Challenging the 'King of the Road' - exploring mobility battles between cars and bikes in the USA

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ABSTRACT

This paper is explorative in both theoretical and empirical terms. Theoretically the paper explores the potential of merging and including 'assemblage theories' into mobilities research. Empirically the paper explores the battle of mobilities between bikes and cars in the USA. With the bicycle as an emerging alternative mode of mobility in American cities, there is a call for a re-evaluation of the automotive dominance of the street. The bicycle is often presented as the 'caveman' in the history of urban mobility, though some scholars argue it ought to have a more constitutional role in contemporary mobility practices (Furness 2010). In a contribution to the repositioning of the bicycle, the qualities and positive impacts of bicycling on urban life are discussed (Jensen 2007, Petersen, 2007). Repositioning and reevaluating the car in American society implies examination and discussion of the main ideas and discourses that led to its status as the 'King of the Road'. This paper theorizes this theme through a framework that includes both cultural and social agents (Jensen 2010), as well as infrastructural networks and systems (DeLanda 2006, Latour 2005, Farias & Bender 2010). The emerging '*Biking Assemblages'* of American cities are related to the existing hegemonic systems, norms, and practices related to the car. This paper contains empirical field studies conducted in the city of Philadelphia, USA where the ongoing dispute between car-drivers and bicyclists, in news media termed 'bike wars', will be examined. Issues of planning practices, law enforcement, power, cultures, and material design practices will be involved as the paper explore the changing practices of the US mobility battle as a window into the debate on future mobility practices.

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1. Introduction

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The paper is structured into five parts. After the introduction in part one, we present the theoretical framing termed 'Biking Assemblages'. Hereafter we connect in more detail to newer academic research done in the US in section three. In section four, the empirical case from Philadelphia is analyzed based on the background of the framing, and in section five we make a few concluding remarks.

3. Mobility and 'biking assemblages'

Mobility in the sense of physical movement of humans, goods, information, capital, symbols etc. can hardly be underestimated in relation to the contemporary city, or put differently; circulation is a paradigm of modern urban life (Hård & Misa 2008:10). A city cannot be understood if it's external (e.g. motorways, internet connections, airport connections or waterways) as well as its internal connections and networks (e.g. ring roads, bike lanes, light rail or subways) are excluded from the analysis. The networked connectivity is a key feature not only of an urban agglomeration's functional transport system but equally important as a key feature of its urban culture. Such a framing takes its point of departure in a 'relational and mobility-oriented sense of place' (Jensen 2009). This means that a place (and a city) must be comprehended in its relative placement within a network of flows of goods, people, cars etc. Thereby the

city is defined by its relational coupling or de-coupling to a network without fixed scale. As Henri Lefebvre already had pointed out; even a house in all its static majestic singularity is only truly comprehended if we include the manifold flows of light, electricity, water, sewage systems etc. (Lefebvre 1974/90:92-93). Such a point of departure is inherently related to a number of key positions within human geography and mobility studies. From the relational sense of place seen in Cresswell (2006) and Massey (2005) to the socio-technical systems highlighted by Latour (2005) and Farias & Bender (2010) over the network city analysis by Castells (1996) and Graham & Marvin (2001) to the explicit mobility theory in Adey (2010), Elliott & Urry (2010), Jensen (2009), Sheller & Urry (2006) and Urry (2000, 2007) these all converge into a perspective of a 'relational and mobility-oriented sense of place'. In an earlier analysis of urban Metros Jensen point to the perspective of 'assemblages' for understanding metro mobility:

> '…. trains, trails, stations, platforms, escalators, metro staff, travellers, signs, commercials, musicians, homeless, police force, tickets, ticket machines, power supplies, news paper stands, coffee shops, customers etc. are assembled into socio-technical systems producing the lived mobility of metro travellers in London, Paris and Copenhagen. The specific assemblage within the socio-technical system is 'what makes metro mobility' by means of sorting, filtering, circulating, and orchestrating mobilities' (Jensen, 2008:19)

In a similar way we argue that 'biking assemblages' are created of multiple different entities making up 'networked ecologies' which according to Varnelis is:

> 'a series of co-dependent systems of environmental mitigation, land-use organization, communication and service delivery … [being] networked, hyper-complex systems produced by technology, laws, political pressures, disciplinary desires, environmental constraints and a myriad of other pressures, tied together with feedback mechanisms' (Varnelis, 2008:15)

Seeing infrastructures as 'networked ecologies' and assemblages points toward a new way of contemplating and conceptualizing the multiple systems and networks creating the contemporary city. In the words of architectural scholar Keller Easterling, we may argue that infrastructures should not be understood as technical systems alone:

> *'While infrastructure typically conjures associations with physical networks for transportation, communication, or utilities, it also includes the countless shared protocols that format everything from technical objects to management styles of the spaces of urbanism – defining the world as it is clasped and engaged in the space of everyday life. Infrastructural space is, as the word suggests, customarily regarded as a hidden substrate – the binding medium or current between objects of positive consequence, shape, and law – yet it is also the point of contact and access, the spatial outcropping of underlying laws and logics'* (Easterling, 2011, 10)

Coming from such a perspective we would argue that we need to understand the complex relationship between objects and systems as well as human bodily practices. Cycling represents here an important mobility nexus of mobile bodies, infrastructural systems and networks (from bike lanes to traffic signage but also e.g. digital layers of GPS communication and social networks creating communities of practices). The practices are thus created in multiple everyday life interactions involving other cyclists, car riders,

bikes and other objects of importance to 'make cycling happening'. The socio-technical networks and the multiple assemblages (see Amin & Thrift 2002; DeLanda 2006; Deleuze & Guattari 2003; Farias & Bender 2010; Graham & Marvin 2001; Hommels 2006; Jensen, Lauritsen & Olesen 2007; Latour 2005, 2009; Thrift 2008) are as important as the embodied practices and the phenomenological perceptions of riding a bike. Petersen brilliantly illustrates the perceptions and sensations involved:

> 'Bicycling provides us with an unbuffered range of sensory experiences of the monumental urbanity we have created, and a view into the spaces of hope in its cracks, fissures, and contradictions. To bicycle through frenetic and congested cities is a work of beauty, one that can redraw the often discriminatory boundaries of neighbourhoods, redeem strained social relations, and rehabilitate a suffocating natural environment, together with the ways urban inhabitants become crippled by it. Inherently human-scaled, it is one path to an alternative understanding of the urban ... Choosing to know a place differently, in ways more expressive of humanistic value, invites a different, clear-eyed urbanity to shape the individual … Consciously seeking new perceptions of urban spaces literally changes our base of local knowledge, redirecting our attention to views not sanctioned by planners or cartographers of political and economic districts. Movement, after all, is a basic expression of freedom, and a deliberate modal choice is an essential way to claim that freedom –a basic right to the city ... Travel by two human-powered wheels is an active choice to encounter urban elements that often go unnoticed and unappreciated by people of privilege. To commute by bicycle, for example, is a choice to breathe in the dangers of diesel pollution, which the city's poorest dwellers take in by design. But such a choice also, ten minute hence, gives access to a completely unfiltered and breathtaking view of a quintessential monument to modernity – the Brooklyn bridge – stretched out in masoned extravagance. And what is more precious than to be treated, on a late night ride along the Hudson River, to a private showing of lights reflecting in the water from tall buildings on the palisades of the opposite bank, while sailboats rock in the river's currents? Cycling also promises encounters with pedestrians and other cyclists. Greetings and reassurance, not glassed in by power windows or drowned by the noise of idling engines, can replace the sometimes violent spatial competition that plays out between travellers who move by other means' (Petersen 2007:37-8)

Patton further adds to this a sensitivity to the before mentioned networks, objects and assemblages thus arguing for an understanding of biking as related to a particular 'subject position' creating a mobile identity wedded to the practices of cycling:

> 'Bicycling is a form of life in that the relations between the equipment, infrastructure, and people's practices shape what is socially possible. Getting someone on a bicycle creates the possibility of that person seeing the city as a cyclist. Unfortunately, the "view from the saddle" is often ugly: most city streets do not adequately support cycling and safety is the major obstacle for those who are otherwise willing to ride. While economically inexpensive, bike lanes are politically expensive because they require the reallocation of roadway capacity on streets with finite rights-of-way' (Patton 2004:18)

Delanda argues that 'assemblages' are noticeable by their external relations (DeLanda 2006:10). This means that the elements of the 'assemblage' must be understood as relatively autonomous and in

principle being able to be substituted with other elements of a network. According to Elliott & Urry assemblages are relational and instable complexes of objects and human agents (2010:14). So we would claim that there exists such a thing as a 'biking assemblage' comprised by multiple social interactions, bodily sensations, material systems, solid objects, and infrastructural networks. Any given 'biking assemblage' is scalable from the local block up to the region, or even across states such as we find it in the 'East Coast Greenway' bike path (Jensen 2007). It is important to understand that 'scale' is not an inherent and fixed dimension to a network, but a socially variable construction enforced by the various engagements that social agents afforded by the system. This furthermore means that a 'biking assemblage' also includes cultures, values, and norms. This stretches from the way routing and rights of way negotiation engages with the political context of the given case, to the underpinning rationalities of what biking is all about, regardless of whether biking is seen as a mundane social practice, a recreational activity or a political manifestation. We claim that all three rationales are in play and we shall return to them in the next section. Here it is important for the point of defining 'biking assemblages' that it is not solely a material or physical entity. The values inscribed into the design and the materiality of the assemblage is as important as bike paths, curbs and wheels. The power issues and the attempts to enforce certain decisions and marginalize others also becomes part of the 'biking assemblage' as the making of cycling (as most other human practice) became a contested field from the very beginning. Most importantly perhaps is the understanding of how objects and subjects, society and technology, nature and culture cannot be kept separate in this perspective. If you take away my bike I cease to be a cyclist but I equally changes as a cyclist if I have a predominantly recreational understanding of my practice as opposed to an everyday life mobility perspective or a political agenda. The particular makeup of a 'biking assemblage' is thus the field of investigation that we will engage with in the section containing the case study. Before we get to there though, we will move closer to the particular sets of norms and cultures characteristic of the biking assemblages in the US.

4. The "Right of Way" and Mobility Practices in American Cities

The late nineteenth century saw a revolution of mobility. Sociologist John Urry describes how the bicycle paved the way for the car in the late nineteenth century. The mobility culture at this time was mainly built upon the railway, which emphasized machine-speed, punctuality and clock-time. The bicycle freed cyclists from the punctual timetables and fixed geographic locations of the train stations. It generated a sense of liberation and autonomy. The bicycle provided similar benefits as those of horse-based travel, the unrestrained movement, but also a desire for speed and setting new records (Urry, 2007). According to Zack Furness, recent studies of automobility compliment the impact of the bicycle on contemporary mobility culture through history, but fail to adequately account for cycling's intersections with automobility practices. The bicycle's role in automotive history is typically described as the 'caveman' in human history, reduced to an anecdote in evolution. Although, there are examples of historians crediting the bicycle for paving the way for the car, stating that the bicycle revealed a desire for personal transportation which led to the "automotive idea": the individuals' awareness of possibilities of long-distance, individualized travel. Instead of perceiving the bicycle as an influence and anecdote in the history of automobility, Furness seeks to reposition the bicycle as the point of origin for automobility in its most rudimentary form. As he states: "Bicycling, in other words, was the first mode of transportation to clearly articulate the idea of autonomy and personal mobility to technological practice." (Furness, 2010: 16). The bicycle should be considered, in the past and in the present, a "freedom machine" (Furness, 2010: 16).

In the beginning of the twentieth century the car was perceived as a mechanical beast threading through the normal mobility flows of everyday urban life. Not only was this common public opinion, but even the courts judged that pedestrians had an implicit right to the streets in cases of accidents. The rise of "Fordism" and with that the Ford Model T generated economic opportunities. The financial and political elite's desire for luxury goods made it easy for the growing car industry to push for including cars and adapting infrastructures in American cities to car use – largely undermining the public transportation and ignoring public opinion. The automobile industry made a deal with mass media too, by buying a large amount of advertising space in publications in return for the magazines and newspapers printing automobile friendly articles and propaganda for automobile advocates organizations like the American Automobile Association. The symbiosis of interests in automobility and the mass media created discourses for reconstructing the urban landscape socially and physically. A new rhetoric emerged in this symbiosis, including the notion of the "jaywalker" linking the pedestrian to a hillbilly, who did not know proper behavior in the streets of a city. Through these kinds of rhetoric and discourses, advocates for automobility attempted to sway urban dwellers to comply with new norms and rules to discipline the pedestrian mobility. This redefined the city streets as "mere corridors for the automobile, as opposed to mixed-use environments for pedestrians, trolleys, and other vehicles" (Furness, 2010: 49). One might argue that the bicyclists and the pedestrians were highest in the hierarchy between modes of transportation in the early twentieth century. But massive car advocacy generated an increasing interest in the car resulting in former bicyclists replacing their bicycles with cars as the preferred mode of transportation. By 1941, the bicycle was no longer a dominant mode of transportation, 85 percent of the bicycles produced in the US at this time were toys for children (Furness, 2010).

The 1920's and 1930's saw a social reconstruction of the urban space in American cities. The planning practice turned away from the bicycle and public transportation and towards the car. A discourse on the future automobile cities emerged, especially seen in Norman Bel Geddes futuristic exhibitions like General Motors "Futurama" and Shell Oil's "City of Tomorrow". Exhibitions like "Futurama" would show a vision of large, high-speed road infrastructures, all in concrete similar to the visions of Swiss architect and planner Le Corbusier (Le Corbusier, 1967). The exhibitions were designed to fascinate and amaze people with their futuristic and technological aesthetics, and they clearly persuaded the corporate-friendly US government at the time, which presented highway plans to the public in 1939 and 1944. These plans however, largely ignored Norman Bel Geddes' recommendations not to design for cars within city limits. In urban areas he advocated metro systems and other means of public transportation as boing more efficient. One example is Robert Moses' vision to transform New York City into a driver's paradise, a strategy stridently critiqued by urban planning debaters like Lewis Mumford and Jane Jacobs. In 1963, Lewis Mumford wrote:

> "The motorcar shapes and forms. Mutilates and deforms might be better words. We have the naïve belief that we can satisfy the demands of the automobile by building more expressways, building bigger expressways, by widening existing streets, by trimming sidewalks. We are exchanging the meaningful and varied life of the cities for our increasingly monotonous life on wheels. The heart of the city should be served chiefly by rapid transit, buses, taxis and above all the human foot. The choice is clear and urgent: Does the city exist for people, or for motorcars?" (Mumford in Furness, 2010: 53).

Especially the last statement is interesting as a relevant question not asked in the urban planning of American cities, exemplifying a lack of critical thinking about the car. Jane Jacobs criticized the practice in another way, critiquing the planning paradigm as a whole and the lack of larger scale planning tools (Jacobs, 1961). In the United States urban scholars Jacobs, Shumacher and Illich formed a trinity for bicycle advocacy, collecting arguments from their respective fields of studies. Illich wrote "Energy and Equity" examining the high speed and minimum space consumption the bicycle provided. He critiqued the automobile for its demands of time and space, claiming, that the bicycle gave the freedom of movement without decreasing the mobility of others. It provides the cyclist with the ability to create new relations between his life-space and life-time. Illich concludes: "The advantages of modern self-powered traffic are obvious, and ignored." (Illich in Furness, 2010: 66).

The 1970's saw a change in bicycle advocacy, when expert bicycling instructor John Forester presented the "vehicular-cycling principle" – a new approach to velomobility. Forester claimed that bicyclists did not need special facilities and infrastructure, but training and knowledge on how to ride a bicycle. Bicyclists would then be treated like automobiles and should act like drivers of vehicles. Some bicycle advocates saw potential in this approach to remove what they called badly designed and dangerous bicycle infrastructures and a way of defending bicyclists' vehicular rights. The vehicular-cycling principle gained popularity within municipalities and governmental institutions because of its economic benefits – it demanded no investment in bicycle facilities and infrastructures. Through the 70's and 80's the principle suppressed the development of bicycle infrastructure, which studies indicate would have increased the number of bicyclists. Furness credits Forester for his advocacy for bicyclists' vehicular rights, but departs from Forester's notion of "cyclist-inferiority superstition" – bicyclists' "phobia" of cars and the belief that separate bike paths decreases bicyclists' safety. This view is based though on Forester's personal experiences, ignoring academic research in the field and his assumptions are largely critiqued by transportation researchers and bicycling advocates (Furness, 2010).

Powerful car manufacturers and a corporate-friendly government, providing large scale highway plans, building codes and zoning laws supporting automobility, were some of the main factors making the car the "King of the Road". Though ideas of hybrids and alternative modes of transportation did emerge and despite urban scholars' and planners' warnings about the negative effects of cars on cities, the car eventually became the dominating and preferred mode of transportation in the United States.

From an earlier analysis of cycling in the US Jensen concluded that from the point of departure in Danish cycle culture one might stipulate that there are (at least) four fundamental motives and rationalities behind biking (Jensen 2007: p20):

1. Recreational practice
2. Everyday life mobility (e.g. Commuting)
3. Identity marker
4. Political statement

Danish mobility culture contains more of the first three than the fourth. Not so much due the lack of political interest in the culture of biking, but due to the fact that most Danes have a bike and that quite a

substantial number of them ride their bike for either recreational or everyday life mobility reasons. From a very early age, not just having a bike, but actually using it as an integrated part of daily life is common practise. The third dimension of the cycle as a marker of identity construction relates immanently to the everyday life practices, and might be said to be tacitly and unreflectively present amongst many Danes. Yet it still seems important to point this out since the way people chose to move is a reflection of their understanding of self and others as much as it is an instrumental act of movement in space. In the words of Thomsen:

> 'Bicycle riders represent a part of Danish transport culture that everybody might use. Still, compared to car usage, cycling symbolizes the limited financial means of the user and their larger awareness of and interest in their body, in exercise, and in nature' (Thomsen 2001:275)

This research into biking in America seems to suggest that the recreational and the political dimensions are much more profound. That is to say, Americans use bikes either mainly for recreational purposes or they make political claims and statements by these mobility practices. This may well be thought of as a tentative hypothesis rather than a solid and verified piece of empirical knowledge, but it seems to be supported by Pesses in his research on cycling in America:

> 'Bicycle touring has existed in Europe since the Industrial Revolution … American workers did not take to this form of recreation so quickly, and it wasn't until the 1950's that bicycle tourist organizations began to form. This cultural difference is reflected in the bicycle industry' (Pesses 2007:2-3)

However, it seems instructive that the cultural awareness and practice of biking start out from a rather different set of values, principles and norms. The interesting thing is whether there is in fact a 'cultural shift' under way. If this proves to be the case, a slow but gradual reversal of the hierarchy towards the inclusion of the second dimension of bike culture namely that of the everyday life mobility should be expected.

Taking our cues in this potential shift we will now turn toward the case of Philadelphia and engage with issues of bike planning and mobility design in this context in order to explore how 'biking assemblages' are being constructed as well as contested.

5. Philadelphia biking – case

This part is based on field research and observations conducted in the city of Philadelphia from September to December, 2010. The field research consists of observations of everyday mobility practices, analysis of hierarchies between different road users and evaluations of signage and physical design solutions from the perspectives of different road users.

Philadelphia is a typical American City in the sense that bicycling is an emerging alternative mobility and visionary politicians and groups of citizens advocate bicycling. Though advocacy for bicycling is one of the strongest in the United States, the opposition is persistent, which has led to a battle of mobility. The streets of Philadelphia are the scene of disputes between road users, some might even call it a 'war'. To further analyze this war, the main two actors' behavior in the everyday traffic war arena must be analyzed. As this dispute or war is not only taking place on the street but also in newspapers and cyberspace, often arguing from either the car-driver's or cyclist's point of view, there is a call to try to state the problem in

neutral terms. This implies a critical evaluation of the road users' behavior to dissociate from the discourse of accusing or framing other road users of being the troublemakers.

Certain tactics and practices are attached to every road user, some are legal and some follow more pragmatic, and in many cases, illegal approaches. It is worth acknowledging that these practices do not apply to every individual using the mode of transport in question, but are dependent on various parameters such as demographics, the individual's situation and destination, his or her "mobile withs" (Jensen 2010) and so on. Time is also a parameter as being late for a meeting might for example encourage a cyclist to ride on the sidewalk in order to save time; a practice that might not have been carried out by the individual in other situations. "Mobile withs" may influence the movement of others too, both the ones related to the individual, e.g. a friend's riding practice will influence the individual's own riding practice or a stranger, or a car driver honking his horn at another driver influencing his way of driving. It has been shown in other studies (Jensen, 2010) that individuals negotiate while on the move and that these negotiations entail the development of certain tactics. These tactics are formed according to dominance and hierarchies between moving subjects. Rather than analyzing in depth who does what and why, this glance at mobility practices in Philadelphia has the purpose of stating that these practices and tactics are common in the street arena and crucial parameters in the ongoing dispute between road users.

As already stated, the road users will be very briefly analyzed, beginning with the cyclists. Bicycling in Philadelphia is a practice that in some cases seems to rely on improvisation rather than following traffic legislation, signs, or the intentions of city planners. This includes running red lights, riding on the sidewalks, riding the wrong way on a one-way street, crossing lanes in front of cars, and more. A popular riding practice in Center City seems to be zig-zagging your way between cars to get to the traffic light ahead. This hazardous riding practice seems to not only intimidate pedestrians but also other cyclists. Some cyclists will look to the sides when crossing a green street light, perhaps to look out for other cyclists running red lights. Whether these attitudes and riding practices are due to the cyclists seeing themselves as "rebels" by riding a bicycle or performing an urban sport that gives them amusement will not be discussed in this project.

Another major player in the everyday mobility scene is the car. One major issue observed is car-drivers lack of respect for the painted bike lanes. Cars are often seen parked in the middle of the bike lane, forcing cyclists to enter the car lane. Moreover, cars will often enter the bike lanes in front of cyclists, e.g. when making a right turn. Another issue is car-drivers unwillingness to yield to other road users. In many cases cars will not yield when making a right turn. This is the case when making a right turn while a bicycle is right next to them, the car will then block the way for the cyclist, creating an extremely dangerous situation. The same is observed with cars at pedestrian crossings. Cars are observed turning at high speeds right in front of pedestrians causing pedestrians to stop abruptly, obviously being shocked and intimidated by the car-driver's behavior. The action is even in some cases emphasized by honking the horn, as if to somehow mark territory. The honking seems to be a common way of demonstrating power, as this is also often experienced by cyclists, sometimes even unprovoked. Much of this behavior can be explained by the fact that the car-driver, is an assemblage of technical and human components, half human half machine. Other explanations are found in the car-drivers being prejudiced as a result of the news media's portrayal of cyclists. Another explanation could be the almost complete lack of presence cyclists have had in the American urban environment over the past many decades, and an ensuing driving behavior that has developed from being the only 'king' in town. Experiences of North Americans driving in Denmark has indicated that it doesn't even occur to them to look for bikes while making right hand turns across bike

lanes because meeting a bike as a presence in driving space is not a situation that often occurs. The challenge to ownership of the road and thereby the potential for the awareness of other users and the possibility of sharing is not always consciously considered.

Narratives of bicycling in Philadelphia describe the arena as rather harsh. One cyclist describes how he got into a fist fight with a driver. He was riding his bicycle in the bike lane when a driver yelled at him, telling him to get off the road. The cyclist yelled back, that he was in the bike lane. His reply provoked the driver who then cut off the cyclist's path by stopping in front of him in the bike lane. The argument continued on the street, the cyclist describes the driver as very aggressive and eventually punching him in the face before getting back in his car fleeing the crime scene. This was not the only intimidating situation for this cyclist, on another occasion a driver pulled a gun on him. (Philadelphia, 2010).

A widely spread argument against bicycling in the Philadelphian debate seems to be that all this new bike infrastructure only benefits a small group of citizens (Philadelphia, 2010). Some drivers describe sitting in their cars in a traffic jam and only seeing a bicycle go by every 15 minutes (Fox, 2010). In this context it is worth noting, that creating special lanes for other modes of transportation than the automobile does play a crucial role in drivers' reflection over and evaluation of their mode of transportation. Scholars of transportation research have shown, that being stuck in traffic in a car while watching others rush by in bus-only or bike-only lanes does have a significant effect on the choice of mode of transport. In other words, the car-driver frustrated by the traffic jam realizes the benefits and time saved by riding a bicycle instead of driving a car (Næss, 2006). Hence, though the numbers of bicycles might not be impressiive at the moment, these redesigns of the streetscapes are, according to transportation research, crucial to make more people cycle. In fact, it would be reasonable to argue that they are a necessity to make more people cycle. This effect is thus also evident in the case of Philadelphia, where adding bike lanes on Spruce and Pine Street has increased bike ridership by 65 % and decreased car driving by 11 % in peak hours. The municipality also states that bike lanes are supported by 60 % of the citizens (Philadelphia, 2010).

Biking Assemblages in the Case of Philadelphia

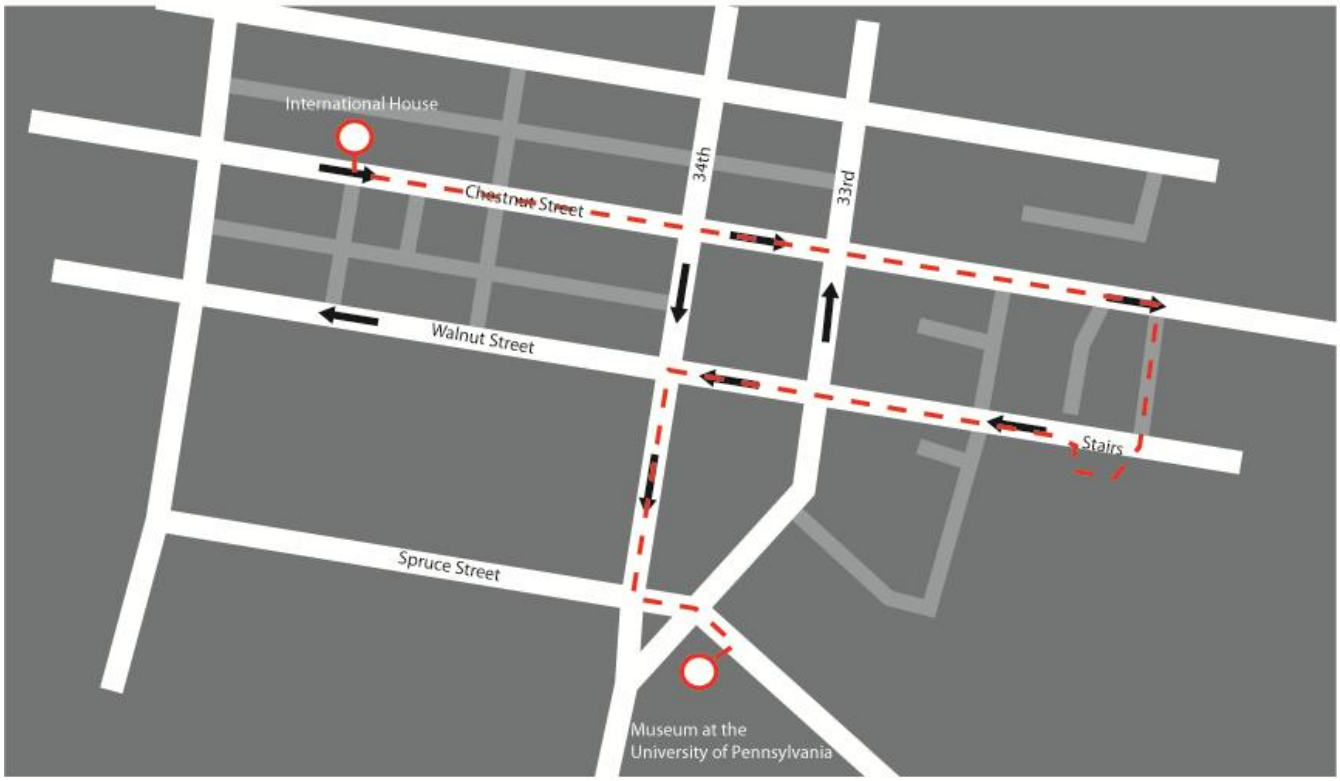
Typical bike lane design in Philadelphia

In part 2 it was stated, that the notion of "biking assemblages" is scalable from e.g. a local block to a region. It was also discussed how values, cultures and norms can be included in the assemblages. This section of the case study will look at "biking assemblages" in relation to bicycle infrastructure and design practices of such in the streets of Philadelphia. With a point of departure in the organization of space in the streetscape and physical design practices regarding curbs, lane widths and signage, the discussion will elaborate on the physical design solutions' impact on mobility practices, culture, education and politics, and vice versa. The need for implementing "biking assemblages" and thinking holistically about street design is thereby sought articulated.

The most common solution to incorporate bicycles in the streetscape is to paint five feet wide bike lanes on the road between street parking and cars passing by on the other side (see illustration above). There are a number of issues with this solution. One cyclist describes his tactic of "riding the line". This implies riding on the edge of the bike lane right next to the cars passing by. This tactic is used to avoid what is referred to as the "door-zone", the zone where people get out of their parked cars in the right side of the bike lane – a zone that has proven very dangerous for cyclists because drivers are unaware of them as they get out of their cars. "Riding the line" minimizes the risk of hitting an open car door, but it implies getting yelled at by drivers and getting intimidated by them driving close to your bicycle. Another issue stated by citizens of Philadelphia is the situation where a car needs to make a right turn and therefore has to enter the bike lane, sometimes in conflict with a bicyclist. Cyclists also mention the problem with cars parked in the bicycle lane and the incoherent bike lanes; sections of the roadway suddenly missing bike lanes as you ride along them (Public Meeting 2, 2010). One might also critique the bike lane design from a bicycle phenomenological perspective. How does it feel for the bicyclist to be squeezed in between parked cars

with a deadly door zone and driving cars on the other side in a five feet wide corridor with no physical boundary between the cars and the bicyclist? One suggestion from city planners to make bicycling in Philadelphia safer is to increase the awareness of bike lanes by highlighting them with color. By painting a bike lane green, car drivers will surely generate awareness of the lanes, but is this enough? Another approach seen in the city is to place flashy signs telling bicyclists and drivers to obey the law and stay off each others' lanes. The authors are unaware of any statistics proving the success of this approach, but given the severe character of bike wars already stated in this project, signs lecturing people to obey the law or painting the bike lanes in a different color might seem inadequate tools. Although it is probable that these initiatives might generate some awareness and demonstration of authority, it seems more drastic changes to urban planning and urban design are needed. However, even good urban planning and urban design solutions might not be enough to solve these issues. As "biking assemblages" implies, including values, cultures and norms, issues of better education, increased law enforcement (as breaking the law related to bicycling and driving is very rarely fined in Philadelphia (Philadelphia, 2010)) must also be addressed. Concerning education, awareness of, and yielding to, bicycles could be incorporated in the drivers' test addressing the problem of unawareness of other road users or "mindlessness" among North American car drivers mentioned above (this ties into the "mindlessness" issue discussed in the first part of this case study and implementing police bicycling test for school children as the example from Germany and other European countries are useful initiatives (Green Mobility, 2010).

Riding One-way Streets



Map of route

To exemplify the challenge one-way streets pose to those on a bicycle, I[1] will try to describe a bicycle trip from International House to the Museum at the University of Pennsylvania in Philadelphia. To start off with

[1] Observations made by co-author Jacob Bjerre Mikkelsen

I would use my mental map to try to plan the route to the museum. Not remembering the exact address and not having a map, I used the nearby landmarks on my mental map of the area. The Irvine auditorium, which architecture impressed me on one of my first days in town was one landmark. The football stadium, where I had my first taste of American sports with my friends was another. I also remembered it was close to the river, so it should be close to Center City. I remembered walking there with my colleague on a street connected to Chestnut Street (my point of departure), so I aimed for this street.

As I went down Chestnut Street, I passed the first one-way street (34th) and came to remember that the street I was planning to go down might be one way in the wrong direction. My mental map told me that the museum was much closer to the river, so I decided to pass 34th street. As I approached the street I aimed for (33rd), my concern was confirmed, which generated uncertainty. I did not want to go back to the street I just passed for several reasons. Firstly, I would have to go around the block as Chestnut Street is one way too, which would demand a physical effort and would increase the time it would take to complete the trip. This would not be an issue in a car, as only the time aspect would be an issue here. Secondly, I was going downhill and as an ascent would demand more energy, continuing downhill seemed more appealing. The situation also fostered consideration of breaking the law and go on the sidewalk (as I have observed is the solution to this problem for many other people in this city). I continued down Chestnut Street and made a right on to the next road, a two-way road. Here I entered an unpleasant concrete streetscape under a road bridge, I hit a deadend blocked by road construction work. I returned the same way I came from and realized the road running above my head was Walnut Street, which could lead me in the right direction. I realized the only way to get on it was through climbing a stair, carrying my bicycle. Walnut Street led me to the one-way street I missed and the way to the museum from this point was rather unhindered.

This example raises questions about wayfinding and correlating mental maps with actual city structure in everyday mobility. One might argue that my struggles here were due to me being new in this city and therefore not familiar with the street layout and traffic pattern. But in an area like University City, this is the case for many of its residents. As many students are here for six months on an exchange student program, a two-year master degree or three year bachelor for example, the number of newcomers in this area is high. It is also worth mentioning that my example might be similar to other peoples' first experiences with bicycling in Philadelphia. The uncertainty, frustration and insecurity this trip generated may very well encourage the cyclist to consider other modes of transportation. Especially for those who are used to automobiles and trying bicycling for the first time, an experience like this might make a potentially weak motivation (perhaps based on pursuing a green life style, being tired of traffic jams etc.) disappear. The time-space of the car and the time-space of the bicycle are also crucial factors. As the detour my first mistake fostered would have been easy and relatively time-efficient in a car, the physical effort factor and the increase in travel time on a bicycle were crucial parameters in my decision making. Listing these arguments and factors is a window into understanding why a great number of bicyclists ride on the sidewalks in University City. The sidewalks in this part of the city are very wide, which might also be an invitation to some cyclists to try to share the sidewalk with pedestrians. This merely an observation and not intended to justify their acts, as theses have proven to be extremely dangerous and intimidating for pedestrians. But it does suggest that the current design of streetscapes encourages cyclists to break the law, as the saved time and energy doing so seem to overrule moral concerns of the individuals in question. There is a call for designing for bicycles and especially designing for the time-space of bicycles and acknowledging that physical effort related to bicycling is a major parameter in how cyclists move and

rationalize. In addition to this the perceived, and in many cases real, threat to the cyclist's life and limb present in existing streetscapes could provide an incentive to breaking the law – the preservation of self overriding the consequences of using the sidewalk as cycling space. Here again the call for designing for bicycles is apparent – one that relates to spatiality and perception.

6. Concluding remarks

Discourses and ideas of bicycling in late nineteenth century America showed how automobility was more a continuation and adaption of the mobility culture forged by the bicycle. The benefits and qualities advocated at that time are still valid today and continue to be adopted into contemporary academic work on bicycling. Powerful car manufacturers and a corporate friendly US government played a key role in the events that made the car the King of the Road. The automobile became the preferred and dominant mode of transportation despite urban scholars' warnings and the development of alternative modes of transportation. This paper has propounded how mass media presents bicycling as a menace and ridicules its existence, and how this conceptualization of the bicycle has a big impact on both the attractiveness of bicycling and car-drivers behavior in traffic. This paper concludes that automobility has great social and physical impact on American cities as well as on human behavior, public space and urban development.

The advantages of bicycling, disadvantages of automobility and paradoxes in the history of automobility point to a re-evaluation of the automobile's status in American cities and calls for critical thinking about the car. The introduction of "biking assemblages" and its application in street design practices shows that designing for bikes in American cities must be done through a holistic approach. Good urban design and urban planning will not be enough to succeed in increasing bikeability in the United States. Some of the many issues that need to be addressed include: who will ride the bike lanes and how will they be motivated to do so; how to increase safety through education and enforcement; the politics of changing mobility practices; and examining individual and overall urban health benefits.
This paper highlighted and addressed some of these issues. Several issues of everyday bicycling in Philadelphia were examined and critiqued, not only considering the physical structure of the road but also semiotics, politics, education and mobility practices. The character of the bike wars of Philadelphia is harsh and brutal, and the current politics and level of enforcement might not be adequate to resolve a conflict of this magnitude. This paper addressed several issues related to the current physical designs of bike lanes in the city by participant-observation and data from everyday bike riding Philadelphians. In addition, this paper underlined the larger scale problems of one-way streets in relation to way finding and the time-space of the bicycle. In general terms, the project touches upon a wide range of issues and fields of study that are all related to bicycles. Each of these issues needs to be further examined to create a comprehensive understanding of the subject.

Looking forward we would argue that even though this paper has only been able to raise a preliminary discussion of the usability of the notion of 'biking assemblages', there is more relevant research to be done. First of all we would point to the need to further theoretical explorations and theorizing of the notion in order to unfold the concept more thoroughly and coherently. This paper has only been a first attempt to launch the concept. Next we would argue that there is a need for further empirical studies in order to seek out the analytical potential of the concept and framework. This should take place at two

levels. On the one level, the usability of empirical analysis and the ways in which the concept of 'biking assemblages' may become even more operational deserves attention. Furthermore, we would argue that in relation to the specific theme of this paper there is a strong need for much more case study activity in an American context to explore the substantial conflicts and changes that are taking place in contemporary US cities. We would therefore point at the need for more research on these topics in order to come to a fuller understanding of the mobility battles between cars and bikes in the USA. In other words more research on how bikes are challenging the 'King' will be needed in the future.

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