



Community Bike Workshops in Australia: Increasing Demand for Cycling Through Mutual Aid

SIMON BATTERBURY^a, CARLOS UXO^b, MARGOT ABORD DE CHATILLON^c, STEPHEN NURSE^d

a. University of Melbourne, School of Geography, Earth and Atmospheric Sciences, 221 Bouverie St, 3010 VIC, Australia

b. Monash University, Wellington Road, Clayton, 3800 Victoria, Australia

c. Labex Futurs Urbains, Université Gustave Eiffel, France.

d. Independent scholar

ABSTRACT: In this article, our goal is to analyse a small but growing movement of community bike workshops or 'bike kitchens' in Australia. Bicycles are reliable forms of 'active' travel for short and moderate length journeys, in an age where carbon emissions must be reduced and reuse, recycling and refurbishment of everyday objects like bicycles are increasingly identified as key elements of sustainability transitions in western countries. A community bike workshop is a not-for-profit community-based organization formed around the restoration and maintenance of bicycles. From interviews, surveys and participant-observation over several years in Australia and in Europe, we show how community bike workshops challenge consumerism and reliance on cars (termed, automobility), offering an innovative pathway to increasing bike ridership and acceptance of this mode of transport in urban environments. We find that they additionally support *vélonomie*, developing confidence among riders to repair a bicycle and to ride it safely. Bike ridership is slowly expanding in Australia, a nation of high carbon emissions per capita and high vehicle ownership. We demonstrate that repair workshops help to increase

'demand' for cycling, by encouraging confidence with mechanical tasks, greater expertise, and convivial sharing of tools and knowledge. As part of increasing ridership and hence demand for cycling provision, they operate in very different ways to more expensive 'supply-side' interventions that tend to dominate planning interventions. Supply-side policies prioritise costly bike lanes, junction treatments, safer streetscapes and bike share schemes. This agenda is favoured by urban authorities, engineers, and planners. By contrast we characterise community workshops, including those we have volunteered at in Australia, as 'mutual aid' organisations, following Kropotkin. We show that although they still have quite limited geographical coverage in Australia centred on Melbourne, they are making a modest contribution to an affordable, more sustainable, and active transportation agenda. In addition, their participants can benefit from their activities across gender, race, age, wealth, and wellness.

KEYWORDS: Cycling; Australia; mutualism; community bike workshops; *vélonomie*

1. INTRODUCTION

1.1 Demand for cycling

The re-engagement with bicycle transport in Western cities in recent decades has accompanied serious concerns over air pollution, carbon emissions, and the need to maintain health through active travel (Buehler & Pucher, 2021). Bicycles tick many boxes: riding is relatively cheap and certainly healthy (Götschi et al., 2016), and shorter journeys are more rapid than other travel modes. Bikes are a healthy and practical option for many journeys in a carbon-constrained world. They are a relatively simple technology, in some respects a technological dinosaur, having survived since the 1890s because they cost very little to own, store or run and offer exercise as well as transport. Bicycles are reliable, in an age where reuse, recycling and refurbishment are increasingly important elements of sustainability transitions. A good quality bike can be repaired, reused and rebirthed many times, as can most of its components (Nurse, 2021; Decker, 2023). Few of its components require replacement with new items.

Despite this, re-engineering cities to accommodate bicycles, and encouraging their use, has proceeded very slowly outside of often-cited European examples. The drive to increase bike use as a sustainable and clean form of transport has two major dimensions. The first, familiar to transport planners, is to *supply* better bicycle friendly infrastructure, including routeways and cycle paths, parking, and share-bike schemes, to make cycling easier, less hazardous, and also more enjoyable. This is the work of government authorities of dif-

ferent types and cycling budgets and the scholarly literature are overwhelmingly slanted towards providing better cycling infrastructure (Buehler & Pucher, 2021). Bicycle manufacturers and bike shops are also part of this supply-side.

Unfortunately, however, supply-side investment and government actions do not automatically lead to any large increase in bicycle use. The second dimension is important here: to increase the *demand* for bicycle use through habitual and accepted transport behaviours, involving education and other 'soft' initiatives that gently nudge cultural and social change in how we travel, while recognising social diversity in terms of age, race gender and ability (termed bike equity) (Misra, 2018; Lugo, 2018). The agents for change here are most commonly located in the community sector and across civil society or involve schooling and demonstration of the utility of cycling for the individual. These so-called 'soft' measures are oriented towards the 'human infrastructure' (Lugo, 2018, p. 16) and behaviour change rather than dedicated, material infrastructure for cyclists.

It is the significance of the second, supply-side element that we hope to demonstrate in this article. Our modest goal is to analyse the history and diversity of a single form of demand-side activity: the community bike workshop or bike kitchen. All community bike workshops stock salvaged parts and components to assist bike repairs, and maintenance, although they function in different ways, as we will show. But they are also social entities or 'fields', in which mutual aid, helping others, and convivial social networks operate. Our geographical focus is Australia, where there is a significant research

gap in understanding and analysing the significance of these workshops. We argue that there is great power in community level initiatives supporting cycling, building awareness of how bikes can be maintained and ridden safely. We trace the arrival, persistence, and functioning of community bike workshops in Australia as a contribution to understanding bike equity and the importance of people-centred and convivial social networks of bike spaces (Batterbury & Manga, 2022).

1.2 Methods

Our study follows a mixed-methods approach. We conducted interviews, some published (Nurse, 2021; Abord de Chatillon, 2022) and unpublished (Batterbury from 2022–2024) and assembled prior studies of bike riding and repair in Australia. Batterbury, Uxo, and Nurse have conducted participant-observation in one workshop, WeCycle, over five years, where they developed good relationships with participants (cyclists, members of the public receiving and fixing bikes, and volunteers). They have alternated between positions of insider, outsider, and “in-between” in workshops (Milligan, 2016). Prior to this, Batterbury, Uxo, and Nurse observed the progressive revival of bicycle transport in the city of Melbourne over several decades.

Abord de Chatillon conducted 467 surveys in Melbourne on cycling and repair, asking cyclists about the type of bicycle(s) that they owned, their cycling practices, repair skills, ownership of tools, frequency of visit to a bicycle shop and some details on the last bicycle breakdown and repair that they experienced (2022, p. 463). Some selection bias typically associated with online survey distribution was reduced by distributing the survey on the streets, at red lights when cyclists were stopped during rush hour. This meant most respondents ended up being frequent cyclists, employed, and living in central urban areas (55). Some 50.3% of respondents were male, and 47.8% female; 29% belonged to the highest Australian income quintile and only 10% to the lowest quintile (291). Data was analysed with the software R and supplemented with 64 semi-structured interviews with some regular and less-regular cyclists, the latter being less familiar with bike repair, and volunteers at community workshops and employees of bicycle shops in Melbourne. Interviews were coded with nVivo, through identifying recurring themes. For instance, the following quote received the code “progress” in reference to the learning of repair, and the study of how a repair skills training could transform the riding experience of a cyclist: *“I probably inflate my tyres more regularly now. I didn’t realise that I needed to do it so often. I was riding around with probably close to flat tyres, let’s be honest”* (Abord de Chatillon, 2022, p. 248).

Batterbury (2024) and Abord de Chatillon’s work overseas has included interviewing people to gauge their repair and workshop experiences in France, Belgium, Austria, Germany, the UK and the United States, providing an international context that helps understand the specificities of Australian bike repairs and workshops.

2. WHAT IS A COMMUNITY BIKE WORKSHOP?

Community bike workshops (CBWs) or ‘bike kitchens’ are organisations, largely located in cities and larger towns, where the practice of bicycle repair and maintenance happens. Unlike commercial bike shops, people can fix their own bikes and learn a range of practical repair skills. In other workshops, bikes are repaired by volunteers and then offered freely or cheaply to people who need them. Their major goal is always an extension of the useful life of bicycles and components using second-hand and some new components. Workshops assist the use of bicycles as modes of transport, but they share many values with other organisations in the community and repair economy, as we will explain. This means they are important players in socioeconomic transitions to lower emissions and

healthier mobility options, with some handling thousands of bikes a year. They often go unrecognised for this work.

CBWs are usually established by activists and community-minded cyclists, sometimes with limited support from local councils and city authorities, donors, or non-profit organisations. CBWs are also agents in the circular economy. Interrupting the waste stream to redirect unwanted bikes and components, bringing them back to life, is a worthwhile activity in countries where consumerism is increasingly criticised. Donated or scavenged bikes are re-used creatively and cheaply with a DIY ethos, avoiding too much new consumption. As part of everyday operations in most workshops across Europe and beyond, some scavenged and donated bikes or parts may also be sold to support ongoing workshop costs, but rarely for high prices. This is particularly the case for workshops that operate a social enterprise model, usually with a small number of paid staff.

Another distinguishing feature is that, unlike bike shops or commercial cycling outlets, workshops generally have very modest financial turnover, and low or minimal labour costs. Worldwide, our surveys of over sixty workshops have found the majority operate with a volunteer workforce, although in some countries like France, subsidies given to the non-for-profit sector allocated at different institutional levels (national, regional, or local) support some paid employees (Batterbury et al., 2022). In most cases, therefore, volunteers in these workshops attend because they want to participate in them, as part of ‘mutual aid’, finding convivial ways of working together, using tools and resolving technical repair problems in a supportive way. Of course, compared to more structured workspaces, community bike repair varies widely in terms of volunteer knowledge and commitment, depending on the availability of resources and people.

Workshop numbers have grown since their origins in the 1980s and 1990s. They are widespread across Europe and the Americas, and they are also present in many other parts of the world. The largest concentration is in France, with over 470 of different types (Panorama, 2023). Over 200 of those are networked through *L’Heureux Cyclage*, which coordinates events, logistics, and learning between workshops, and these repair or repurpose over 100,000 bicycles yearly (Panorama, 2023). Belgium is also a country that counts many CBWs, including eighteen located in Brussels, such as *Cycloperativa*. Ten bike workshops operate in Austria, with at least four in Vienna. They include WUK (*Werkstätten- und Kulturhaus*, House for Workshops and Culture) which, established in 1983, is one of the world’s oldest (Teppner, 2020), perhaps only surpassed by Bike Edmonton, in Canada, established in 1980 (Bike Edmonton n.d.).

The community bike workshop movement exists in Australia too, although it has attracted very little attention from social scientists and transport planners. A new online map of bicycle recyclers across the country maintained by Bart Sbeghen identifies approximately thirty Australian workshops, a number that is growing annually (Sbeghen, n.d.). They are concentrated in Melbourne, where the authors have all volunteered or worked, but they now extend across other cities. After introducing our key theoretical concepts and ideas in sections 3 and 4, stressing the mutualism of the workshop movement, we then clarify the contributions of workshops to sustainability, active travel, self-help and solidarity networks in Australia.

3. MUTUAL AID, CONVIVIALITY AND VÉLONOMIE IN THE BIKE SECTOR

There are four concepts that frame understanding of community bike workshops: mutualism, conviviality, task groups practising repair, and *vélonomie*. We introduce them in turn.

Although, as a practice, mutualism predates its incorporation into the anarchist movements, it “designates a group of anarchist philosophies that envision non-governmental society and non-capitalist commerce as the product of bilateral agreement and mutual guarantees between free individuals and social groupings” (Wilbur, 2019, p. 3). While French thinker Charles Fourier, the journal *New Harmony Gazette* in the United States, or the *Société du Devoir mutuel* in Lyon used different variations of the term, the first well-developed articulations of the concepts of mutualism and mutual aid can be traced back to Pierre-Joseph Proudhon and Peter Kropotkin in the 1800s.

Proudhon appropriated the term mutualism to propose “a form of market socialism” based on reciprocity of credit, and a Bank of the People which would allow everyone to access free credits (Shannon, 2019, p. 100). He also advocated for the establishment of non-hierarchical collectives similar to contemporary worker cooperatives. In turn, Russian anarcho-communist Peter Kropotkin considered in his seminal work *Mutual Aid, a Factor of Evolution* the role of mutual aid in the animal world, and in human societies. Kropotkin posited that “bitter struggle for the means of existence, among animals belonging to the same species” could not be considered “the dominant characteristic of struggle for life, and the main factor of evolution”, as Darwinists (but not Darwin himself) asserted. Instead, he argued, “animal species, in which individual struggle has been reduced to its narrowest limits, and the practice of mutual aid has attained the greatest development, are invariably the most numerous, the most prosperous, and the most open to further progress” (Kropotkin, 1902, pp. vii, 293). Similarly, Kropotkin concluded that mutual support, rather than mutual struggle, played a leading part in the progress of humankind.

Subsequently, the concept of mutualism had a “long, complex and contentious history” in the anarchist tradition (Wilbur, 2019). In any case, mutualism should not be exclusively framed as an anarchist concept, as it has been adopted (and adapted) by movements outside that ideology. For example, polymath thinker Ivan Illich claimed that tools, used as part of growth and capitalist expansionism, had become monopolised in the hands of industrial production and “integrated at the service of a small élite”. In order to develop a more equitable society (including more equitable transport), based on “participatory justice”, Illich proposed the use of convivial tools, meaning technology easy to use and to transform, and accessible to everyone: “A convivial society should be designed to allow all its members the most autonomous action by means of tools least controlled by others” (Illich, 1975, pp. 23, 30, 86). As Linnea-Møller more recently points out, Illich also saw the bicycle as a form of convivial transport, which can “be autonomously operated and repaired while not constraining the time and space of others”. Linnea-Møller also notes that the “speed-sceptic work of Illich has been translated into contemporary degrowth discourse”, specifically in regard to the need for equitable transport. The concept of ‘convivial tools’, she adds, relates to the value of ‘autonomy’, central to degrowth approaches, “...as it refers to technologies that are simple to understand, communally owned and democratically developed based on the active involvement of the users” (Linnea-Møller, 2023, p. 139).¹

The anthropologist Paul Richards, building on Durkheim, suggests the formation of ‘task groups’ based on shared material practices, like cycling and repair, contributes to shared, embodied capacity in a social domain (Richards, 2010). Individuals develop technical capacities and beliefs in what they are doing, leading the context of this article to their progres-

sive enrolment in the community workshop as a task group and cycling as a broader, shared activity. Tools, practices, and conviviality, are an anchor, along with the bikes themselves as a material object (Dant, 2005).

Illich prefigured societal concerns about the impact of modern technologies inaccessible to common citizens, more recently articulated by Andrew Stirling and Maria Puig de la Bellacasa. Stirling analyses how the dynamics of power in science and technology tend to favour incumbent interests (for example, car use), and focuses on the way these socio-material incumbencies are reinforced and reproduced (Stirling, 2019). In turn, Puig de la Bellacasa argues that enduring, simple technologies have a place in a decarbonising world, adding that “foregrounding the importance of care, maintenance and repair to the very material sustaining of the world is a step in challenging teleological, progressive, shiny ideals of innovation” (Puig de la Bellacasa, 2017, p. 210).

A final term that closes the circle around what workshops do, is the French neologism ‘*vélonomie*’ (from *vélo*: bicycle + *autonomie*: autonomy). Clearly linked to the previous concepts, it is sometimes translated as ‘velonomy’ (and should not be confused with ‘velonomics’, which relates to the economics of cycling). *Vélonomie* refers to “the acquisition of autonomy on a bicycle through the learning of various skills that facilitate cycling” (Abord de Chatillon & Eskenazi, 2022). In a broader sense, *vélonomie* establishes a link between the bicycle, the cyclist, and, importantly, the social environment in which cyclists move (in which they also purchase and maintain their bicycles), emphasising the need to be proficient in technical operations (such as learning to change gears or to carry out repairs) but also societal codes (road user interactions, perception of cyclists, etc.) (Abord de Chatillon, 2022).

4. VÉLONOMIE IN AUSTRALIA

Australia’s long travel distances, even within some towns and cities, and its strong automobile culture have meant *vélonomie* lags behind other affluent nations. The bike once had more importance in Australian cities, with several bike manufacturers spread across the major ones, until the Second World War and the rapid rise of the motor car. Today, however, cyclist modal share of transport is much lower than in the early 20th century, accounting for 1% of daily trips (Butterworth & Pojani, 2018), reaching 1.7% across Melbourne (Pearson et al., 2023). It is higher in the inner cities, estimated at 3.7% in Melbourne by Butterworth and Pojani, and among younger age groups. Other sources suggest the Melbourne Central Business District and inner suburbs have over three times more cyclists than in the outer suburbs (Pucher et al., 2011).

Despite this, there has been a notable uptake of interest in riding, beyond inner city commuting and trips to school in recent years, echoing the “return of cycling” observed in the past decades in European countries (Héran, 2015). Pearson et al. (2023) suggest “substantial latent potential in cycling, but low participation”. The COVID 19 pandemic expanded ridership since local exercise was permitted on nearly empty roads in locked-down cities in 2020 and into 2021, and there was also a temporary increase in bike sales and use, with some supply shortages even emerging in Australian bike shops. However, this comeback brought into question the resources that cyclists have available in major cities when it comes to maintaining their bicycles, especially given the rising living costs after the COVID 19 pandemic. The rise of the gig-economy has also meant an influx of Chinese-made ebikes, now present in all major cities and largely used for food deliveries. Ebikes need some specialist maintenance, but outside of this sector, most repairs to the bikes commonly found in Australia can still be done with fairly basic tools.

1 For a comprehensive explanation of different understandings of “autonomy” see Kerschner et al. (2018).

Ridership is far from equal across the numerous groups making up Australia's urban populations. A survey of over 700 individuals in Melbourne in 2021-22, to gauge attitudes towards riding a bike, revealed concerns about fear of motor vehicle traffic (among 56% of respondents), collisions, and bad weather (not present in all Australian cities) (Pearson et al., 2023). Another study addressed the attitude to cycling among the Culturally and linguistically diverse (CALD) populations in Melbourne (Law & Karnilowicz, 2015). 'Soft' factors like cultural norms influence the propensity to cycle (Ashmore, et al., 2020; Welsch et al., 2018). Cycling forms part of social identity, class and status (Aldred, 2013; Boterman, 2018), and participation rates are always unequal between men, women, and by age and ethnic group (Aldred et al., 2016). Law & Karnilowicz found women from Arab backgrounds had the least propensity to cycle and have high levels of social exclusion, sometimes restricting them to off-road leisure trips with children. Contemporary supply-side planning policies and measures have led to the development of cycle lanes and road treatments across Australia that are more inviting for novice cyclists (Pucher et al., 2011). But we want to stress again, along with Adonia Lugo (Lugo, 2018) and others, that community bike workshops are about something different: not 'supplying' better streetscapes but *increasing demand* for cycling more aligned with enabling diverse populations to cycle. We see this as a key issue for sustainable urban mobility transitions: encouraging people to adopt cycling as a culturally acceptable and healthy alternative to the car or even to public transport, in ways that suit their budgets, time, and personal circumstances. Community Bike Workshops are one place where *vélonomie* is nurtured and demand for cycling increased, as part of 'mutual aid' and 'conviviality'.

'Convivial tools' are needed to repair a bicycle, along with confidence and skills, obtained through practical learning. Some Australian cyclists have these skills, but many lack them. For instance, one of our recent surveys found that 37% of Melbourne cyclists felt confident with general bicycle repair but 18% do not. Some skills and tools are very widespread, such as those required for inflating a tyre and repairing a punctured inner tube, whereas others that are needed for less frequent operations, such as wheel truing or bottom bracket maintenance, are not as common (Abord de Chatillon, 2022). CBWs thus contribute to bicycle repair by providing complementary tools and repair advice to individuals or households that may not have access to them otherwise.

We have observed that learning in Community Bike Workshops is by and large non-hierarchical and aims to be reciprocal in nature with volunteers able to pass on their knowledge to others after a few sessions. This is made possible by the high variety of skills needed in a workshop from interacting with customers to book-keeping, receiving and delivering bikes and spares, food preparation, parts-sorting, cleaning bikes, and all aspects of bike repair. The "Do It Yourself ethics" (Furness, 2010, p. 141) of workshops prioritise bicycle repair and recycling, but convivial friendships and social relationships can also emerge.

Generally, the larger the Community Bike Workshop, the better the expertise, range of tools and ability to cope with advanced bike technologies such as hydraulic disc brakes, hub gears and thru-axles. Cheap poorly manufactured bikes, and high-end super-lightweight racing bikes, are less favoured for recycling or reuse. As noted, electric bikes need additional skills to repair and maintain. Workshops may divert these to bike shops or obtain mutual aid from other volunteers.

5. EXAMPLES OF MUTUAL BICYCLE AID ACROSS AUSTRALIA AND IN MELBOURNE

The history of CBWs in Australia goes back to the 1990s, largely without government support. Positive outcomes

for community, equality and the environment mean that today local Australian councils and nonprofits encourage and cooperate with CBWs, realising their value and often assisting them by offering premises, small community grants, or insurance. The Bicycle Garden in Sydney, for example, is co-located with a community centre supported by the City of Sydney, and the workshop space fulfils several different functions including a bike skills training programme. Bikes are perceived as «a tool for social change» (personal communication, March 1, 2022). The ReCyclery in Canberra operates in a similar way, co-located in an environmental centre. Like subsidised public transport, the presence of CBWs in a neighbourhood is an environmental nudge or lubrication, gradually changing behaviours (Molsher & Townsend, 2016), making donation of unwanted bikes simpler, as well as improving repair skills.

Australian workshops have yet to attain the coverage and size of their French or Belgian counterparts. The recent study of Melbourne bike riders by one of the authors found that only 12% of them had heard of bike workshops (Abord de Chatillon, 2022). Community Bike Workshops in Australia are what Gibson-Graham call 'prefiguring' organisations (Gibson-Graham, 2006; Schiller-Merkens, 2024), well ahead of the game in developing mutual aid, and showing what can be done by committed people, but they are still few in number. Australia is still far behind many other Western world countries in movements away from private motorised vehicles. As fuel restrictions and the rise of electric vehicles (EVs) sweeps across Europe and North America, these trends are much slower to build in Australia and there is still great cultural attachment to utility vehicles ("utes"), sports utility vehicles (SUVs), and the sanctity of individual motoring even for short distances (McCracken, 2020; Clarsen, 2017; Bissell, 2018). Outside the major cities, public transport, particularly trains, have poor coverage. Another trend is that teenagers commonly abandon bikes as they transition to automobility, which happens more quickly in low density, hilly or subtropical cities like Sydney and Brisbane than it does in Melbourne. Generally, where the weather is difficult or the terrain too hilly, there are fewer cyclists to operate and to patronise workshops.

Our research has found that workshops have sprung up in nearly all large Australian cities, and some smaller ones, but with varying success. Depending on what definitions are used, Tasmania has only one, and there are almost none open to the public in Queensland. Some of the newest are the Bicycle Canteen in Wagga Wagga, New South Wales, and various youth support programs have emerged in suburban locations and on university campuses. Melbourne, with by far the most workshops (eight), is beginning to close the circular economy for bikes a little, with more diverted away from landfill or liberated from back yards. Of course, as it happened with some forms of valuable E-waste, there are limits to supply of good quality used bicycles that can be refurbished.

Melbourne's workshops alone exhibit a diverse range of purposes and operational models. Collectively, though, if their social value is included, they are beginning to make a significant contribution to addressing welfare and sustainable transport needs across the city.

Unlike in Europe, workshops that simply serve as spaces open to the public where individuals can maintain their own bikes and learn new skills are less common. Instead, each Melbourne workshop has a specific focus and purpose and developed autonomously. For instance, some like Back2Bikes operate as social enterprises, while another, Dr. Cranky, supports cycling education for younger school children and provision of bikes in mobile 'Bike Hospitals' in schools (Antonio & Sbeghen, 2017). Dr. Cranky's self-evaluation shows 80% of kids who never rode a bike, did so at least once a week after

receiving one from their project, and the majority of recipients then rode an average of three times a week (Dr Cranky's, 2017). Another sells refurbished bikes obtained from arrangements made with two retail chains. The Bike Shed is Melbourne's oldest, founded in the 1990s (opinions differ on the exact year). It is located in an urban eco-park. The Shed allowed self-repair for decades, and this continues in limited form while the main emphasis has shifted to repairs for customers, with at least one paid staff member (Bugedo Caroca, 2021). Income from bike sales and repairs also subsidises its other charitable bike activities.

WeCycle, a small charitable association fixing and distributing bikes for people in need, is another example. All of the authors have volunteered here. It was founded by two locals, the late Craig Jackson and Gayle Potts, in 2017 in the inner northern suburbs of Melbourne. The area served by the workshop is diverse, containing many post-Second World War migrants, many from Greece and Italy, and the wider suburbs have more recent arrivals from the Middle East and from East and South Asia. In recent years the immediate area has undergone extensive gentrification, being four to eight kilometres from the Melbourne city centre, and well connected by transport networks. The inner north is one of the most bike-friendly parts of Melbourne, relatively flat and with several off-road paths for connectivity and commuting.

The WeCycle project began by refurbishing bikes in a garage, and then donating them in working condition to people in need. Over the years, this has evolved into a larger project, retaining the same purpose, comprising a team of approximately fifteen rotating volunteer bike fixers. WeCycle has also developed relationships with social care agencies, who assist new asylum seekers and refugees in need. These agencies pass on to WeCycle requests from families and individuals wanting and needing bikes, which are gradually prepared and delivered to them. The element of mutual aid in this relationship is very clear, and this service is not provided by government departments.

The project operates from a small building owned by the local council, who leases it for a nominal fee. It is a convivial, if slightly chaotic, space where disassembled parts and bikes in progress are stored and worked on. The budget is lean; major costs are insurance and consumable parts and supplies, like tyres, brake pads, grips, chains and cables. These are sometimes paid for by community grants, or by selling a few unwanted bikes at modest prices. All labour is carried out by volunteers, comprising people with diverse abilities, and different ages, genders, and ethnic backgrounds, who work once or twice a week. The work is carried out in a mutually supportive way, sharing tools and know-how. There are occasional frustrations that need to be resolved, these frequently being lack of space and difficulties with waste disposal or recycling, problems shared with many workshops across Europe (Batterbury & Vandermeersch, 2016).

Members of the management group have different responsibilities – ordering spares, maintaining legal status of the association, treasury and accounts, liaising with social care agencies, or delivering bikes. Unwanted bicycles or parts are donated to WeCycle, many by residents of Darebin municipality, where the workshop is located. Bicycles are assessed following a Bicycle Repair and Safety checklist and repaired if feasible. One volunteer is responsible for filing repair tasks for client families; based on the requests received, some volunteers work on a number of bicycles for a particular family or individual. Meanwhile, other volunteers tidy, clean, dismantle bikes or help people who arrive at the shed wanting assistance with minor issues such as punctures. The number of bicycles reconditioned by WeCycle volunteers has increased over the years. Commencing at 80 bicycles annually, the figure surged to 185 bicycles delivered to clients in 2022

and 249 in 2023, with an additional 35 sold to the public. Notably, demand from social care agencies has increased, and clients may experience a delay of up to six months before their requests for bicycles can be fulfilled. Other workshops have helped to fill this demand.

Connecting recipients with their bikes is sometimes challenging given Melbourne's large size. Many of the bike recipients live or are given temporary housing by non-governmental and resettlement agencies in distant suburbs; due to this, they are unable to visit the workshop, which unfortunately reduces convivial ties to the project. Furthermore, many of the clients are new arrivals with little English; while some WeCycle volunteers speak languages other than English (French, German, Spanish, Bahasa, Farsi, Kurdish, Chinese), this can sometimes create challenges.²

Additionally, WeCycle provides free bicycle check-ups once a month, through an agreement with the local municipality, which funds these sessions. Local residents can have their bike looked over by the team of volunteers, with minor tuning if problems can be solved at the same time. These sessions, though, provide more than repairs, as they develop *vélonomie*, the sense of cycling self-confidence, empowerment and autonomy explained above. They also give the community workshop much needed visibility – some of WeCycle's volunteers once attended one of these sessions and later decided to join the project.

WeCycle, like many other bike workshops, faces a number of challenges. Financially, its reliance on grants or cash donations became more precarious in the aftermath of the COVID-19 pandemic. The project is also dependent on local municipalities continuing their support policies for community organisations, given their own evolving staffing and budgetary situations, and it also experiences some turnover in Council liaison officers, and its own volunteers. While the project was co-funded by a man and a woman, and the committee includes two female members, female volunteers are still a minority.

The WeCycle spatial network consists of the workshop as a hub, but with wider networks forming its 'bike space' (Batterbury & Manga, 2022). Its 'human infrastructure' of volunteers, its task group, is spread across the local area, and the 'clients' come from a much wider region again. Some of them live up to 40 kilometres away from the workshop and it is in their localities that they ride their bikes. Consequently, evaluating the impact of WeCycle activities on 'demand' should consider their role in providing mobility in more distant local authority areas like Hume and Whittlesea. Anecdotal evidence is that WeCycle bikes are used for commuting, trips to school, and leisure, and occasionally they are returned for servicing. However, a detailed assessment of the use given to bicycles once they are delivered to clients is still needing a more detailed evaluation.

6. CONTRIBUTIONS TO SOCIAL TRANSITIONS AND MUTUAL AID

There are three major findings revealed through our participation in, and research with, Australian bike workshops.

6.1 Workshop coverage

The ideas of Kropotkin (1902) and Illich (1975) offered generalised models of a better society, presumably with the expectation of achieving broad impact across the different societies they discussed through convivial forms of mutual aid. In reality, the convivial and mutual workshops we have

2 WeCycle has worked with communities from the Middle East, the Horn of Africa, South and Southeast Asia, and Ukraine as well as established city residents.

uncovered in Australia are relatively few in number and have limited spatial coverage. While their efforts to increase 'demand' for cycling are noticeable. They have not catalysed a widespread transition towards increased cycling or to any form of widespread 'system change' in transport modes, as the existing data on low cycling mode share reveals (Pearson et al., 2023). This is in stark contrast to another example of 'system change' – the Australian renewable energy sector has developed very rapidly across the country in just over a decade, with many fossil fuel power stations now retired and with 40% of energy needs now sourced from renewables (Clean Energy Council, 2024).

Nonetheless, Australia's bike workshops continue to welcome and engage those already passionate about bikes, or those who become attracted to their activities. Each year, CBWs give bikes, likely numbering in the low thousands, to numerous individuals across Australia who genuinely need them – a significant contribution to bicycle equity. In terms of *vélonomie*, they increase it widely, in what constitutes a contribution to a demand-side sustainable mobility transition. We have observed instances where workshop attendees initially timid about repair skills gradually gained confidence over time, transforming fear of tools into joy. CBWs also serve as outlets for mutual support, a characteristic present to varying degrees in Australia's working-class suburbs and inner cities among different ethnic groups. The materiality of tools and bikes can become a focal point for channelled passions and commitment to community causes, with an adjacent interest in tool libraries among the same people. However, involvement in CBWs is sometime transitory, with volunteers redirecting their efforts and passions due to life changes, and bike riders transitioning from bike riding to other transport modes. Mutualism is always in tension with the need to earn a living and to sustain other social relationships in the capitalist Australian city.

6.2 Workshop transitions

A second issue for enabling societal transition is whether convivial relationships can be maintained in workshops that adopt more commercial practices over time. There are already variations in Australia between large and well-established workshops and smaller and newer ones. The critical moment is when workshops begin to engage employees rather than volunteers, paying them from bike sales or from grants. Then, workshops can overlap with what bike shops offer. They need to change their official status so that they can be officially registered as social enterprises or charities with staff, and they must pay employee benefits and other contributions under Australian employment law. This transition has occurred at two CBWs located in the inner North, the Bike Shed at CERES described above, and Back2Bikes in South Melbourne.

Back2Bikes, established in 2012, started operating, equipped only with a box of tools, on the veranda of another social organisation. Since 2017 they have occupied a large shed, carry out bike services and bike training for a fee, and provide free bikes to charitable organisations. Worldwide, organisations like Bike for Good in Glasgow, Scotland, which started as a market stall in its first year and now occupies two substantial warehouses, have also achieved this transition through organised bike sales, servicing of the city's share-bike fleet, training, and various grants (Batterbury, 2024). This social enterprise model is, of course, a balancing act between commercial viability and mutuality. Experimentation with modes of functioning is normal, to maintain financial viability, but professionalisation brings costs, and particularly the need to maintain regular income.

Other workshops stay small and reach far fewer people. They do not seek to achieve growth in any of their measures. Mutuality is sustained, but not increased, either because of real

constraints on operations or because of the wishes of the key participants. This is the model WeCycle has opted for.

6.3 Gender and diversity

A third concern is vital efforts to counter the male-dominated aspect of bike repair, and to diversify bike organisations across the country. A previous study among Melbourne bike users and repairers confirmed that repair and maintenance are largely male activities; less than 10% of professional bike mechanics are women. The study documented actions (largely) by men in bike repair settings that include giving unwanted attention to female clients, making assumptions, and denial of women's repair expertise (Abord de Chatillon, 2021). These issues are increasingly acknowledged within cycling workshops as disempowering, with some of them providing sessions dedicated to women and gender minorities, like ChainLynx at the Bicycle Garden in Sydney or Cycle Jam at the ReCyclery in Canberra. Most workshops produce and enforce codes of conduct or provide training for a reflexive awareness of gendered behavioural norms and other power inequalities.

Even in workshops that bring some attention to the status of women and try to implement the conditions for them to be welcome in repair spaces, they are often relegated to tasks other than mechanical ones. 'Tools' become less convivial in this instance. Women are frequently in charge of administrative tasks or customer service, something that they may have chosen themselves, if they are often less experienced when it comes to bicycle mechanical repair and maintenance. Uneven gender roles need to be addressed, as well as the capacity that members of each workshop have when questioning these roles. Roles and expectations have often emerged from the whole life of each volunteer, developing since their childhood (Sayagh, 2018).

In addition, in France and Australia, Abord de Chatillon (2022) found less affluent riders more often own bike tools and are more confident at repair. They repair their bicycles themselves more frequently, and resort more often to repair in community bike workshops. Developing and funding more workshops therefore addresses an important dimension of social inequality and diversity for these groups. In addition, there are other inequalities if richer urban jurisdictions with more affluent riders are the places where good infrastructure and dedicated cycle lanes are concentrated (Stehlin, 2019; Hoffmann, 2013).

7. CONCLUSIONS

In this first study of the arrival and functioning of community bicycle workshops in Australia, we have shown that they have small but important contributions to sustainable mobility and to active travel in Australian cities. We found they are most advanced in Melbourne, a city with other pro-cycling initiatives and an urban core conducive to both regular cycling and community initiatives.

While Australia is far behind France or Belgium in the establishment and operation of workshops, interest in CBWs, reflected in the number of organisations, has grown. While there is widespread variance in the uptake of cycling between cities and neighbourhoods, we also found that increasing cycling use requires much more than the provision of infrastructure, which we have here termed supply-side investment.

Engineering 'demand' for cycling through 'human infrastructure', is vital for any form of sustainable mobility transition. This includes the social relations of mutual aid and conviviality that are supported in community bike workshops and associated organisations that increase demand and interest in cycling as a mode of urban transport. There are remain-

ing concerns about representativeness and gender equalities among workshop volunteers and clientele.

We recommend offering more support to community bicycle workshops, through providing premises or operational costs. Such assistance is relatively cheap and worthwhile compared to major supply-side investment in safe cycle lanes and parking. We encourage those involved in transport planning in Australia to recognise and increase investment in these small, convivial, cost effective, and passionate spaces. In terms of research directions, we have only begun to uncover the diversity and strengths of the community bike workshop movement in Australia. Future research can explore the use of bikes acquired and repaired at workshops in a more systematic way, recognising that bicycle use and reuse are very much part of the Australian circular economy.

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