Heat Stress and On-Demand Work:

The Experience of Food Delivery and Courier Cyclists

UTS Climate Justice Centre
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Submission to the Inquiry into the Victorian On-Demand Workforce

Background

A research team based at the Climate Justice Research Centre at the University of Technology, Sydney (UTS) are completing a research project examining the issue of heat stress for different groups of outdoor workers. The research has gathered quantitative and qualitative data from outdoor bicycle delivery riders working for food delivery and courier companies.

The project — *Heat in the Streets: Mapping the Lived Experience of Heat Stress of Climate-exposed Workers Towards Developing a Thriving and Resilient City* — is funded the City of Sydney council's innovation grants program. The UTS project team is a cross disciplinary collaboration between:

Climate Justice Centre, Faculty of Arts and Social Sciences

- Professor James Goodman, Director, Climate Justice Centre
- Dr Elizabeth Humphrys
- Freya Newman
- Dr Francesca da Rimini

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- Associate Professor Leena Thomas
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Preliminary findings from this study may be indicative of issues faced by workers in the on-demand economy who are heat exposed, in particular bicycle delivery riders, and therefore relevant to the Inquiry into the Victorian On-Demand Workforce.

Preliminary project findings

While there is limited qualitative research on how people experience heat stress in Australian workplaces, initial research has indicated that the level of labour organisation (worker confidence and unionisation) and the type of employment dominant (permanent, casual, contract, gig, etc) in a workplace or industry, are key factors in the ability of outdoor workers to mitigate the impact of heat stress in their day-to-day work. In other words, the level of organisation of workers in an industry, or a workplace, is likely correlated to an employee's experience of heat stress.

In an era of climate change and global warming, heat stress is a growing occupational health and safety concern. Outdoor workers, and those who work indoors without effective ability to control their temperature, are vulnerable to occupational health and safety risks posed by high heat and humidity. Strenuous, physical work attracts particular risks, as increased exertion makes metabolising heat more difficult.

Our project examined the experience of outdoor council workers and outdoor bicycle couriers, so we could assess how workers of different employment status — employees in permanent ongoing work (Council) as compared to on-demand subcontractors (delivery riders) — experience heat stress. The project team collected both quantitative data (temperature, humidity and geographical movement)

and qualitative information (time worked and physical responses to heat) from these workers over a two week period in March 2019. In terms of the delivery riders, the project team recruited both food delivery workers and bicycle couriers delivering documents and packages in the Sydney area.

Initial data from the project demonstrates the well-established nexus between outside temperature/humidity and work effort in producing heat stress. Initial analysis suggests the importance of workplace autonomy in determining the pace and type of work, and thus in shaping the experience of heat stress. The capacity to minimise exertion during the hotter times of the day, and allocate work requiring more effort to the cooler days/times can be critical. Heat stress is thus linked to employment arrangements - and in part a product of the category of employment.

Compared to outdoor council workers and the document courier riders — some of whom who were in continuing employment and organised into teams with greater autonomy to organise the working week — food delivery riders undertaking monitored piecework appeared to find it more difficult to cope with high heat conditions. Our analysis of their experience indicates they had a reduced ability to take the following actions, which many workers undertake to deal with high heat at work:

- Reschedule/rearrange different work tasks during the working day.
- Refuse work (many fearing that by taking leave, or refusing shifts in unsafe weather for example, they would be deprioritised during the bidding process for future shifts).
- Vary the intensity or pace of their work.
- Expertly or safely navigate the city, due to reduced knowledge of dedicated bike paths, congestion, traffic, and overall fitness levels and cycling experience.
- Alter their cycling routes (something workers in more secure employment did often, to avoid particularly unsafe or unshaded areas of the city).
- Hydrate and rest regularly (due to the pressure to maintain a particular intensity of work, as well as the reduced ability to take rest breaks in between deliveries).

What did workers tell us?

Riders identified a range of issues in our interviews (intake and exit interviews) and surveys on hot days. They spoke about the pressure to keep working in extreme weather conditions because of the financial cost of not continuing, and that ‘on hot days, one or two hours [of work] is too much’. One worker said that in the heat of December they ‘did a lot of night riding and [they] came across so many riders [across a wide geographic area who] were absolutely exhausted. But they had to keep going, they need the money’. Another worker spoke about the tracking of workers by delivery companies, and how surveillance requires them to take extra risks in hot weather:

> I remember [one rider], he was going up the hill and I was going down, and he is sweating his head off, and then he gave up, he literally collapsed, I turn around and said what’s wrong, he said I can’t do it, I can’t do this anymore but i’ve gotta finish this gig. And i said well, just have a rest. Five minutes.

> ‘Yeah but they’re tracking me’. Doesn’t matter. Five minutes is time to have a rest and then when you feel like it just take it slow. Lowest gear you can find, just finish your shift. … They do fire the worst performing ones, so but they think of an excuse. Some other reason.

Control over workers, and a lack of freedom on the part of riders, was a common theme. One rider told us that:

> We are working as an employee of Deliveroo but we’re not, we’re ‘independent contractors’. So we can do whatever we like, we can take whatever shift we want, that’s what independent stands for. But no, they [Deliveroo] really control.

Riders also identified issues where, given the lack of transparency in allocating gigs, they felt companies may be allocating work in ways that maximise profits and that riders might not be aware of this. One rider stated that:

> you can choose to move to the new system [distance based] or remain on the old system [job based]... You only know when you finish your gig and they tell you how much [you got for each gig]. What i think they do is they look at the riders who are mostly efficient and they get them to do the jobs with the longer distance and pay them accordingly.

In relation to workers’ compensation for work related health impacts, one rider told us that ‘I never claim [insurance through Deliveroo], because when I claim the Workcover, there’s like a flag under my name’. Another worker commented that ‘Last time I claimed [compensation] with [the food delivery company]... I didn't go through with it. They told me something like ‘its too complex’ so I just let it go’.

Mandatory uniforms required by some of these companies can also be an occupational health and safety issue, and unsuitable for temperature extremes:

> Yes, I pay for it, I have to wear their uniform. They’re good enough to lend [it] to you when you first get on board. Until you pay it off... We have to wear a shirt, a jersey… It doesn’t wick. It doesn’t move the moisture away... Before it was cotton, this is a brand new one [polyester]. I had to [use it] because the old one is starting to fall apart.

How does this affect the way we design our cities?

For outdoor workers, the heat stress from the immediate thermal environment can be exacerbated by the urban heat island effect. Elevated temperatures are caused by the inability of the surfaces in the built environment to quickly reject the heat it gains from sun, as well as the waste heat generated by our use of equipment, air-conditioning and vehicles.

Our study showed that, most riders developed a tacit knowledge of the city and immediate locale in relation to the availability of water, shade, breeze and quiet spots, but many suggested these could be improved. Where workers had a degree of autonomy over scheduling and choice of routes, it was clear they were taking advantage of the available infrastructure the city to mitigate the impact of heat.

Reported strategies included choosing to work in the CBD where streets were shaded by the tall buildings in the middle of the day, or finding refuge in air-conditioned lobbies, cycling along tree-lined streets, or relegating strenuous or inclined routes to cooler parts of the day. Other key factors in choice of routes related to knowledge of dedicated bicycle paths, congestion and traffic at different times of the day.

Our findings suggest that gig workers and other transient workers would clearly benefit from provision and access to critical urban infrastructure such as 'heat-refuges' that offer shade from the sun and access to water and improved air flow. More importantly, they could be some of the first to suffer, if more attention is not paid to mitigate the urban heat island effects more broadly across the city. These would include strategies such as increased shading and tree cover, improved 'cool' materials, increasing green roofs and green walls and water features, as well as the promotion of energy efficient built and transport infrastructure and improvement of air quality.

Other research on heat stress and work

We will be finalising the project detailed above in September this year, but are continuing to work on the issue of heat stress and workers in the era of climate change. Across the team we have completed another project surveying construction workers and heat stress (Freya Newman), and are in the midst of a third project interviewing union officials and staff members on these same issues (Elizabeth Humphrys, Freya Newman and James Goodman). Given findings from these projects support aspects of what we report above, we note them here for your information.

NSW construction workers: In 2018 Freya Newman conducted a research project surveying NSW construction workers on their experience of heat stress at work. Workers were asked about their experience of heat stress, if/how they organise industrially around heat stress, and attitudes to climate change. Data from this project supports our findings in the *Heat in the Streets* project, in that: workplace organisation and workers' confidence impacts their ability to take action on heat stress; and, precarious workers are likely to be further disadvantaged in being able to take mitigating action in extreme weather. The results of this research have fed into both later projects, and Newman's project won the UTS University Medal.

Interviews with unions: Elizabeth Humphrys, Freya Newman and James Goodman have been conducting a project interviewing union officials and employees about: member's experience of heat stress; how they organise around heat stress; and campaigns on climate change. By the end of the project we will have interviewed officials and staff representing the ACTU, firefighters, the NUW, the ASU, the ETU, United Voice, the TWU and CFMMEU. Preliminary findings have found that labour organisation (at a particular site or in a particular industry) significantly impacts the ability of workers to take action at the time of extreme heat stress, and that employment status (permanent, casual, on-demand, etc) is linked to this as well.

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