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ABSTRACT

This article explores the phenomenon of 'bikelash', or organised community opposition to cycle lanes. Urban residents commonly cite bicycle lanes, a space on the road reserved for cyclists, as the infrastructure most likely to encourage them to cycle. Yet the introduction of cycle lanes is often controversial. This article explores the phenomenon of bikelash, asking: Why does it occur? And what are the best ways to respond to it? A critical review of the literature on 'contested' cycle lane projects is undertaken in order to explore how this phenomenon can best be conceptualised within a mobilities framework.

Introduction

Come on! .. Doesn't anyone have any real objections? (Stewart 2013, the Daily Show, on bikelash in New York City).

Popularised during the frenzy of media activity surrounding New York's bike lane rollout, the term 'bikelash' was coined to describe a perceived wave of 'angry' community opposition to new cycling infrastructure. For some, bikelash is a positive sign, an indication that cyclists and cycling are becoming a phenomenon large enough to be noticed (Goodyear 2014). For others, however, particularly those involved in the design, implementation and promotion of cycling infrastructure, bikelash can represent a depressing corrective to hopes that communities will get behind attempts to improve the 'bikeability' of their cities.

Bikelash has important consequences for the future of cycle infrastructure projects. In some cases, bikelash actually leads to the abandonment of projects and the removal of new bike lanes. Yet the phenomenon of bikelash is not well understood. Staff involved in the rollout of cycle lanes often report feeling 'surprised' by the intense, often 'angry' nature of opposition to these lanes (Duarte, Procopiuck, and Fujioka 2014; Lubitow and Miller 2013; Vreugdenhil and Williams 2013), indicating that these conflicts have not been well anticipated or planned for.

So what are bike lane objectors so angry about? Research suggests that reductions in car parking or lane space as a result of new on-road bike lanes are commonly experienced as an 'annoyance' by motorists, who are generally used to being afforded unfettered dominion over road space (Spotswood et al. 2015; Vivanco 2013). However, it appears that there are certain conditions where this *annoyance* seems more likely to translate into *organised opposition* to bike lanes: people coming together to form groups and develop campaigns to have lanes removed. In many cases, these campaigns are characterised by a 'strangely severe' emotional tone (Bruce 2015). Journalists writing about new cycle lane projects often

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express bemusement or shock at what they perceive to be the 'near hysterical' (Montgomery 2013, 240) character of these conflicts, and the ways that many objectors appear to be 'opposed to a huge range of things going beyond any potential negative impact on their lives' (Bruce 2015).

From New York to Toronto, London, Sydney and Auckland bike lane projects have provoked 'unusual scenes of friction' (Goodman 2010) on the streets and in both mainstream and social media. Yet little academic attention has been devoted to exploring the question of why bike lanes seem to inspire such vitriol, or why this strength of feeling still remains such a surprise to those involved in developing and implementing these projects.

We argue that part of the reason bikelash remains under-theorised is that modern transport planning is still wedded to a rationalist, techno-centric planning paradigm that leaves it ill-equipped to engage with the socio-political dimensions of mobility, including mobility conflicts like bikelash. This lack of engagement with the wider social context of transport needs and transport conflicts threatens the viability and sustainability of cycle infrastructure projects. Urban transport policies in general are becoming increasingly politicised (Walks, Siemiatycki, and Smith 2015). Bike lanes, argues Shaer (2011), far from being 'simple strips of pavement festooned with green and white paint', are becoming 'sponges for a sea of latent cultural and economic anxieties'. Failure to acknowledge and address these anxieties is, according to Stehlin, imbuing cycle lane debates with a 'surplus antagonism' (Ortner in Stehlin 2015, 133) that will potentially limit the expansion of cycling infrastructure. We seek to fill this important knowledge gap by providing a critical conceptual exploration of the phenomenon of bikelash using a mobilities lens.

Methodology: using a mobilities lens to conceptualise bikelash

This article provides a critical reading of the cycle lane literature using a mobilities framework. We believe a mobilities perspective, with its attention to power and 'modes of mobilised social inclusion/exclusion' (Sheller and Urry 2006, 222), and its treatment of transport as *social* behaviour, is particularly well-suited to investigating the underlying socio-cultural dynamics that cause bikelash. As critical researchers working at the interface of public health and transport planning we value the important encouragement mobilities frameworks provide to utilise diverse theoretical resources, including critical theory, discursive approaches and post-colonial theory in ways that enable us to expand our understanding of transport conflicts as complex social phenomena. Our paper contributes to a growing body of mobilities-inspired work on the socio-political dimensions of cycling and mobility conflicts (Aldred and Jungnickel 2014; Golub et al. 2016; Horton, Cox, and Rosen 2007; Stehlin 2015; Vivanco 2013).

This paper makes the case for the importance of a more expansive bicycle planning paradigm that eschews a techno-centric focus on 'build it and they will come'. Instead, we argue, what is required is an expanded science of mobility that analyses how we can engage with 'the intertwined physical, technological, social and experiential dimensions of human movement' in ways that promote and protect cycling (Vivanco 2013, xix).

We have drawn on academic and grey literature on a range of contested cycleway projects to ask how the phenomenon can best be understood and conceptualised. One of the challenges of understanding bikelash from an academic perspective is that there is currently no consistent terminology that makes it easy to identify research that touches on cycle lane conflicts. The research database SCOPUS was used to review 724 results on 'bicycle lanes' in order to identify articles that might contain relevant primary research on these conflicts. Because this research is part of a New Zealand-based project designed to assist communities with bikelash we have prioritised literature from English-speaking countries (US, UK, Ireland, Australia and New Zealand) with a similar cultural context, characterised by low rates of cycling and a relatively early stage of cycle-infrastructure development. The relative lack of experience of cycle lane development within these countries, combined with historically poor cultural acceptability of cycling, means that new projects in these countries are particularly vulnerable to bikelash.

We have called upon a wide range of relevant primary and theoretical research on social aspects of transport including grey literature on bike lane conflicts. This grey literature is important because it

brings in the voices of cycling activists, transport planners and cycling journalists, who have provided some of the most detailed accounts of the experience of bikelash and how best to respond to it.

Bikelash and the nature of conflict within modern transport planning

The nature of conflict within urban development projects has received increasing attention within planning literature in recent times (Chan and Protzen 2016; Gualini 2015), with many arguing that the character of modern political debate, and the desire to make planning processes more 'participatory' have led to heated interactions characterised by 'extensive fracturedness' and 'radical discontent' (Chan and Protzen 2016, 20). The intensity of these conflicts may be celebrated as the sign of an increasingly 'unrepressed polity' (Chan and Protzen 2016, 20); however, there is no doubt that it is also a challenge for planners, who are the professionals most often tasked with mediating these conflicts (Nolon, Ferguson, and Field 2013). In addition, the evidence suggests that the state of theory and practice within transport planning may leave planning practitioners particularly underprepared to understand and negotiate conflicts like bikelash.

Discussing a case of 'white lane fever' in Launceston, Australia, Vreugdenil and Williams (2013) comment on how surprised city planning staff were by the strength of feeling over what they perceived to be a 'straightforward' case of 'minor physical infrastructure provision' (Vreugdenhil and Williams 2013, 283). Despite the acrimony witnessed in many cities, the evidence suggests that cycling projects are still widely understood by transport planning staff to be simple, 'neutral' initiatives, delivering technological solutions to meet community needs, often at low cost compared to motor vehicle infrastructure (Lubitow and Miller 2013; Lubitow, Zinschlag, and Rochester 2016). Yet this perspective leaves transport planners underprepared to understand why people might object to these 'neutral' projects. Far from representing a 'value-free' reshaping of the streetscape, cycle lanes present fundamental challenges to existing power relationships within cities. To understand the strength of feeling involved in bikelash, we need to move beyond the notion of bike lanes as simply 'paint on pavement' to examine the ways that these lanes disrupt existing social landscapes.

Many authors have pointed to features of contemporary transport planning theory and practice that make this task difficult. Cycling and the needs of cyclists have generally been neglected by transport planners, who have traditionally held to an evolutionary view of transport that valorises automobiles (Schiefelbusch 2010). A vision of a car-oriented utopia has a long history in urban planning traditions, dating back to Frank Lloyd Wright's 1920s Broadacre City, a place where men and women would be liberated to live as free individuals. The car was seen as a critical enabler of a merged town and country life, supporting a nation of free independent farmers and proprietors (Field 2005; Hall 1996).

Modern transport planning is also still strongly dominated by a 'techno-centric' rationalist planning model that sees transport planning as a science that enables 'dispassionate' experts to identify 'correct' technological solutions to 'mathematically'-determined transport needs (Lindelöw, Koglin, and Svensson 2016; Schiefelbusch 2010; Zavestoski and Agyeman 2015). As Timms, Tight, and Watling (2014, 79) note, this techno-centric model of knowledge is often accompanied by a simplistic model of governance and power that assumes technological solutions will simply be 'implemented' by 'strong visionary leaders'. At best, Zavestoski and Agyeman (2015:5) argue, most transport planners typically show 'occasional interest in political processes that open or close doors' for their particular transport projects.

An apolitical view of knowledge and governance provides insufficient resources for understanding the causes of or solutions to mobility conflicts like bikelash. Cycle lanes are not apolitical or neutral technologies. New space carved out for cyclists inevitably represents the disruption of a real or imagined order within the existing streetscape. For some groups this reallocation of space provides important new opportunities, while for others it is experienced as a loss.

Yet modern transport planning theory and practice continues to pay scant attention to the wider social contexts and gains and losses associated with new infrastructure like bike lanes. Part of the reason for this is that transport planning as a discipline has tended to focus on practice and has been

more isolated from advances in planning theory (Lindelöw, Koglin, and Svensson 2016; Vivanco 2013). Koglin and Rye argue that bicycle planning, as a subset of transport planning, has particularly suffered from a lack of engagement with 'new mobilities' theory, with its emphasis on 'power relations, social relations, and cultural aspects of transport' (Koglin and Rye 2014, 215). A situation they argue that has left bicycle planning presenting itself as atheoretical (Koglin and Rye 2014).

This lack of engagement with contemporary theory effectively requires cycle planners to fall back on the traditional mix of economic and civil engineering theory that has long been the foundation of modern transport planning. These theories at best reduce social life to a set of basic inputs that can be entered into demand modelling exercises; and at worst encourage planning practitioners to sideline social concerns completely as economic externalities (Schiefelbusch 2010).

Understanding mobility conflicts like bikelash requires a more holistic model of transport planning that moves beyond an exclusive focus on infrastructure and traffic flows towards an analysis of the socio-political dimensions of transport behaviours, transport infrastructure, and transport conflicts. As cycling anthropologist Luis Vivanco (2013, 69) notes, '[b]icycling *is* highly sensitive to material conditions such as urban spatial form, the built environment, and traffic policy. But it is also highly sensitive to cultural attitudes, symbolic constructions, and social relations'.

One of the important recent contributions of the mobilities literature has been to highlight the fact that cyclists are not a monolithic group; rather that there are diverse reasons why people cycle, and diverse 'cultures of velomobility' (Horton, Cox, and Rosen 2007). Similarly an analysis of the existing literature on bike lane conflicts indicates that bike lane objectors are not a monolithic group. It is important to acknowledge and plan for the fact that there are different reasons why people dislike or object to cycle infrastructure and cycling in general. Improving community consensus around the need for bike lanes requires greater attention to the diverse values and concerns of the communities potentially affected by projects.

Accounts of bikelash indicate that there are four groups who are most likely to object to new bike lanes: retailers; conservative voters; anti-gentrification activists; and marginalised cyclists. For some of these groups, the objections appear to be primarily about the physical displacement of existing infrastructure, such as parking, and the impact it will have on their economic existence (retailers). For other groups, however, this physical displacement represents a larger political displacement that exacerbates histories of socio-economic marginalisation (anti-gentrification activism; and marginalised cyclists); or challenges systems of existing cultural privilege (conservative bikelash) within the city. The causes of bikelash amongst these groups is explored, along with the steps that could be taken to engage with these types of conflicts.

Objections from retailers

Retailers, often with the support of local business organisations, provide some of the most influential objections to bike lane projects. Retail objectors tend to be a particularly powerful group because, as Drennen (2003, 4) notes, for politicians and government officials it is **'**politically risky to be anything but strongly supportive of small businesses'. Objections from retail groups have prompted the commissioning of many studies on the economic effects of cycle lanes. Retailers, and planners, tend to be particularly concerned about the economic consequences of a reduction in customer parking spaces, as well as drop off spaces for freight (Crane et al. 2016; Lee and March 2010).

However, this research also shows that businesses tend to overestimate the importance of onstreet parking to customers, and underestimate the number of customers who arrive by bus, bicycle or on foot (McCormick 2012; O'Connor et al. 2011; Stantec Consulting Ltd 2011). It is important to acknowledge and respond to these fears of economic loss well in advance of construction. Many studies have reported improvements or at least no decline in economic outcomes for retailers in areas with new bike lanes (Clifton et al. 2012; Drennen 2003). Others, such as an analysis of the business impact of Vancouver's separated bike lanes did show a small initial decline in reported retail income associated with the early stages of bike lane implementation (Stantec Consulting Ltd 2011).

It may be helpful to share economic impact studies with retailers as part of cycle lane planning processes (Drennen 2003; McCormick 2012). In one of the most comprehensive studies on the economic impacts of cycle lanes, McCormick (2012, 48) argues that if possible economic impact studies should be localised, as retailers may be 'incredulous of findings from outside their local context'. Creation of 'Bike Friendly Business Districts' has also been an effective strategy for improving support for bike lanes amongst retailers in many US cities (LiveMove 2015) .

While initial opposition to cycle lanes amongst some retailers can be strong, it often dissipates once new lanes are up and running. In a review of the outcomes associated with a new cycle lane in Sydney, researchers found that concerns about loss of car parking died down quite quickly once it was apparent the effect on business was negligible. In fact, rather than resisting loss of car parking, retailers pressed for more bike parking. Three businesses had actually moved into the area in part due to the lanes, citing an attraction to the 'pro-environment', 'pro-health' ethos promoted by the new cycleway (Crane et al. 2016). Certainly there is growing evidence that some retailers view being part of a 'bicycle friendly business district' as likely to help them attract higher income, 'creative class' customers (McCormick 2012).

Studies that provide rich, relatable stories from retailers about before and after feelings about cycle lanes, may be particularly useful in outreach activities designed to prevent or address retailer objections to cycle lanes. As Stehlin notes, the idea that cycling is generally good for business is 'now an article of faith of the bike movement'; however, it shouldn't be assumed that retailers are aware of the research on bike access and commercial activity (Stehlin 2015, 125). Part of the success of the Valencia Street cycle lanes in San Francisco is attributed to the fact that the San Francisco Bicycle Coalition worked to 'canvass every merchant on the block [and] talk to every neighborhood association' (Abel in Drennen 2003, 30). Mead (2015) in his discussion of retail objections to a bike lane in Enfield, London, urges councils to make outreach materials to retailers interesting and accessible. Commenting on local anti-bike lane leaflets he argues that even though much of what is written is misleading, it is 'accessible and easily digestible', and going up against a 17-page council consultation document, he says, it seems to be 'winning local hearts and minds'.

Other recommendations for avoiding or minimising bikelash amongst retailers include: involving them in collaborative neighbourhood design processes aimed at selecting new cycle lane routes (McCormick 2012); pitching cycle lane projects as improvements to the overall quality of the neighbourhood, rather than as projects for cyclists (Stott 2014); and taking advantage of the general support for traffic calming and amenity improvement amongst local businesses.

Conservative bikelash

> If you're itching to write an anti-bike-lane argument… line up, because it's a burgeoning literary genre. (Sternbergh 2011, New York Times)

Objections to bike lanes tend to be divided along political lines, with conservative voters more likely to be opposed to new cycling infrastructure (Castillo-Manzano and Sánchez-Braza 2013; Siemiatycki, Smith, and Walks 2016; Sternbergh 2011; Walks 2015). Conservative bikelash is often described as particularly 'angry' in tone, and tends to exhibit the heightened emphasis on external threat and violation common within conservative discourses (Graham, Haidt, and Nosek 2009; Lakoff 2002). Cyclists are commonly portrayed as threatening 'outsiders' who seek to 'invade' or 'rob us' of a way of life we hold dear. In general, the angry tone of much conservative bikelash is consistent with a range of research that shows that conservative voters are particularly likely to express angry public opposition to redistributive policies (such as road reallocation) as a form of 'theft' of their existing entitlements (Banks 2014; Kimmel 2013; Mackie, Devos, and Smith 2000).

In the US in particular, this conservative characterisation of cyclists as 'outsiders' often has an explicitly racist element to it, ('we don't want to end up like Beijing!' (Wood 2014) 'terrorists will use the bike lanes!' (Snyder 2014)). In NYC opponents argued that new bike lanes in New York were not just unsafe and unsightly, but that they were a sign of creeping totalitarianism, the importation of communist

values; and even a security risk. More recently controversy erupted in NYC after a member of the Queens Community Board questioned the wisdom of investing in cycle lanes, because after Donald Trump 'rounds up all the illegals, there won't be anyone to ride in the bike lanes' (Colon 2017).

Although at face value it is tempting to dismiss these more extreme examples of conservative bike-lash as frivolous, conservative objectors often represent a 'small but heavily fortified opposition' (Bruce 2015) with a disproportionate influence on bike lane decisions due to their wealth and readiness to litigate. Henderson (2013, 126) notes that in San Francisco the legal challenges to bike lanes mounted by conservative voters have had a powerful effect, 'foster[ing] a sense of confusion and cautious inaction among the city's political leaders'.

Numerous authors have pointed to the ways that conservative value commitments, in particular, the centrality of car travel to notions of family and economic responsibility; the commitment to sub-urbanism; a belief in market-led growth over state-led planning; and the associated commitment to privatised road space over the notion of streets as polis, all play out in conservative resistance to progressive planning projects (Furness 2010; Henderson 2006, 2015; Sheller 2015; Sheller and Urry 2000; Walks 2015; Walks, Siemiatycki, and Smith 2015).

Sternbergh (2011), writing on bikelash in New York noted the similarities between anti-bike lane arguments and conservative 'Tea Party' discourses. In particular, he pointed to the use of similar rhetorical strategies, including: (1) the appeal to an imagined golden age of yesteryear (when we all just loved our cars); (2) the spectre of bureaucracy run amok (cycle lane planners as 'faceless road swipers'); (3) the reliance on dismissive shorthand (cyclists as leftists, hipsters, 'freaks', or 'ideologues'); and (4) warnings that cycle lanes are an expression of a 'creeping, foreign-based anti-Americanism that's plainly contrary to our core values'.

Numerous authors have pointed to the central role that a defence of 'automobility' or car-dependence plays within conservative value systems (2006; Henderson 2013, Sheller and Urry 2000). Conservatives are more likely to essentialise car travel, seeing it as a 'natural' part of life in the city that enables families to achieve and uphold suburban ideals, centred on 'private ownership, nuclear families, harmony with nature, exclusion, segregation, and privilege' (Purcell 2001, 181).

Cars play a central role within this conservative view of the city, acting as an extension of the 'private sphere' of the home that enables commuters to 'secede from', and protect their family from, the 'dangers' of city life (2006; Henderson 2013, Sheller and Urry 2000). Thus the conservative emphasis on 'family' and 'responsibility' becomes closely intertwined with automobility, with car travel understood as an important way to care for your family (Henderson 2015).

Cycling, and cycle lanes, represent a number of important threats to the 'secessionist automobility' at the heart of conservative value systems. Cycling initiatives are often strongly associated with broader compact-city planning discourses (Krizek 2012; de Roo and Miller 2000) that seek to weaken the segregation of home and work central to the suburban ideal. Both cycling advocacy and compact city planning processes tend to be 'pro-urbanist', representing the city as a place to be enjoyed and engaged with (Talen 2005; Vivanco 2013). Cycling as an activity tends to promote active engagement with city scapes – cyclists negotiate their way through a changing landscape without the protection of a steel bubble, open to unplanned social interactions even (perhaps especially) with strangers, experiencing the smells and sounds of urban life (Freudendal-Pedersen 2015; Shepard and Smithson 2011). This enjoyment of cycling as an embodied, emotional experience challenges the utilitarian conceptualisation of transport at the heart of traditional transport planning.

In this way cycling and cycle lanes also challenge the 'privatisation' of road space that occurs with increased car dependence, reclaiming streets as spaces for social engagement (Vivanco 2013). However, it is important to note that this new opening up of streetscapes for largely middle class white cyclists occurs against a backdrop of neo-liberal urbanism that increasingly excludes lower-income people from public spaces (Hoffmann and Lugo 2014). It is also important to note that not all cyclists necessarily 'enjoy' cycling (e.g. those for who for whom cycling is a necessity or a part of their job).

However, the notion that many middle-class cyclists at least 'enjoy' their commute challenges the puritanical commitment to 'industry' over pleasure at the heart of conservative ideals (Farmer 2005).

The perceived adventurousness or playfulness of cyclists, and by extension the view of bike lanes as a 'playspace', is frequently cited as a source of annoyance to conservative motorists who object to cycle lanes (Bruce 2015).

Thus, in many ways cycle lanes attract the cultural contempt many conservatives have for *cycling* and *cyclists*. As Janette Sadik-Khan, NYC transportation commissioner in charge of bike lane roll-out notes, this 'antipathy doesn't end with people who ride bikes; it extends to the painted lanes that they ride on' (Sadik-Khan and Solomonow 2016, 146–7).

What might be the best strategies for engaging with conservative bikelash? In New York, given the extreme nature of much conservative bikelash, a decision was made by cycle lane advocates to try to take the moral 'high road' as much as possible, and to challenge the idea of cyclists as scary outsiders by promoting images of cycling as part of 'everyday' living within the city. As NYC bike blogger Doug Gordon notes: 'Taking the high road is probably a good prescription for any protest movement. Be the face of reason while your opponents are screeching and tearing their hair out. Bike advocates especially need to show they're just ordinary people who want to get where they're going safely'. When it came to the Prospect Park cycle lane conflict, notes Gordon, 'the way that the community responded was not to get in protester's faces - it was to hold a short 'We Ride the Lanes' ride with kids' (Gordon in Snyder 2014).

There is 'lots to disagree with here, but should you?' ask Gordon and fellow bike blogger Aaron Naparstek (2014). They assert that 'arguments against cycling seem ridiculous without need for arguing'. It is more effective, they contend, to focus on *showing* that people who ride bikes are 'regular people', challenging conservative bikelash's representation of cyclists as a 'threat' and 'outsiders': 'Show what it's all about: Safe streets for kids, seniors and families'. Bike lane promotion activities involving children, families, or schools may also be an important way to tap into the positive commitment to 'family values' amongst conservative voters.

These type of 'media friendly' events that provide 'visual' evidence of support for cycle lanes are also important because the intensity of conservative opposition to cycling lanes can dominate media coverage of conflicts, making it seem like opposition is more widespread than it actually is. A commitment to 'actively cultivating positive media coverage' was an important element of the successful campaign for the Burrard Street Bridge bike lanes in Vancouver. After negative media coverage was identified as a key component of the cancellation of an earlier bike lane trial over the bridge, both cycle advocates and the City took 'a far more proactive approach' to communicating to the media the rationales, features and benefits of the cycle lane in the lead up to the new, ultimately successful 2009 trial.

On the second attempt, the City of Vancouver used a wide range of communications strategies, including mass media advertising in print, and on radio, use of social media, earned media opportunities (over 30 media interviews with City staff), as well as placing banners on the Bridge itself. The use of a proactive media strategy was identified as particularly important to avoid any momentum building behind the idea that the lane was 'an explicit strategy to reduce car usage', which staff noted was likely to galvanise opposition (Siemiatycki, Smith, and Walks 2016). Instead the messaging focused on the ways that the lane would increase the safety of *all* people who use the Bridge.

Cycling advocates responding to bikelash in NYC also note the effectiveness of focusing on the ways that bike lanes increase the overall safety of all road users, not just cyclists. As Ben Fried, editor of Streetsblog that covered the bikelash debate, concludes, 'It's the safety stats that carried the day. – … They're pretty indisputable'. (Fried in Walljasper 2013) Tim Blumenthal, president of PeopleForBikes in NYC agrees that it's important to focus on the benefits for everyone: 'Bike issues need to (be) framed in the context of what they mean to the city, not just what they mean to people who bike', he argues. He noted that it is important to focus on the ways that new bike lanes will 'benefit all residents and visitors by reducing traffic, noise, and air pollution – making city life a little less frenetic for everyone' (Blumenthal in Walljasper 2013).

Both of these strategies- the use of campaigns designed to *show* that cyclists are ordinary people (e.g. community rides) as well as the use of media strategies designed to highlight the benefits to *everyone*-provide important counterpoints to the positioning of cyclists as the threatening 'other' of city life within much conservative bikelash. The focus on the 'safety' benefits of cycle lanes for the broader community

of motorists and pedestrians as well as cyclists, also provides an important challenge to this discourse of threat and danger. One of the key rhetorical strategies used to dismiss cycling within conservative anti-bike lane discourse is the idea that it is inherently 'dangerous and irresponsible' (Fincham 2007; Horton 2007), as well as a threat to pedestrians. Lubitow, Zinschlag, and Rochester (2016) assert that in societies increasingly preoccupied with avoiding 'risk' (Beck 1992), conservative bike lane opponents have been quick to recognise that concerns over the safety of cycling represent one of the most effective ways to oppose new cycling initiatives (Lubitow, Zinschlag, and Rochester 2016).

The increased use of shared pathway infrastructure does seem likely to increase the potential for future conflict between pedestrians and cyclists. However, researchers have also pointed out that concern about pedestrian safety is vulnerable to overinflation by conservative motorists (Castillo-Manzano and Sánchez-Braza 2013; :1022). The use of surveys of community opinion to counter this overinflation of community concern about cycle lanes was identified as a key strategy for addressing bikelash in both Seattle and New York (Walljasper 2013).

The tenacity of the bicycle advocacy movement, and strong collaboration between advocates and city hall, may explain why NYC has been able to counter fierce bikelash from conservative quarters, including long-running and expensive legal challenges (Deixel 2014; Sadik-Khan and Solomonow 2016; Walljasper 2013). Deixel (2014) argues that cycle advocacy organisations in NYC have been particularly important in the fight against bikelash in NYC because they have been so effective at mobilising people to come out in support of the lanes. She argues that the work of the advocacy organisations, such as critical mass rides and letter writing campaigns, facilitates an important sense of 'identity' amongst cyclists. Understanding oneself to be a *cyclist*, instead of 'just someone who uses a bicycle as a mode of transportation' says Deixel, is crucial to mobilising people to support and defend bicycle infrastructure, because once people start to see cycling as part of their identity they feel 'personally marginalized' by attacks on lanes, and they are 'more likely to fight to reclaim the Right to the City, as their own rights to safety and legitimacy are at stake' (Deixel 2014, 67).

However, it is important to note that this ability to 'decide' to identify as a cyclist is a privilege that is perhaps more accessible to 'choice cyclists' from higher-income communities. This observation about the positive contribution that identifying as a cyclist can make to increasing support for lanes also reinforces the importance of creating practical opportunities (such as family rides) for motorists in more conservative communities to experience new lanes as cyclists. In general, all groups involved in cycle lane projects also point to the importance of good long-term, community consultation around these projects. Lubitow, Zinschlag, and Rochester (2016) argue that traditional planning approaches that see cycle lanes as simple 'apolitical' technological solutions, combined with the new 'build it and they will come' mantra within cycling advocacy means that cycling lanes are often rolled out too fast without proper community consultation.

Given the disproportionate influence of conservative bikelash, careful consideration should be given to how to engage with the values and concerns of conservative voters at every stage of bike lane planning processes. As well as appealing to 'family values', prioritising 'nostalgic' over futuristic promotion campaigns (e.g. 'lets bring back the bike') and tapping into 'pro-business' sentiment using 'bikes bring business' campaigns may also be potentially useful ways of connecting with potential bike lane objectors in more conservative communities.

Bike lanes as 'white lanes': Opposition to gentrification

> [I]t is troubling that the pro-bicycling cultural and demographic shift occuring in U.S. inner cities is structurally linked with the gentrification and displacement of inner-city residents who are low-income and people of color, the exact population that is dependent on cycling as an affordable mode of transport. (Golub et al. 2016, 4)

In some settings cycle lane objectors also include inner city residents who are concerned that bike lanes represent 'white lines of gentrification' (Lubitow, Zinschlag, and Rochester 2016) that are displacing them from their neighbourhoods. Opposition to gentrification amongst poorer, working class and ethnically

diverse neighbourhoods has been identified as an important component of conflicts over bike lanes in cities such as Portland, Chicago, Washington, New York and London. These are communities that have historically borne the brunt of the 'racialized disinvestment' of surburbanisation (Lugo 2013; Sheller 2015; Stehlin 2015); and are now experiencing the new 'suburbanization of poverty' that is pushing low income, pre-dominantly non-white residents out of traditional inner city neighbourhoods (Lubitow and Miller 2013; Lubitow, Zinschlag, and Rochester 2016).

Stehlin (2015, 133) notes that in Portland cycle lanes became a 'flash point for simmering tensions over race, class and urban change', with Mayor Fenty's support for the 'dog parks and bike lanes' associated with gentrification eventually contributing to him losing the election in 2010. Lubitow, Zinschlag, and Rochester (2016) argue that objections to bike lanes in the Paseo Boricua neighbourhood in Chicago were also motivated by concerns that cycling was a 'recreational activity of privileged white people' and that 'expanding bike lanes in to minority communities symbolically paved the way for gentrification' (Lubitow, Zinschlag, and Rochester 2016).

Enthusiasm for biking is often high amongst the young, predominantly white 'creative class' residents who increasingly represent the face of gentrification in many Western cities (Florida 2002). Cities such as Chicago and New York have explicitly promoted cycle lane projects as part of economic development strategies designed to attract these types of residents. The difficulty with this argument, however, is that it ignores equity issues around the effect of this growth on low-income residents experiencing the gentrification associated with cycle lanes.

The relationship between gentrification and cycle lanes is complex, and it is most likely that the lanes are a result rather than a cause of gentrification (Geoghegan 2016). However, several researchers have pointed out that this relationship is often unproblematically celebrated by politicians and cycling advocates who remain ignorant or insensitive to the fact that for low-income communities of colour, 'urban 'revitalisation' represents an eviction from their home' (Sheller 2015, 84). Both Stehlin (2015) and Hoffmann and Lugo (2014) also point to the colour-blindness of discourses of urban 'liveability', arguing that when new infrastructure like cycle lanes brings gentrification, it can lead to a dramatic decline in the 'liveability' of the city for those who are displaced by these processes.

Members of these marginalised communities tend to be sensitive to the history of financial neglect within their neighbourhoods, challenging the fact that neighbourhood improvement has only become a priority now that wealthier white people are asking for it. As one bike lane opponent in Portland noted: 'You say you want it 'safe' for everybody, how come it wasn't safe 10 years ago? That's part of the whole racism thing…. We wanted safe streets back then; but now that the bicyclists want to have safe streets then it's all about the bicyclists getting safe streets' (Participant in Lubitow and Miller 2013, 125).

Sheller (2015) points out that these communities are also more likely to have previous experiences of 'eviction' associated with city planning processes. For example, she points to objections to bike lanes and 'urban revitalisation' projects in Philadelphia amongst African-American residents as situated within a history of forced evictions and demolitions of African-American neighbourhoods facilitated by the city in the 1960s and 1970s to make way for new university buildings and housing. These communities, she argues, remain rightly suspicious of efforts to 'remake' their neighbourhoods.

Several authors point to ways to prevent and address bikelash within these communities. Central to these solutions is the need for more effective engagement with the issues faced by these communities, including their experiences of racism, unemployment, housing insecurity, and 'overpolicing' (Hoffmann 2016; Kinney 2016). Golub et al. note that in order to make cycling more appealing to these communities, cycling advocates need to address the broader issues that act as barriers to people in these communities even using cycle lanes:

> [S]treet harassment and crime, sexual solicitations, and police violence are likely experiences that marginalized communities suffer from when they need or choose to ride a bicycle. … Common infrastructure tools used to lure new bicyclists such as off-street trails and protected bicycle lanes cannot address these common threats and vulnerabilities many experience in the public realm everywhere and every day. (Golub et al. 2016, 2)

Thus, in many ways there is a degree of ethnocentrism at the heart of the 'build it and they will come' planning philosophy that needs to be addressed if cycle lane projects are to be successful in low-income,

ethnically diverse neighbourhoods. As Vivanco (2013, xx) notes, the idea that cycling offers 'a fast, fun, healthy and affordable way to get around the city' is often presented as a 'self-evident fact' by (largely white) cycling advocates, despite the fact that for many communities, specifically low-income communities, 'material conditions on the ground suggest something completely different'.

As Hoffmann and Lugo (2014) note, cycling advocates also need to avoid the temptation to label car dependency and/or opposition to cycle lanes as simply old-fashioned or 'backward', given the higher levels of unfamiliarity with or cultural unacceptability of cycling, as well as the aspirational nature of car ownership within many low-income communities. Greater responsibilities for transporting family members, as well as the relative 'unaffordability' of cars within many of these communities, means automobiles often assume an importance that is antithetical to the 'post-car status effect' enjoyed by white, privileged 'choice cyclists' (Horton and Parkin 2012).

The nascent 'bike justice' movement also points to the need for greater collaboration between cycle advocates and wider 'urban justice' movements to make gentrification more 'participatory' through the inclusion of affordable/social housing within inner city developments, so that everyone can benefit from new cycling infrastructure (Stehlin 2015). It also argues that we need to make cycle infrastructure more meaningful to these communities by including more cyclists from marginalised groups within planning processes (Hoffmann 2016). Cycling anthropologist Adonia Lugo (2013) points out that the perception that cycling is a 'white' person's pursuit partly stems from the fact that the local cyclists within these communities are more likely to be biking out of 'economic necessity' and are therefore less likely to have the time or social capital to participate in the voluntary planning processes that take part around these projects.

Lubitow, Zinschlag, and Rochester (2016) argue that the best way to engage these communities and their local cyclists with cycle lane projects is to start first with local grassroots initiatives aimed at engaging the communities with cycling. They point to the West Town Bikes/Ciclo Urbano (WTB/CU) community-led bicycle training centre and repair shop as an important example of this type of community engagement initiative. The WTB/CU project, which aimed to teach minority youth and adults how to ride and repair bikes, was seen as an important engagement tool because it provided important practical links between cycling and the issues facing the marginalised Puerto Rican community. Not only did it provide the community with the opportunity to learn cycling skills, but it emphasised the social and economic opportunities available to the community through cycling, including providing job training skills to young people, and removing financial barriers to youth participating in their city.

Critically, arguments about the economic benefits of cycle lanes also need to be pitched to and address the economic concerns of the communities in question. In particular, it is important to recognise that arguments in favour of cycle lanes as bringing creative class migration, and associated 'bike friendly business district' programmes, are just as likely to *create* as to mollify bikelash in these communities. Similarly, 'streetscape revitalisation' projects designed to mitigate the impact of cycle lanes on retailers are also at risk of encouraging a form of gentrification that can be a source of bikelash in lower-income communities.

Several authors point to the need to confront these tensions by building broader political support for 'liveability' planning in general (Checker 2011; Lugo 2013; Sheller 2015). Part of this shift includes moving beyond a focus on inner-city commuter cycling to cycling infrastructure that also suits the cycling needs of marginalised communities with higher proportions of people who are unemployed, living without a car, and/or involved in care work (Stehlin 2015). There is a need to provide greater representation for the needs and voices of cyclists and *potential cyclists* within these communities at all stages of cycle planning processes, including within city agencies, bike advocacy organisations, and education programmes for transport professionals. Bike justice advocates argue that a more inclusive approach to bicycle planning will not only reduce opposition to cycle lanes, but will realise the potential of the bicycle as a low-cost means of transportation that can be particularly meaningful to those living in low-income communities (Golub et al. 2016; Steinbach, Green, and Datta 2011).

Marginalised cyclists

Cycle lane objectors may also include cyclists who feel marginalised by bike lane planning processes. Although on a global scale we are witnessing a surge in support for bike lanes, cyclists themselves have long had an ambivalent relationship with separated bike paths (Oldenziel and de la Bruhèze 2011). The evidence suggests that this ambivalence can at times turn to active opposition where cyclists are excluded from cycle lane design and implementation processes.

Bikelash amongst cyclists seems most likely to occur when poor design and lack of consultation are perceived to have produced cycle lanes that actually make cycling *more* dangerous for cyclists. In their article 'No bicycle lanes!' shouted the cyclists', Duarte, Procopiuck, and Fujioka (2014) discuss a cycle lane in Curitiba, Brazil that was eventually removed after widespread protests from cyclists. The lane, intended primarily for recreational, 'leisure' cyclists, was originally to be opened once a month; however, the authors argued that a long history of exclusion from planning processes meant that instead of seeing the lane as 'a sign of goodwill', cyclists vehemently opposed the lane, pointing to its numerous safety flaws, and arguing that it was 'distracting attention from the real problems faced by cyclists in Curitiba' (Duarte, Procopiuck, and Fujioka 2014, 183). The authors identify the lack of respect for cyclists as 'technical experts' as a key part of this opposition.

Recent controversy in Madrid over new bike lanes is another good example of bikelash amongst cyclists. Here one of Madrid's most influential cycling organisations, En Bici Por Madrid, is opposed to new cycle lanes on the grounds that they can make intersections more dangerous for cyclists, as well as the fact that they 'relegate' cyclists to the side of the road (Amigo 2016).

Sports cyclists, with their faster speeds, and their tendency to ride as 'vehicular cyclists', are another group who are also often opposed to attempts to clear cyclists out of car lanes. The 'vehicular cycling' movement in the United States in particular has advocated for 'political rejection of special facilities and on-road treatments for cyclists'. (Vivanco 2013, 107), on the grounds that cyclists should have the right to 'take the lane' and use roads in the same way that cars do (Furth 2012). Indeed, new cycle lanes within many English-speaking countries do appear to have sparked debates in both mainstream and social media over whether cyclists should now be 'required' to use the lanes, reinforcing the idea that cyclists are not legitimate road users. These types of measures are perhaps likely to be most strongly resisted by the small minority of 'very confident' cyclists who report that they prefer direct, fast routes with low cyclist volumes over special cycling infrastructure (Caulfield, Brick, and McCarthy 2012).

In their account of the history of bike lanes in Europe 1900–1995, Oldenziel and de la Bruhèze (2011, 35) talk about the ways that cycle lanes were initially bitterly resisted by cyclists as 'a measure to literally push bicycles aside'. This ambivalence about the role of cycle lanes may flare up under conditions of sustained marginalisation of cyclists from cycle lane planning processes, and particularly so in cases where marginalisation results in poor design and unsafe lanes. If the breakdown in good will is extreme, it may result in cyclists engaging in full-blown bikelash. Extensive, ongoing consultation with cyclists that treats them as key sources of technical expertise on the design and implementation of cycle lane projects is likely to be central to preventing or resolving bikelash amongst this group.

Broadening cycling infrastructure consultation processes to include diverse groups of cyclists, including sports cyclists and vehicular cyclists, as well as traditionally underrepresented groups such as women, older people and people from marginalised communities (Aldred, Woodcock, and Goodman 2016) is another important strategy for increasing support for cycle lanes.

Discussion and conclusion

The emerging literature on bikelash points to four key sources of organised opposition to bike lanes: retailers; conservative voters; residents opposed to gentrification; and disaffected cyclists. It also points to some key strategies that planners and cycle advocates may use to prevent and resolve bikelash. The first point, we conclude, is that planners and cycle advocates need to be better prepared for bikelash: to expect it, and to move beyond 'techno-centric', 'apolitical' understandings of cycling infrastructure.

There is a need actively to seek understanding of the diverse mobility cultures of their city, and the ways that cycle lanes are likely to disrupt existing power relationships in the streets in question.

This may be challenging for bike lane proponents who now find themselves 'increasingly compressed between a right-wing backlash and credible claims to [their] tacit involvement in gentrification' (Stehlin 2015, 133). However, greater understanding of the likely causes of bikelash will not only make it possible to reduce or mitigate some of this conflict, but is also likely to temper the effect of the 'vitriol' that is reported as a source of 'shock' and likely disillusionment amongst planning staff and politicians attempting to create and defend bike lanes.

Like other research on quality urban design initiatives, the bikelash literature identifies extensive ongoing consultation as a key to gaining public support for bike lanes. This requires a move beyond consultation at the 'governance' level to treating residents as key 'technical experts' on cycling and cycle lanes; as well as active support for cyclist advocacy organisations that provide critical grassroots mobilisation to support and defend cycle lanes. Public opinion surveys, safety statistics and localised economic impact assessments are important tools that cycle lane advocates can use to influence public opinion and to challenge misunderstandings or misrepresentations of the impacts of cycle lanes. Effective, proactive engagement with the media, and attempts to 'take the high road' in the midst of highly charged battles for public opinion seem to be success factors in cities that have by and large countered outbreaks of bikelash.

Finally, the literature on bikelash challenges some of the key 'articles of faith' in the cycle advocacy movement; pointing out that sometimes it's important to slow down and focus on promoting grassroots community engagement with cycling, rather than jumping straight to a 'build it and they will come' phase of infrastructure rollout. It also problematises an uncritical reliance on a 'bikes bring business' argument, pointing to different ways that this message can be interpreted in diverse socio-cultural contexts.

Using a mobilities perspective with its heightened attention to issues of power, structure and identity within transport conflicts also provides important reminders of the links between 'local' infrastructure conflicts and larger social and economic processes of accumulation and exclusion within the city. It foregrounds the necessity to plan for, acknowledge, and actively negotiate these conflicts in ways that prioritise urban justice and more inclusive urban planning processes. It also points to the value of moving beyond 'one-size-fits-all' education programmes towards more creative, responsive and participatory cycling infrastructure projects. Most critically it speaks to a need to step back and start as beginners in forging links between cycling infrastructure and the specific livelihoods and concerns of different neighbourhoods and communities.

Disclosure statement

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