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Abstract. In many cities, streets are governed for the car. Street infrastructure is allocated and regulated to prioritise high-speed travel for those in cars, typically at the cost of slowness for those outside them (and often, as critics argue, also for those inside the car). Yet the governance of streets is not fixed. This chapter examines a series of efforts by transport activists to reorient the form and regulation of streets in San Francisco. These include DIY (do-it-yourself) infrastructure, in which participants physically alter the form of street infrastructure (installing cycle lanes, crosswalks and other unsanctioned 'improvements'), and the JAM (just a minute), in which participants temporarily alter the regulation of street infrastructure (holding up traffic when car drivers illegally take over spaces allocated for cyclists). The chapter examines these as two related but distinct practices: (1) prefiguring, in which hoped-for worlds are physically brought into being; and (2) heckling, in which prevailing norms are comically and chaotically disrupted. The central claim in both is the same: the temporalities of street infrastructure are not inevitable, but the result of choices that could be changed – and that change can be fast.

Keywords: cycling, DIY urbanism, mobility, prefigurative practices, San Francisco, urban governance

If the temporalities of infrastructure are socially produced and relational, how might alternative temporalities be brought into being? The intimate connections between speed and power and between power and automobility mean that street infrastructure is typically allocated and regulated

to prioritize speed for those in cars, and in doing so tends to produce slowness for others. Yet these claims and connections are not fixed. This chapter explores a range of activities designed to rework the temporalities of infrastructure on the streets of San Francisco, California. I focus on two practices: prefiguring, in which activists quietly and anonymously make unsanctioned 'improvements' to city streets in an effort to speed up the provision of protected infrastructure for walking and cycling; and heckling, in which activists loudly and comically redirect traffic so as to highlight and challenge the degree to which speed in cars is paid for by slowness outside them. While heckling is often controversial, I use this loaded term deliberately to emphasise the power relations at stake. Like hecklers, protests disrupting traffic are frequently frowned upon, successful interventions must be skilful and sophisticated. The central claim in both sets of practices is the same: the temporalities of street infrastructure are not inevitable, but the result of choices that could be changed—and that change can be fast.

Infrastructure and automobility

The control of infrastructure connects to the control of time, enabling the powerful to be fast, and rendering the powerless slow (Wajcman and Dodd, 2016). The intimate connections between infrastructure, time and power are clearly apparent on streets, making these a frequent site of conflict (Hubbard and Lilley, 2004; Cresswell, 2006; Norton, 2011). Streets are ubiquitous, encompassing a third of all developed urban land worldwide (Southworth and Ben-Joseph, 2013: 5). Far beyond the journey, differential access to speed on streets results in vast differences in social and economic opportunities, from access to employment and education, to health and life expectancy (Sheller, 2018). Much of the conflict over streets centres on the place of cars, recognizing that the emphasis on speed and mobility for those inside cars has produced slowness and immobility for others.

Globally, there is growing recognition that automobility comes at a high price. This includes direct costs like infrastructure budgets, but also costs like air and water pollution—

transport is the second biggest emitter of greenhouse gases (23 percent globally and predicted to double by 2050, with 72 percent from road vehicles; UN Environment Program, 2020)—deaths and injuries (car crashes have long been the leading killer of children and young people in the US and internationally; WHO, 2019), plus a vast array of indirect costs borne by governments and communities (Böhm et al., 2006; Culver, 2018; Henderson, 2020). With the recognition of these costs, cities and states are adopting policies and programs aimed to reduce the dominance and impact of cars on city streets. Vision Zero is increasingly prominent among these and involves a commitment to eliminate traffic deaths and serious injuries within 10 years (Shahum, 2017). Other policy frameworks include Complete Streets (Smart Growth America, 2019), Transit Oriented Development (Dittmar and Ohland, 2004), and Link and Place (Jones et al, 2007), as well as the commitment to sustainable transport systems in the UN Sustainable Development Goals (11.2). Vision Zero was adopted by San Francisco in 2014, shortly after New York became the first US city to commit to the program (Shahum, 2017).

Commitments to policies like Vision Zero suggest that pedestrians, cyclists, transit-riders and others not travelling by car have in some sense won the policy debate, and that infrastructure to support safe walking and cycling will indeed be provided. Conditions on the ground, however, are quite different.

To take effect, policies need physical and regulatory changes: new planning and engineering standards, reduced speed limits, revisions to road rules and driver training, changes to enforcement practices, and the reallocation and repricing of parking spaces. Perhaps most crucially, a move away from automobility requires infrastructural change. Numerous studies have documented the central role of infrastructure in increasing the share of trips made by walking, cycling, public transport, and other forms of open-air mobility (Schoner and Levinson, 2014; van Goeverden et al., 2015; Aldred and Dales, 2017; Buehler and Pucher, 2021; Zhu et al., 2022). Far more than weather, speed or personal fitness, the lack of physical protection from cars is a key barrier to walking and cycling.

There is a wide spectrum of infrastructure – from 'sharrows' (painted images of bicycles and arrows to indicate a road should be shared by cars and cyclists) and painted lines (delineating lanes to be used by bicycles, alongside motor vehicles), to protected infrastructure (for instance, physically separated bike lanes with more substantial materials like concrete bollards and kerbs, and pedestrian crossings with level changes and 'bulb outs' forcing cars to slow down). While paint offers very little protection—and sharrows may actually make streets more dangerous (Ferenchak and Marshall, 2019)—physical separation improves both actual and perceived safety for all road users, including those in cars (Buehler and Pucher, 2021). The benefits of infrastructure improvements are especially significant for racialized and other vulnerable communities, who bear the greatest burdens in the current system of automobility (Sheller, 2018; Lusk et al, 2019; Raifman and Choma, 2022).

Infrastructure is accordingly a key part of policies and strategies to reduce the dominance of cars. San Francisco's Vision Zero Action Strategy, for example, states: 'Vision Zero San Francisco commits City agencies to build better and safer streets, educate the public on traffic safety, enforce traffic laws, and adopt policy changes that save lives' (City of San Francisco, 2021: 5). Despite this clear mandate, the allocation and regulation of street infrastructure remains contested. Proposals for bike lanes, pedestrian upgrades and other infrastructure for active and open-air transport can attract fierce opposition (see Vreugdenhil and Williams, 2013; Wild et al, 2018; Roberts, 2020; Ferster et al, 2021; Leyendecker and Cox, 2022 among others). These projects are replete with what Akhil Gupta (2015: np) describes as suspension, in which 'completion is not the only possible outcome'. While infrastructure that is not yet in place tends to be deemed unfinished, infrastructure projects are not always completed. Projects can be suspended indefinitely, they can also be cancelled. Even projects that have been constructed may not be secure, as built works can be dismantled, torn down, removed.

Implementation can be delayed in many ways: studies, consultation, and testing that draw-out construction timeframes; competition for funding that pushes projects from short to medium

and medium to long term; electoral cycles that require pauses and revisions. The conflict then can be understood less about content and more about time: when will physical infrastructure shift in line with policy shifts?

This question connects to literature exploring the suspended, deferred, delayed and unfinished (Lombard, 2013; Carse and Kneas, 2019; Stamatopoulou-Robbins, 2021). A key point highlighted in this literature is the significance of temporality to power. While many studies trace how spatial transformation projects are 'decided upon' and what happens when they are 'completed', projects do not always follow clear-cut trajectories, and results are not always certain (Arícan, 2020). Through a study of construction projects in Istanbul, Alize Arícan shows how delays can be used to reshuffle who controls and who benefits from projects. As Arícan argues: 'it is specifically through delays that economic and political power is exerted, navigated and negotiated' (2020: 482).

Power often works in predictable ways, deployed by already powerful groups to maintain and extend agency. But this is not always fixed. As Simone Abram explains, notions of progress implicit in plans for infrastructure suggest a modern, linear conception of time, 'yet close attention to planning practices indicates that such temporalities are doubted, contested, and mediated' (2014: 129). Gupta makes a similar point: 'The bridge to the future is always under erasure, and we do not know where it will lead' (2015: np).

With respect to street infrastructure in particular, Hubbard and Lilley's (2004) study of road engineering in post-war Coventry highlights the differential and conflictual production of space and time. The efficient city that planners laid out on paper was never fully brought into being. Mobilities were not produced as planned, efforts to construct new highways instead created an uneven and contested 'speed politics'. Emphasizing the performative and contingent nature of cities, Hubbard and Lilley show how high modernist plans were disrupted to generate new temporalities. Particular groups can channel the energies of the city in particular directions, they explain, 'alert[ing] us to the human creativity that might otherwise be papered over in accounts

that emphasize the colonization of everyday life by the forces of capitalism, technology, and science' (2004: 291).

In the very different context of contemporary Peru, Harvey and Knox (2015) show similarly that the politics of road infrastructure is enacted, anticipated and understood in diverse ways. In explaining this, they set out a schema that is helpful in thinking about the politics of street infrastructure in San Francisco. This begins with two groups familiar in political theory: publics whose engagement consists in large part in practices of cooperation and community engagement, and counter-publics driven by oppositional logics. Alongside these two, Harvey and Knox identify a third group: impossible publics. Impossible publics refuse to play the game, to follow the processes set by the state. For Harvey and Knox, impossible publics 'respond to state projects in ways that fail to either accommodate or oppose them in ways that fit the expectations of the engineering professionals. … they follow alternative, uncooperative, or spontaneous possibilities … refus[ing] to behave responsibly manifest[ing] a troubling creativity and imaginative response to regulation' (2015: 16-17).

In the sections that follow, I explore 'impossible' practices through which activists in San Francisco interrupt the temporalities of street infrastructure. I begin with a brief sketch of the context for open air transport activism in San Francisco, noting the length and breadth of activities before discussing two in more depth. First, DIY infrastructure, in which participants place official-looking objects on the street to 'pilot' or prefigure faster action on infrastructure by the City. Second, JAMs, in which participants challenge or 'heckle' the social and legal norms that enable car drivers to colonize infrastructure allocated to other road users. Despite their very different tactics, both practices show that the rhythms of street infrastructure are not fixed and could—quite quickly—be shifted such that speed and slowness are more equally shared among all road users.

Speed politics in San Francisco

> "Why are we waiting and doing one block at a time and lobbying and … [having] all these meetings and conversations? It's stupid. We need to get things going more quickly … our Vision Zero [death toll] is going up, not down and I am done [waiting]" (interview, 6 July 2022).

As with many other progressive causes, there is a long history of advocacy and activism around the governance of streets in San Francisco and the Bay Area. There is a committed activist community, leading well-established (and internationally influential) activities such as Critical Mass, which recently celebrated its thirtieth year (Carlsson, 2002), and PARK(ing) Day, which is approaching its twentieth (Thorpe, 2020). There is also a strong culture of engagement in formal processes, including large and long-running advocacy groups such as Walk San Francisco and the San Francisco Bicycle Coalition, which have played significant roles in the adoption of Vision Zero (Schneider, 2014; Stehlin, 2015; Vision Zero Coalition, 2015).

While progress has been made in securing these commitments, there remains a long way to go. Even with political will and budget allocations, building the infrastructure necessary to protect pedestrians and cyclists involves consultation and approval processes that can extend for many years. In the words of Mayor London Breed, 'layers of bureaucracy … have historically slowed progress toward achieving the City's Vision Zero goal' (Breed, 2019: np).

Frustration with those processes have prompted some to look for alternative forms of engagement. Instead of participating in state-led processes—for example, engaging in activities like writing letters, collecting signatures, speaking at public meetings, making submissions, filing out surveys and online forms—some have pursued more direct options. Participants expressed frustration not only with the length of city processes, but also the power imbalance. In their approach to safe infrastructure, one explained, the City sends a clear message: "[they] say non-verbally: people mind your place. We are the ones who put this this infrastructure in. You will wait. You will wait for the process to trickle down and mind your place" (interview, 23 June 2022).

Rejecting that message, activists have developed practices of engagement that work to interrupt those trickle-down processes. Building on informal, unsanctioned activities like Critical

Mass and PARK(ing) Day, these practices are wide-ranging. Some are very serious, such as vigils in which participants gather to commemorate particular pedestrians and cyclists killed by cars, often extended symbolically for a a few days or weeks by handmade signs stating 'a driver killed our neighbor here'. Others are more playful and celebratory, such as bike parties and slow rides, in which people travel by walking, jogging, roller skating and other non-car means, followed at the back by a line of slow-riding cyclists who stop cars moving at anything more than a pedestrian-friendly pace. In contrast to organized groups like Walk San Francisco and the San Francisco Bicycle Coalition, organization of these activities is loose, with participants dropping in and out. Coordination has largely been through social media, with some participants known to each other not by name, but merely by Twitter handle. These oppositional publics are also part of a larger ecosystem, sharing ideas and strategies with activists and more conventional advocacy groups (publics and counter-publics) working in other cities and other countries.

In the remainder of this chapter, I focus on two of these practices: DIY infrastructure and JAMs. Both pursue speed and space, calling for more protected bike lanes, pedestrian crossings, and other infrastructure necessary to support safe and efficient travel outside of private cars. They do this in quite different ways. With DIY infrastructure, participants work to accelerate the introduction of infrastructure by installing objects directly onto city streets. Acceleration is thus sought in both city processes as well as travel speeds for those outside of cars. Objects are placed anonymously, as if by the City. In this way, I argue, they can be understood as prefigurative efforts to bring about change by acting as if that change has already taken place. JAMs take a very different approach. Instead of acting quietly and attempting to blend in or pass as official, participants use cowbells, megaphones, signs and bright clothing to attract attention. JAMs highlight the slowness cars impose on other road users, and the unequal governance processes that allow this. JAMs, I argue, can be likened to heckles – interventions that disrupt an expected sequence of events by highlighting its flaws, forcing a rethink and perhaps a reset.

Prefiguring speed

The cones, posts, and flowers depicted in Figure 12.1 were installed in 2016 by the San Francisco Municipal Transformation Agency (SFMTrA), a loosely organized group of transport activists (Thorpe, 2022). As the sign explains, the installation followed the death of Kate Slattery. Slattery had been cycling in the cycle lane when a car was driven out of its allocated space and into hers. Another young woman, Heather Miller, was killed in a similar hit and run in San Francisco that same day.

Figure 12.1. We need bike a protected bike lane here *now*, not ten years from now (Source: SFMTrA).

The SFMTrA followed that intervention with others across San Francisco, adding orange cones and other objects to painted lines to increase visibility and separation between cars and more vulnerable road users. As in the example above, cones and posts were added to places where pedestrians and cyclists had been killed. Interventions were also made in other sites, identified using sources including the city's High Injury Network (a map prepared in 2016 to support the City's commitment to Vision Zero). The SFMTrA also created its own online map, inviting people to identify areas in need of infrastructure improvements. Members of the SFMTrA, who were

often white men, recognized the importance of site selection, and the need to involve others in this process. As one member commented:

> "I don't think everyone in our city would be as comfortable doing these things, as we did, and I think I increasingly reflect on some form of privilege that allowed me to feel comfortable borrowing cones and standing in the street and fixing things the City couldn't fix… We made a conscious point to select locations that were socio economically and racially diverse as best we could and bring in more voices to participate" (interview, 17 June 2022).

Instead of calling for a reprioritization of walking and cycling infrastructure, these interventions are deployed as if that change has already taken place, as if cities and states do indeed see their responsibilities to provide safe spaces for walking and cycling as urgent and immediate. They act as if citizens are already entitled to streets that are safe for walking and cycling (see Figure 12.2). In doing so, DIY infrastructure works prefiguratively to enact a different temporality. As one participant explains: "We experimented with lots of materials; we experimented with paint, we experimented with posts, we experimented with the cones… We could exercise prototyping and design ideas in a different way… where can we learn and share with the community and the City new prototyping ideas" (interview, 17 June 2022).

Commonly attributed to Carl Boggs, prefiguration describes 'the embodiment, within the ongoing political practice of a movement, of those forms of social relations, decision-making, culture, and human experience that are the ultimate goal' (1977: 100). Prefiguration joins 'ends' and 'means'. Instead of imagining or lobbying for the implementation of alternative urban forms at some point in the future, prefigurative strategies work performatively to put those alternatives into practice—now (Maeckelbergh, 2011). As Cohen and Morgan (2023: 1053-4) explain, prefigurative strategies pursue a form of social change which 'does not entail a great rupture miraculously coordinated from above or a revolutionary ground swelling from below. Rather, it entails the accumulation of millions of everyday practices that presuppose current socio-economic structures and yet call forth new social worlds'.

Figure 12.2. Pedestrian safety ‘pilot’ (Source: SFMTrA).

The SFMTrA does not call for a shift in what the City is and is not responsible for, or what citizens can and cannot expect. Instead, they assume that shift has already taken place. Interventions are designed to support existing City policies and commitments, to assist the City to fulfil promises and comply with obligations already undertaken. The members of the group remained anonymous, letting the infrastructure speak for them. As their founding member explains: “[I made] a very specific point of not naming myself. I didn’t want to be a leader, I wanted this to be [that] we are San Francisco, and we are doing this” (interview, 14 June 2022). The emphasis is on the infrastructure, and on the official-looking objects used to construct it. Because street infrastructure is increasingly constructed from materials produced by and purchased from the private sector, and installed by private contractors, making installations appear official can be quite simple. One participant advised:

> “If somebody was going to do that, I would advise, one: check the Internet. All this stuff is available online, you can buy safe hit posts, and you can buy the sticky stuff and safety vests … And be

smart where you put it. You know, make it look like it's just like the regular city stuff" (interview, 23 June 2022).

Acting anonymously through infrastructure adds to the prefigurative power of the SFMTrA's installations, their capacity to disrupt and reshape rights and rhythms by acting as if the City is responsible for providing streets that are safe for everyone:

> "We could borrow cones from construction sites and make a real difference there, and also really see how it would change the behavior of automobile drivers instantaneously. There's some psychological effect of an orange cone that me standing there with my bicycle doesn't have. An orange cone says don't do this, you can't drive here to people. It has authority" (interview, 17 June 2022).

The SFMTrA acts as if City and State authorities take their commitments to reduce pedestrian and cyclist deaths seriously and are indeed responsible for improving safety for people who walk and ride on city streets right now. Interventions often used orange cones and posts found around the city, which participants told me they 'borrowed' for the duration of the installation. When I queried the use of this term, one explained:

> "We were essentially saying in the physical environment, [to] the City of San Francisco… let us help you, and so we would be borrowing cones from other City departments, so we were being civic minded, but we were essentially re-prioritizing where orange cones should go in San Francisco… And they often got taken back by those Departments, so, in effect, we did return them, but it was an official prototyping [using] materials from the City and County of San Francisco" (interview, 17 June 2022).

The SFMTrA works not to shift, but to speed up state action. Their name is a play on that of the official body, the San Francisco Municipal Transportation Agency. It was inspired by a similar group in New York City, the New York Transformation Department. The replacement of 'transportation' with 'transformation' was intended to convey this temporal change. As the New York activist who coined their group's name explains,

> "We wanted something clever that seemed official, that had a little bit of joy and magic to it, and also conveyed this idea of change… We could transform a street instantly. It also speaks to this idea, if just the City agency would change its thinking, literally by just one letter, right, that we could change the city much faster" (interview, 21 May 2019).

Heckling slowness

DIY infrastructure is quiet, anonymous, and can last for days or weeks; JAMs are quite different. JAM stands for just a minute – another play on words, this time a double reference. First, to the drivers who park in bike lanes saying they will be "just be a minute" and, second, to the traffic jam that a JAM temporarily creates. Brief, noisy, and tongue-in-cheek, JAMs involve a small group of people, a megaphone, signs, and safety vests (see Figure 12.3). Participants block the car lane until the car obstructing the bike lane is driven away, using the megaphone to explain this to people passing: "the bicycle lane is obstructed, we'll just be a minute"; "this car will be just a minute". They hold signs reading 'Just a Minute' and 'Sorry'. Cyclists are welcomed through the blocked vehicle lanes. Motor vehicles are told to wait for just a minute while the driver of the illegally-parked car completes their "important business".

Whereas DIY infrastructure centres on the form of street infrastructure, JAMs challenge its governance. JAMs critique behaviours that are already illegal—parking in a bike lane—but have rarely been enforced. Many JAMs have been held on Valencia Street, a key corridor between downtown and the Mission and a site of extensive activism. While plans for protected infrastructure along Valencia have long been in place, progress in implementation has been slow. The painted bike lane has frequently been used as a parking space, forcing cyclists to ride around cars into traffic, and causing regular injuries (Rudick, 2020). JAMs call out the behaviour of the drivers involved. They also call out the social norms that have supported those drivers in failing to police such transgressions and, more fundamentally, in accepting infrastructure that can so easily be driven over.

Figure 12.3. "Hold tight folks, we'll be just a minute" (Source: @SafeStreetRebel).

Slowness and speed are at the heart of the JAM. Participants challenge the slowness forced upon cyclists by cars who take up space beyond their allocated lanes. They reclaim space for cyclists to travel faster, and temporarily force cars to accept the slowness their fellow drivers create. As one commentator explains, JAMs 'force motorists to wait and experience first-hand what cyclists go through every time someone blocks the bike lane for 'just a minute" (Rudick, 2022: np). Speed is central also to the conduct of a JAM: it lasts for just a minute, and participants must move quickly:

> "Once the bike lane is clear, you need to run back onto the sidewalk and … you have the potential for colliding with bicyclists or such like that. For the JAMs, you need to be very nimble. You say 'oh there's a car run, run and run and go. No dilly-dallying'. It's definitely the action for people who are fit" (interview, 23 June 2022).

JAMs make no attempt to pass as official, and participants do not hide their identities. While members of the SFMTrA have been careful to preserve their anonymity (a key condition in

agreeing to speak to me), participants in JAMs are more open. The idea was conceived by Maureen Persico, a prominent transport activist spurred into action some years ago when she started trying to cycle with her young son to school. JAMs are coordinated by Safe Street Rebel, another loosely organized group of activists who engage in JAMs and several other activities. As the name suggests, Safe Street Rebel is more oppositional than the SFMTrA, and pursues change not by prefiguring alternatives but by challenging the status quo.

As well as traffic jams, the JAM also invokes other practices. The name echoes culture jamming, in which 'a range of tactics [are] used to critique, subvert, and otherwise "jam" the workings of consumer culture' (DeLaure and Fink, 2017: 6). While Safe Street Rebel's JAMs are not oriented toward advertising and consumer culture, they share with culture jamming an emphasis on disruption, on 'scrambling the signal, injecting the unexpected, jarring audiences, provoking critical thinking, inviting play and public participation' (DeLaure and Fink, 2017: 6). In this emphasis on interruption, JAMs operate as a form of *heckling*.

Heckling is defined as a social drama, which is evaluated by its watchers as judges (Kádár and Ran, 2015). In theatre, comedy or politics, where heckling is more common, this social drama centres on the heckled person, who has an institutionalized right to speak or perform on stage, and the heckler, the unauthorized public speaker who interrupts the public performer. Hecklers are impossible publics, undermining established hierarchies by refusing social norms about who can speak and when.

Through counter-performance, hecklers aim to affiliate themselves with the audience, encouraging that audience to shift their allegiance away from the planned performance. Hecklers interrupt and challenge, and they are often portrayed as negative, unwelcome and impolite (Campbell, 2017). Yet hecklers can also be constructive, enabling onlookers an opportunity to see more than one position at a time. Hecklers can thus make vital contributions to democratic exchange, as Mel Jordan explains:

> Institutions of public speech inscribe the heckler as anti-social, but I want us to consider her in quite the opposite way, as the very embodiment of becoming-social. Let's … think of the heckler as heroic, a kind of public speech super hero, with the ability to suspend rhetoric, preserving the right to speak out of turn. The violence, awkwardness and embarrassment of the heckle are signs of its political courage, fearlessness and agency. The heckler's interruption opens up a space for public discourse. Deprived of the heckler we would have one less method of turning passers-by into assembled publics (2011: 118).

Car drivers do not have a legal right to park in a bike lane, even for just a minute, but social norms and enforcement practices have allowed this to become a common practice. In this context, JAMs ask onlookers to switch their affiliation from double-parking drivers to cyclists. Just as Jordan argues hecklers undermine established hierarchies by refusing social norms about who can speak and when, JAMs disrupt social norms about who and what streets are for. For JAMmers as for hecklers, humour is an important tool for disruption:

> … we need more fun in advocacy. There's a lot to be angry about. And I do think you can channel that anger into all kinds of protests. But sometimes just taking and making your point with humor breaks through. Especially, you know, that's a viral tweet, right? And was shared by lots of people, and there's something really fun and funny about it. But it still makes the point that, like, this shit has to stop. You're endangering people's lives. And so my hat is off to the advocates in San Francisco who came up with this. (Doug Gordon, cf. Goodyear et al, 2022: np).

JAMs are oppositional, but they share with DIY infrastructure – and with heckling at its best – a commitment to make the city better. Commentators have described JAMs as 'defending the city', and praised the power that comes from their joyful elements (Goodyear et al, 2022):

> … in so many ways, city government is failing us, and even when we pass laws and make things happen, [when] we turn the wheels of government. We take three years to pass the Reckless Driver Accountability Act, or take 10 years to pass congestion pricing, it still doesn't happen. Government seems like it's not doing a very good job of implementing these days, and in some ways that forces citizens to go out and do direct action (Aaron Naparstek cf. Goodyear et al, 2022).

Safe Street Rebel can be understood as a kind of heckle itself, with the suggestion that rebellion is necessary to achieve safety. The group is more diverse than the SFMTrA, with more women and more people of colour. This is a conscious choice, as participants explain:

> "All my actions, especially the JAMs, if you see my Twitter feed, they're all about, we want to mentor you. We're going to tell you exactly what we learned… we break it down, we mentor people through DMs. It's all about reproducing it as far and as wide as it possibly can go" (interview, 23 June 2022).

Some members of Safe Street Rebel are fearless, bravely and loudly standing up to cars and officials. Others are more cautious, working behind the scenes on things like signs and social media. The group recognizes the different capacities of certain people to engage in activism and advocacy, and the relationship between this and street infrastructure. Protected infrastructure is needed most urgently by those that are already marginalized and vulnerable, as participants explain:

> "It's infrastructure that keeps the inner police officer out of my head. It's infrastructure that supports people whose job it is to deliver food or drive people and often those are people of colour or people who have lower economic means. So, give them what they need to do their jobs and support their families, which is loading zones and clear signage and safe places to pull over and give pedestrians and bicyclists space….
>
> The flaw [in my earlier advocacy] was thinking 'oh, we can just keep it clear and demand that police come and ticket'. It took me a while, but I finally learned something about police interactions with people of colour and I finally learned about the need for real infrastructure" (interview, 23 June 2022).

JAMs challenge—heckle—established norms about who speaks and when, about slowness, and especially about slowness for women and others who have been marginalized for too long. They interrupt the established car-based order, calling out the inequities this creates and the implication not just of officials but of passers-by in sustaining them. JAMs show that cars already exceed their authority, and that change is both possible and potentially very fast.

Shifting speed politics

> "We need to keep this momentum up" (Wiener, 2022: np).

Official responses vary. Participants report only limited police engagement with their interventions on the street, and several examples where that engagement was positive. Engagement with city planners has been less direct, but there is some evidence to suggest that these interventions have had an impact. It is important to note that both DIY infrastructure and JAMs took place alongside a wider ecosystem of advocacy and were given substantial impetus by COVID-19 (Flynn and Thorpe, 2021). But speed politics is shifting.

With respect to DIY infrastructure, official engagement has been with the objects rather than the groups deploying them – consistent with the anonymous, quiet nature of the interventions. Much of this engagement has followed publicity on social media. While some see this as an important part of the process, others would rather let the objects blend in with official infrastructure. As one participant explains:

> "What was so infuriating is that they [others in SFMTrA] would post it. And the City would say, 'Oh, we can't put infrastructure, oh it will take so much time', but the very next day, they would have crews to scrape off the safe infrastructure, they would come the very next day" (interview, 23 June 2022).

In many instances, posts and cones have been removed by City authorities. But sometimes the unofficial infrastructure proved stickier. Participants described several locations where their interventions were initially removed, but then, following media reports and public support, the City would install their own posts and protected infrastructure.

Perhaps the most celebrated of these is JFK Drive in Golden Gate Park, the site of one of the SFMTrA's first interventions. Unusually, the SFMTA allowed the DIY posts along the painted bike lane to remain in place. The rationale for this, the SFMTA explained, was that the City was planning to install their own posts there (Bialick, 2016). The SFMTA replaced the SFMTrA's posts a few weeks later. DIY infrastructure also prompted shifts extending beyond their particular

locations. One participant described a change in the rules regarding buffer space requirements around protected infrastructure, which had previously prevented the installation of soft-hit posts by the City:

> "the City said, I'm sorry there's just not enough space. And so we put some on, I think it's Folsom Street at Division, this little place where cars were double parking. We put them in there, and now I think the City essentially changed their policy as a result of it. So, there are now, many years later, official City-sanctioned delineators there. And also, they now don't require that extra space, they changed their policy because we proved that their policy was entirely academic" (interview, 17 June 2022).

With respect to JAMs, engagement with officials has been more direct, but also quite limited. In one example, filmed and shared online, participants of a JAM explain their actions to passing policy and ticket inspectors. Both are immediately convinced, one says, 'I'm totally behind you guys' (Bike Lane Protest on Valencia St, 2022).

Police have even been the object of a JAM. Seeing a police car parked in the bicycle lane, the group decided to hold a JAM as they would for any other car. When I asked how the police reacted, I was told:

> "They talked amongst themselves, I was on the megaphone at the time, so I said Important Cop Business. Sorry to block, sorry. Sorry to, you know, hold you all up. This is Important Cop Business. So, they chatted amongst themselves, probably wondering what to do, and then they drove away" (interview, 23 June 2022).

In June 2019, the SFMTA introduced a new policy: Quick Build. In the words of Mayor London Breed, Quick Build was intended "to allow the Agency to cut through the layers of bureaucracy that have historically slowed progress toward achieving the City's Vision Zero goal" (Breed, 2019: np). Two legislative amendments supported Quick Build (California Senate Bills 743 and 288), which changed the way transport projects are assessed under the California Environmental Quality Act. Guidelines implemented under SB 743 in 2018 shifted the focus from traffic congestion to reducing vehicle miles travelled, and in 2020 SB 288 exempted transit, bike,

and pedestrian projects from the lengthy reviews required for more substantial infrastructure for a two-year trial period. The focus of this exemption was on lightweight, reversible projects – very much like those installed by the SFMTrA.

The reversible nature of these projects meant they could be treated as pilots or experiments, and accordingly given much less consultation prior to their installation. As SFMTA transportation director Jeffrey Tumlin explains:

> "Because the Quick Build projects are so cheap and reversible, we can take any feedback and make adjustments … our intention is to tinker around until we get it right. Then that becomes the blueprint for a later, much more expensive construction project that will involve concrete and curb work and streetscaping" (cf. Harrison-Caldwell, 2021: np).

Advocacy groups have welcomed Quick Build, but they have also highlighted areas in need of improvement, including expanding the range of projects exempted (Tolkoff and Anzai, 2022). Some activists have been more critical:

> "It sounds wonderful and if it were done as named, it would be wonderful… [but] the Quick Build program in San Francisco is: 'we're going to have a series of meetings with the people that are on this block, most of them who drive and we're going to ask them how they feel about it and then maybe within six months will get some soft posts or something'. The money that we spend, the time that we spend on negotiating human safety, is morally reprehensible" (interview, 6 July 2022).

While far from ideal, the Quick Build program shows progress in raising the profile of temporality. In developing a policy specifically focused on speed, we can see evidence of an official recognition that policy commitments are not enough, that timely implementation is also required. In October 2022, with the initial two-year trial approaching its end, new legislation was passed to make the exemption permanent (SB 922). Introducing the new bill, Senator Scott Weiner emphasized the critical importance of speed:

> We cannot allow sustainable transportation projects to get bogged down in years of unnecessary and expensive administrative delays when we could be revitalizing California's transportation landscape now… we need to get these projects going much faster than we have in the past. We've

seen just how successful SB 288 has been in jumpstarting sustainable transportation projects – we need to keep this momentum up (Wiener, 2022).

Conclusion

> "It has to change. It's not sustainable for people that are involved and angry it's not sustainable, for a city it's not cost effective to do things one block at a time… [I don't want] to start here and … build from here … I want all of that now! … make all this stuff happen now!" (interview, 6 July 2022).

Activists and advocacy groups have fought hard to secure policy commitments like Vision Zero, which promise to redistribute speed and slowness more equally among those in cars and those outside them. The progression from policy to plans to change on the ground, however, has proved elusive. The long association between power and automobility is reflected in the apparent obduracy of the myriad norms, rules and practices through which street infrastructure and its temporalities are sustained. In the face of that obduracy, some activists have shifted their emphasis from negotiation to disruption.

DIY infrastructure and JAMs sit outside of state-led processes, they neither accommodate nor oppose the City's plans and proposals. Participants work instead as impossible publics, setting their own terms for engagement. These unruly citizens trouble both the temporalities that exist on car-oriented streets, and the temporalities of official efforts to rework them. With DIY infrastructure, citizens prefigure a different approach to speed, one in which people outside cars are provided with the infrastructure necessary to travel safely and efficiently. DIY infrastructure also prefigures an alternative approach to governance, in which City agencies responsible for that infrastructure act with urgency. With JAMs, citizens heckle car drivers who, in their own pursuit of speed, impose slowness on others. JAMs also heckle the officials who allow drivers to colonize cycle lanes in that way and, more fundamentally, the wider social norms and expectations that

sustain this. Together, these practices help to disrupt the connections between speed and cars, and slowness and other forms of transport.

DIY infrastructure and JAMs challenge the temporalities of urban governance, and particularly the idea that change is unavoidably slow. These practices reveal the degree to which slowness for pedestrians, cyclists and others outside cars is not inevitable, but the product of choices about infrastructure and its governance. While highlighting significant inertia, both DIY infrastructure and JAMs show also that these choices can be overturned. Speed for those in cars need not be prioritized and, without the social norms that have sustained car dominance, the allocation and regulation of streets can shift quickly.

References

Abram, S. (2014) 'The time it takes: Temporalities of planning', *Journal of the Royal Anthropological Institute*, 20(s1): 129-147.

Aldred, R., and Dales, J. (2017) 'Diversifying and normalising cycling in London, UK: An exploratory study on the influence of infrastructure', *Journal of Transport & Health*, 4: 348-362.

Arícan, A. (2020) 'Behind the scaffolding: Manipulations of time, delays, and power in Tarlabaşı, Istanbul', *City & Society* 32(3): 482-507.

Bialick, A. (2016) 'Beyond safe-hit posts: Tackling the challenges of engineering safer streets'. https://www.sfmta.com/blog/beyond-safe-hit-posts-tackling-challenges-engineering-safer-streets (accessed 14 December 2022).

Bike Lane Protest on Valencia St (2022). https://www.youtube.com/watch?v=kDboYpYvT2o (accessed 14 December 2022).

Boggs, C. (1977) 'Marxism, prefigurative communism and the problem of workers' control', *Radical America,* 6(Winter): 99-122.

Böhm, S., Jones, C., Land, C., and Paterson, M. (eds) (2006) *Against Automobility*. Malden, MA: Blackwell.

Breed, L. (2019) 'Building safer streets faster: Our new "Quick Build" policy', available at: https://londonbreed.medium.com/building-safer-streets-faster-our-new-quick-build-policy-92012487ce76 (accessed 22 July 2022).

Buehler, R., and Pucher, J.R. (eds) (2021) *Cycling for Sustainable Cities. Urban and Industrial Environments*. Cambridge, MA: MIT Press.

Campbell, L. (2017) 'Collaborators and hecklers: Performative pedagogy and interruptive processes', *Scenario: A Journal of Performative Teaching, Learning, Research* XI(1): 33-71.

Carlsson, C. (ed) (2002) *Critical Mass: Bicycling's Defiant Celebration*. Edinburgh: AK Press.

Carse, A., and Kneas, D. (2019) 'Unbuilt and unfinished: The temporalities of infrastructure', *Environment and Society,* 10(1), 9-28.

City of San Francisco (2021) 'Vision Zero SF Action Strategy'. https://www.visionzerosf.org/about/action-strategy/ (accessed 25 July 2022).

Cohen, A.J., and Morgan, B. (2023) 'Prefigurative legality', *Law & Social Inquiry,* 48(3): 1053– 82. https://doi.org/10.1017/lsi.2023.4

Cresswell, T. (2006) *On the Move: Mobility in the Modern Western World*, New York, NY: Routledge.

Culver, G. (2018) 'Death and the car: On (auto)mobility, violence, and injustice', *ACME,* 17(1): 144-170.

DeLaure, M., and Fink, M. (eds) (2017) *Culture Jamming: Activism and the Art of Cultural Resistance*. New York, NY: New York University Press.

Dittmar, H., and Ohland, G. (eds) (2004) *The New Transit Town: Best Practices in Transit-Oriented Development.* Washington, DC: Island Press.

Ferenchak, N.N., and Marshall, W.E. (2019) 'Advancing healthy cities through safer cycling: An examination of shared lane markings', *International Journal of Transportation Science and Technology* 8(2): 136-145.

Ferster, C., Laberee, K., Nelson, T., Thigpen, C., Simeone, M., and Winters, M. (2021) 'From advocacy to acceptance: Social media discussions of protected bike lane installations', *Urban Studies*, 58(5): 941-958.

Flynn, A., and Thorpe, A. (2021) 'Pandemic pop-ups and the performance of legality', in: B. Doucet, R. van Melik, and P. Filion (eds) *Global Reflections on COVID-19 and Urban Inequalities. Volume 3: Public Space and Mobility* Bristol: Bristol University Press, pp 25-35.

Goodyear, S., Gordon, D., and Naparstek, A. (2022) 'They paved paradise and put up a parking lot', *The War on Cars, New York.* https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwi_jticz-f7AhWjzzgGHe5aBjAQFnoECA0QAQ&url=https%3A%2F%2Fthewaroncars.org%2Fepisode-84-they-paved-r-place-and-put-up-a-parking-lot-final-web-transcript%2F&usg=AOvVaw0mxI16FaFQ_6TcdWs-l0iA (accessed 14 December 2022).

Gupta, A. (2015) 'Suspension', Theorizing the Contemporary*, Fieldsights,* 24 September 24. https://culanth.org/fieldsights/suspension (accessed 11 June 2021).

Harrison-Caldwell, M. (2021) 'How SF's Quick Build Program works around bureaucratic obstacles', *The Frisc*, 5 November 2021. https://thefrisc.com/how-sfs-quick-build-program-works-around-bureaucratic-obstacles-9ca899eb7ed7 (accessed 14 December 2022).

Harvey, P. and Knox, H. (2015) *Roads: An Anthropology of Infrastructure and Expertise,* Ithaca, NY: Cornell University Press.

Henderson, J. (2020) 'EVs are not the answer: A mobility justice critique of electric vehicle transitions', *Annals of the American Association of Geographers,* 110(6): 1993-2010.

Hubbard, P. and Lilley, K. (2004) 'Pacemaking the modern city: The urban politics of speed and slowness', *Environment and Planning D: Society and Space* 22(2): 273-294.

Jones, P., Boujenko, N., and Marshall, S. (2007) *Link & Place: A Guide to Street Planning and Design*. London: Local Transport Today.

Jordan, M. (2011) 'Heckle, hiss, howl and holler', *Art & the Public Sphere,* 1(2): 117-119.

Kádár, D.Z., and Ran, Y. (2015) 'Ritual in intercultural contact: A metapragmatic case study of heckling', *Journal of Pragmatics* 77: 41-55.

Leyendecker, K., and Cox, P. (2022) 'Cycle campaigning for a just city', *Transportation Research Interdisciplinary Perspectives,* 15: 100678.

Lombard, M. (2013) 'Struggling, suffering, hoping, waiting: Perceptions of temporality in two informal neighborhoods in Mexico', *Environment and Planning D: Society and Space,* 31(5): 813-829.

Lusk, A.C., Willett, W.C., Morris, V., Byner, C., and Li, Y. (2019) 'Bicycle facilities safest from crime and crashes: Perceptions of residents familiar with higher crime/lower income neighborhoods in Boston', *International Journal of Environmental Research and Public Health,* 16(3): 484.

Maeckelbergh, M. (2011) 'Doing is believing: Prefiguration as strategic practice in the alterglobalization movement', *Social Movement Studies,* 10(1): 1-20.

Norton, P.D. (2011) *Fighting Traffic: The Dawn of the Motor Age in the American City*. Cambridge, MA: MIT Press.

Raifman, M.A., and Choma, E.F. (2022) 'Disparities in activity and traffic fatalities by race/ethnicity', *American Journal of Preventive Medicine,* 63(2): 160–167.

Roberts, C. (2020) 'Into a headwind: Canadian cycle commuting and the growth of sustainable practices in hostile political contexts', *Energy Research & Social Science,* 70: 101679.

Rudick, R. (2020). 'Another crash on Valencia as City drags feet on safety', *Streetsblog San Francisco.* https://sf.streetsblog.org/2020/10/27/another-crash-on-valencia-as-city-drags-feet-on-safety/ (accessed 14 December 2022).

Rudick, R. (2022) 'Valencia Street 'Just a Minute' pilot protest', *Streetsblog San Francisco.* https://sf.streetsblog.org/2022/01/26/valencia-street-just-a-minute-pilot-protest/ (accessed 14 December 2022).

Schneider, N. (2014) *Vision Zero, SF*, Berkeley, CA: Institute of Transportation Studies, UC Berkeley.

Schoner, J.E., and Levinson, D.M. (2014) 'The missing link: Bicycle infrastructure networks and ridership in 74 US cities', *Transportation*, 41(6): 1187-1204.

Shahum, L. (2017) 'Safe Streets: Insights on Vision Zero policies from European cities', *German Marshall Fund of the United States*. http://www.jstor.com/stable/resrep18873 (accessed 14 December 2022).

Sheller, M. (2018) *Mobility Justice: The Politics of Movement in the Age of Extremes*. London: Verso.

Smart Growth America (2019) 'What are complete streets?'. https://smartgrowthamerica.org/program/national-complete-streets-coalition/publications/what-are-complete-streets/ (accessed 14 December 2022).

Southworth, M. and Ben-Joseph, E. (2013) *Streets and the Shaping of Towns and Cities*. Washington, DC: Island Press.

Stamatopoulou-Robbins, S.C. (2021) 'Failure to build: Sewage and the choppy temporality of infrastructure in Palestine', *Environment and Planning E: Nature and Space,* 4(1): 28-42.

Stehlin, J. (2015) 'Cycles of investment: Bicycle infrastructure, gentrification, and the restructuring of the San Francisco Bay Area', *Environment and Planning A: Economy and Space,* 47(1): 121-137.

Thorpe, A. (2020) *Owning the Street: The Everyday life of Property*. Cambridge, MA: MIT Press.

Thorpe, A. (2022) 'Prefigurative infrastructure: Mobility, citizenship, and the agency of objects', *International Journal of Urban and Regional Research,* 47(2): 183– 99. https://doi.org/10.1111/1468-2427.13141.

Tolkoff, L. and Anzai, K. (2022) 'Accelerating sustainable transportation in California', *SPUR*. https://www.spur.org/sites/default/files/2022-04/SPUR_Accelerating_Sustainable_Transportation_in_California.pdf (accessed 29 July 2022).

UN Environment Program (2020) *Share the Road Programme Annual Report 2019*. Nairobi: UNEP.

van Goeverden, K., Nielsen, T.S., Harder, H., and van Nes., R. (2015) 'Interventions in bicycle infrastructure, Lessons from Dutch and Danish cases', *Transportation Research Procedia,* 10: 403-412.

Vision Zero Coalition (2015) 'Vision Zero: Where San Francisco stands in achieving Vision Zero: One Year Progress Report'. http://sfbike.org/wp-content/uploads/2015/02/Vision-Zero-Report-2014-web.pdf?org=451&lvl=100&ite=7046&lea=3362887&ctr=0&par=1 (accessed 14 December 2022).

Vreugdenhil, R., and Williams, S. (2013) 'White line fever: A sociotechnical perspective on the contested implementation of an urban bike lane network: White line fever', *Area,* 45(3): 283-291.

Wajcman, J., and Dodd, N. (2016) 'Introduction: The powerful are fast, the powerless are slow', in J. Wajcman, and N. Dodd (eds) *The Sociology of Speed: Digital, Organizational, and Social Temporalities*, Oxford: Oxford University Press, pp 1-12.

WHO (World Health Organisation) (2019) 'Global Status Report on Road Safety 2018'. https://www.who.int/violence_injury_prevention/road_safety_status/2018/en/ (accessed 14 December 2022).

Wiener, S. (2022) 'Senator Wiener introduces SB 922 to expedite sustainable transportation projects'. https://sd11.senate.ca.gov/print/967 (accessed 29 July 2022).

Wild, K., Woodward, A., Field, A., and Macmillan, A. (2018) 'Beyond 'bikelash': Engaging with community opposition to cycle lanes', *Mobilities,* 13(4): 505-519.

Zhu, M., Li, H., Sze, N.N., and Ren, G. (2022) 'Exploring the impacts of street layout on the frequency of pedestrian crashes: A micro-level study', *Journal of Safety Research,* 81: 91-100.