anymore? And while I am not sure that bike lanes are the causation of gentrification they’re definitely part of a whole sweeping change that happens in cities that can be perceived as negatively impacting current residents. (Interview, 06.01.16-B)

As stated by *Stehlin* (2014), who addresses this issue more directly, the new developments in bicycling are intertwined with current processes of gentrification. This is especially visible in more peripheral parts of the city, where bicycle infrastructure is “more likely to follow, or even lead, gentrification” (*Stehlin* 2014: 30). Concerning the connection between bicycling and social inequalities, Washington Post journalist *Emily Badger* points out the unclear causality between the two phenomena: “In whichever order events occur – if the new bars or the bike lanes come first – the two have become awkwardly linked” (*Badger* 2016: no page given). *Badger* further states that low-income residents worry about the effects new bicycle infrastructure has on their neighborhood and its affordability. On the other hand, if improvements are made *after* redevelopment took place, citizens ask themselves why this change did not happen before the demographics of the neighborhood altered (*Badger* 2016). Both cases can have negative implications. “By focusing construction on the most intense flashpoint of gentrification, the bicycle network reflects and reproduces the city’s transportation injustices in terms of class, race and geographic isolation” (*Stein* 2011: 37). This causes great concerns about the systemic racial discrimination that comes along with this “just” mode of transportation. Paradoxically, this is particularly the case in places that have been lauded for their progressive and sustainable European-style bicycle planning by many, among which are New York City, Portland, Oregon, and Boston.

## 5. Conclusion

As the present article demonstrated, bicycle mobility in the US has become highly intertwined with discourses around social fragmentation and economic prosperity in cities. In the context of Boston, the investment in bicycle mobility proved to be driven more by economic or political pragmatism than concerns about sustainability or equity. This decision could be motivated by a desire to attract a young, mobile, and ‘creative’ workforce for which good biking infrastructure is appealing. Bicycling was also promoted as a way to counteract difficulties the city is facing with the current transportation system, or in anticipation of the difficulties which a growing city might face in the future.

The findings show that investments in bicycle mobility are not evenly distributed among all neighborhoods. Rather, generally wealthier neighborhoods

appear to have received more attention. This might be in line with a more general pattern of an uneven distribution of resources in cities. However, the findings also suggest that investments in bicycle mobility in Boston have become intertwined with discussions about neighborhood affordability and gentrification. Even though the Boston Bikes program tries to challenge the current image of cycling in the city, biking is still perceived to be linked to a privileged population.

In order for bicycling to live up to its potential as a holistically sustainable mode of transportation, the conversation about the social dimension needs to be deepened. The recent considerations by *Golub et al.* (2016) concerning what they call “bicycle justice” are a first – and hopefully impactful – start. When scholars notice an uneven distribution of public resources in the field of cycling, this might be symptomatic of more general patterns of inequality, rather than an isolated phenomenon. The question of the relationship between bike infrastructure changes and gentrification processes needs to be empirically investigated further. This issue leads to a much broader and pressing question: How can a city government improve the built environment in historically underserved neighborhoods without fostering social fragmentation and social exclusion? This is a question which is not only relevant in the US, but which could be asked in a European setting as well.

All in all, the case of bicycle mobility in Boston shows that seemingly sustainable means of transportation do not automatically contribute to more socially just or environmentally sustainable urban transportation. It is crucial to consider how policies promoting these modes of transportation are politically conceptualized and implemented. Otherwise, the promotion of ostensibly sustainable transportation will simply serve to exacerbate existing inequalities.

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