Does the New Zealand Driver Licencing System Adequately Prepare and Test Drivers to Share the Road Safely with Cyclists?

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ABSTRACT

In New Zealand in 2017, 18 people riding bikes died and 750 were seriously injured as a result of crashes with motor vehicles. These tragic statistics are unacceptable, and we are calling for an urgent rethink about the way we train and test drivers to share the road safely with riders. More than 80,000 people were granted driver licences in 2017. Were they ready, considering that research to date indicates that a driver's attitude and state of mind contribute significantly to good road sharing? The New Zealand Road Code and written licence tests offer little guidance for candidates or for testing officers conducting practical driving tests.

We would like to see radical change to mould drivers' mind-sets so they can demonstrate kindness and compassion towards people riding bikes and other vulnerable road users. Drivers need to see riders not as hazards, but as part of the answer to resolving traffic congestion and living more sustainably. Drivers need to grasp the critical importance of using their full attentional capacity to search for and see riders, and then generously apply understanding and patience to create safety margins. This may require waiting and making space rather than being concerned about holding up following traffic. We recommend new technologies that enhance the power of storytelling to help drivers connect emotionally with people riding bikes. We also suggest legal interventions as part of a 'call to action' to reduce the power imbalance between motorised and non-motorised road users. Testing officers, too, require a more holistic competency framework to test the likelihood of candidates behaving safely on the roads. We believe that these measures could effectively reduce New Zealand's tragic statistics involving vulnerable road users and contribute to a completely new understanding of road sharing.

Keywords: driver licence, road sharing, testing, cyclist, behaviour change.

1 INTRODUCTION

"Ann Rigg died on a road near Nelson in April 2019 as a result of a crash with a car. She was a much-loved member of her community and Cycling Club. She was full of fun, full of love, she had a wonderful career. She will be missed by her loved ones, friends and colleagues. For them, life has changed forever." (Stuff 2019)

In 2017, 18 New Zealanders riding bikes died and 750 were seriously injured as a result of crashes with motor vehicles. In the same year, 80,266 people were granted drivers' licences through New Zealand's Graduated Driver Licensing System (New Zealand Transport Authority (NZTA), 2018). This raises the question: does our learning and testing environment adequately prepare drivers practically and emotionally to share the road with people on bikes? Does it support the core principles of a safe transport system, in which people make mistakes and are vulnerable to crash forces?

The current practical driving tests do not prescribe an encounter with a rider to give the testing officer the opportunity to observe how drivers' licence candidates manage such situations. Instead, this is left to chance. Research to date indicates that a driver's attitude and state of mind contribute significantly to the way they share the road (Fruhen et al. 2019). However, the New Zealand Road Code and written driving tests provide little guidance for candidates or testing officers.

In this paper, we aim to make a compelling case for conducting trials and research to test our recommendations and clearly demonstrate that some – if not all – of them can contribute to reducing the appalling levels of injury and loss of life suffered by vulnerable road users (VRUs) in New Zealand.

By way of contrast, injury and death in the workplace are taken very seriously in New Zealand. We devote an enormous amount of legislation, resources, and public education to reducing these statistics, which are comparatively fewer in number per capita. But so far the agency responsible for safety in the workplace (Worksafe) has taken a different approach to injury and death on our roads.

In the New Zealand transport system, factors that influence road users and their behaviour (human science and human factor studies) have been an area of research for some years. But this area is complex, ever-changing, and there is still a lot to learn. Key aspects include the way we learn to drive, the New Zealand Road Code, and our licencing requirements.

There is currently limited acknowledgement or knowledge of these influencing factors or the long-term attitudes we develop starting from when we learn to drive. Questions that need consideration include:

- How do the contents of the New Zealand Road Code influence our attitudes to the way we drive?
- How does the current learning and testing regime of the Graduated Driver Licensing System affect road users?
- What changes could be made to the Road Code and the learning and testing regime that would improve the safety of people riding bikes?

Finding the answers to these questions should be the responsibility of all who use, maintain, and regulate our roads. This conceptual paper examines the current rules that New Zealand drivers learn and must demonstrate competency in and the testing system they pass through as relates to encounters with people riding bikes. We discuss drivers' intentions of following the road rules. We then review situational awareness and hazard perception. We seek to determine how drivers can become more aware of riders, e.g. actively searching for them. Next, we consider drivers' responses to meeting riders on the road. If drivers did as the Rode Code suggests, we would not have the appalling rate of injury and death to VRUs that we do. We suggest radical measures, such as developing an enforceable Code of Rights for VRUs to address the imbalance of power between drivers and others they share the

road with. Lastly, in consideration of this discussion, we recommend changes to the way we assess drivers' competency, attitudes, beliefs and behaviours that may reduce the risks faced by riders and other VRUs in New Zealand today. We contend that the current road toll is unacceptable, that it is possible to significantly reduce it as other jurisdictions have done, and that the means to do so are available, affordable and supported by the majority of New Zealanders. We make an urgent call to 'do the right thing'. Will you join us?

2 DOES JUSTICE RULE OUR ROADS?

"*Rules and normativity not only limit the possibilities of action of people, but also help to preserve the rights and welfare of the community, i.e., the public health."* (Alonso et al. 2017).

The current rules in the New Zealand Road Code that mention people riding bikes describe what motorists should do when they meet them on the road. Blog sites and letters to newspaper editors frequently call for riders and car drivers to treat each other with equal respect. But does this equality exist on our roads in actuality? When commenting on new road safety legislation in New South Wales, Carruthers (2017) argues that it does not. It is one thing to say that drivers and riders should respect each other equally, and another to recognise that "*[m]ost cyclists hardly need to be reminded to respect the space of a two-tonne vehicle travelling at 80 kilometres per hour just centimetres from their elbow.*" He points out that it is a myth that riders' safety should be a shared responsibility. He maintains that, to a large extent, their safety is in the hands of drivers. This section will examine the extent to which our road rules and driver training and testing contribute towards a 'just' relationship between road users.

In 2016, the Australian Capital Territory (ACT) Government in Australia made changes to the competencies that learner drivers are expected to demonstrate to gain a provisional or unrestricted drivers' licence. These changes recognise the harm they could potentially cause to VRUs. Candidates must demonstrate the ability *"to communicate, anticipate, observe and recognise and respond safely to these people"*. They must demonstrate this ability to the testing officer before they actually encounter any VRUs. They must show that they understand the risks of blind spots, particularly around intersections and roundabouts, and when making turns and opening the car door. They must respond to VRUs in the correct way as they approach them, including slowing down and following at a safe distance. The ACT Government also added 20 additional questions relating to VRUs to the written test. Candidates are now tested in areas where there are lot of people riding bikes, and they must show that they can navigate around them safely. These measures are part of a campaign to change the road culture in the ACT (Burgess 2016).

At present in New Zealand, of the approximately 235 possible questions used in our written tests (of which 35 are selected for a given test), only about 6 relate directly to people riding bikes. We recommend that New Zealand adopt a similar approach to the ACT.

Bonham & Johnson (2018) found that there are problems and omissions in the way people riding bikes are represented in the material provided to candidates in Australia. The material describes riders in negative or neutral terms, e.g. "hazards", "untrained", and "unpredictable". The authors contended that this type of language creates an impression that does not recognise riders as legitimate users of public roads.

The section in the New Zealand Road Code on sharing the road with people riding bikes uses the term "cyclist'" throughout. However, 70% of people who ride bikes in New Zealand do not self-identify with this term. For many people who do not ride, the term has negative associations relating to sport riders (road, group, or speed riders) wearing lycra (Grieg 2010). This is not helpful when a significant percentage of New Zealand drivers already hold negative attitudes towards people riding bikes, and this

language may only reinforce these views and – in the eyes of some – legitimise them. Alternatives could include behavioural descriptions such as 'commuters riding to work', 'couples pedalling in the park' or 'children cycling to school'. There is a far-reaching wider debate about hate speech in the public discourse at present, and the overwhelming consensus is that while it is not good, fixing it is harder. In our case, however, a few extra words that humanely describe people who ride bicycles might make a useful difference.

Unlike countries such as the Netherlands where people riding bikes and motorists are separated by roading infrastructure, in New Zealand motorists and VRUs typically share the same road space and the former have considerable power over the latter. VRUs are in serious danger when that power is abused, either intentionally or unintentionally.

A similar power imbalance exists between patients seeking or undergoing treatment from a medical practitioner for an illness or injury. The practitioner, who has knowledge of drugs and treatments, holds power over the patient who typically does not have this knowledge. Patients are at grave risk if they cannot access help, or if treatment is not administered correctly. Drivers of motor vehicles are operating a machine that has great potential to cause injury, but are themselves physically sheltered and for many reasons may find it hard to spot people riding bikes. The latter have little or no protection to speak of if struck by a vehicle, they travel much slower than vehicles, and they are inherently unstable (due to having two wheels). With the huge increase in the number of vehicles on our roads (MoT 2018), and the negligible growth in road space, congestion, and stress between road users is likely to only get worse.

Bunkle (2009) relates an unfortunate story about some patients with cervical carcinoma *in situ* who were untreated or under-treated as part of an experiment by researchers at the National Women's Hospital. The study led to the acknowledgement that, in New Zealand, people accessing paid and unpaid health and disability services provided by doctors and other health professionals in hospitals and private practices have rights. The Health and Disability Act 1994 spells out this code of rights, which include that patients should never be discriminated against or pressured, and should always be treated with care and respect, listened to, provided with easy-to-understand information, and be able to make complaints and have them taken seriously.

It is not difficult to imagine embedding similar rights for VRUs in relevant legislation and developing powers of sanction to protect their interests. These could include measures that are common in Europe, such as if there is a crash between a motorist and a rider, the driver is always deemed to be at fault, for the purposes of insurance claims.

While some of the costs of medical care are covered by the New Zealand accident compensation system (ACC), people who are knocked off their bike have little recourse to complete or comprehensive compensation for damage to property, loss of wages and time, or psychological and emotional injury, on top of any physical harm. In our view, the knowledge that ACC will 'take care' of riders if they "don't see" them before a collision reduces drivers' duty of care.

The European Commission (2015) has taken an approach that builds measures to reduce the number and severity of accidents involving VRUs into the rules governing road design, land use planning, vehicle design, education and training, legal frameworks, and enforcement. Policy guidelines covering many of these issues have been introduced in New Zealand, but they lack regulatory compulsion, and are easily watered down by elected representatives who are influenced by the status quo and regard our roads as the domain of motor vehicles.

The concept of a code of rights for VRUs may appear unrelated to the questions we are seeking to answer in this paper. However, if drivers behaved as the New Zealand Rode Code suggests, we would not have the appalling rate of injury and death to riders and VRUs that we do. More must be done to

remove the imbalance of power between drivers and others they share the road with. New Zealand law takes bullying seriously in many areas of life, but curiously not on our roads (NZ Government 2019). Many would argue that people who use active modes of transport to get from place to place deserve credit for this, in view of the environmental, safety, economic, and sustainability problems created by using motor vehicles. The victims of this road toll do not deserve a system that exposes them to such vulnerability.

For our roads to be a 'just' place, we propose changing the words used to describe people riding bikes and developing a Code of Rights for VRUs. This code would create a foundation upon which the Road Code and the current written and practical drivers' licence tests can rest on.

3 WHO FOLLOWS THE RULES ANYWAY?

According to Douglas & Swartz (2017), a person's intention to follow rules involves balancing the positive and negative consequences of an action with their perception of societal norms. The authors surveyed a group of truck drivers and asked them how they would respond to several versions of scenarios involving trying to make a delivery on time by either driving beyond their legal hours or driving aggressively at speed. Based on the outcomes of this survey, the authors recommended including ethics-based scenarios in truck driver training programmes, and instructions that make them more unsure of the risk involved when deciding whether to break the law or drive dangerously. In other words, the instructions should correct erroneous perceptions of the likelihood of getting caught, or causing a crash.

There are many reasons why it is not easy to decide what is the 'right thing to do', according to Basford et al. (2002). Relevant examples include: drivers may be unfamiliar with cycling-specific signage and infrastructure, infrastructure gives certain cues as to who has ownership over the road, and different riders are likely to respond differently during following or passing manoeuvres.

Elliott & Armitage (2009) found that people are more likely to do the right thing when false perceived advantages gained by a particular action are dispelled, rather than when the negative consequences of the action are highlighted. For example, proving that travelling over the speed limit does little to nothing to reduce overall travel time is more effective than emphasising the risks speeding poses to your own and other people's wellbeing. The authors posit that a person's motivation to behave in a certain way and their perceived ability to do so (i.e. their behavioural control) indicate the likelihood of them actually behaving in a particular manner. The one caveat is that a person's perceived ability is shaped by the accuracy of their perceptions, which are based on their experiences and the social pressures they feel bound by.

Mirman et al. (2017) demonstrated that a comprehensive on-road driving assessment (ODA) significantly reduced the likelihood of teenage drivers crashing. The authors compared the outcomes of completing an ODA and using a web-based tool called TeenDrivingPlan (TDP) to doing nothing at all. They recorded the number of crashes involving students who had completed an ODA, those who had used the TDP, and those who had not done either. They found that the crash rate for those who had competed an ODA was reduced by 53% and by 20% for those who had used the TDP, compared with those who had not done either. The authors noted that, in the USA, the time required for driver licence evaluations was only around 20 minutes.

In New Zealand, the on-road part of the practical test for a restricted licence lasts 45 minutes, and the on-road part of the full licence test takes 20 minutes. We again suggest that our current system does not adequately prepare drivers to share the road with people riding bikes. A more thorough written and practical testing regime needs to be investigated.

Scott-Parker (2018) notes the high number of crashes involving young learner drivers working through the Graduated Driver Licencing System in Queensland (Australia). The thinking behind the system is that drivers can get on-road driving experience in a way that limits their exposure to risk. The author interviewed young people and found that several themes emerged, particularly related to young people and their stage in life, including:

- the transition to psychosocial and transport independence.
- driving skills and knowledge gained through paper resources, online, from friends, and from the tests.
- interacting with their peers.
- their behaviour and attitudes.
- the behaviour of other drivers.
- interactions with the police and justice system.
- driving mistakes.
- the costs of owning a vehicle.

Scott-Parker stressed that the current system does not address issues such as increasing the likelihood of breaking road rules and being involved in (or causing) a crash. While all drivers in New Zealand must pass the same tests and abide by the same rules, consideration could be given to the way the tests and rules are presented to take account of the widely varied age, ethnic, and gender of candidates.

Haworth et al. (2018) observed that in Queensland (Australia) 35.5% of drivers complied with the 1.5m Minimum Passing Distance rule in ≤60+ km/h speed zones, and only 31% in >60 zones. They found that driver attitudes were a greater contributing factor to these outcomes than demographics. In the New Zealand driver licence testing process, there are little or no reliable ways to determine drivers' intentions to follow those same rules. Although it is easy to memorise the correct answers regarding sharing the road with people riding bikes in the written test, the candidate's attitude towards riders may well override what they know is the right thing to do. Again, gaining a better understanding of candidates' attitudes could enable us to use tailored information to address problems that may emerge when they get behind the wheel of a motor vehicle.

Furthermore, people's attitudes towards others change over the course of their lives, as do technology, road design, and road rules. Following a recent spate of fatalities due to road crashes in New Zealand, several commentators are calling for drivers to regularly re-sit their licences at a maximum period of every 10 years. Road safety campaigner and former racing car driver Greg Murphy said drivers with many years of experience exhibit bad habits and do not know how to use new technology such as ABS brakes in today's cars (ODT 2019). He suggests that these problems could be overcome by compulsory re-testing at intervals.

4 "SORRY MATE, I DIDN'T SEE YOU" IS SIMPLY NOT GOOD ENOUGH

A 2017 NZTA survey reported that one of the top five concerns of people who ride bikes is motorists not seeing them. For instance, eye-tracking technology used in an experiment conducted for the 'Direct Line' insurance company showed that motorists only see one in five people on bikes (MacMichael 2013). Inattentional blindness, according to Pammer and Blink, is likely to occur when the driver is engaged in another activity, e.g. a deeply involved phone conversation. Research in New Zealand has shown that drivers who often talk on their phones have less appreciation of the dangers they are creating for other road users (Prat et al. 2019). Other researchers (Hallet et al. 2011) have identified a large number of driving distractions, including:

- using a handheld mobile phone or hands-free phone.
- smoking.
- listening to or adjusting the radio or car entertainment system.

- sending and reading text messages.
- talking to passengers.
- eating and drinking.
- looking out of the window.
- thinking about other things.
- applying makeup or looking at themselves in the mirror.
- insects in the car.
- connecting devices.
- adjusting the car mirrors.

Furthermore, only 3% of our visual field has high visual acuity (central vision) – the rest is blurred (peripheral vision). This is exacerbated by the tunnel vision impact of speed (Isler et al. 2011).

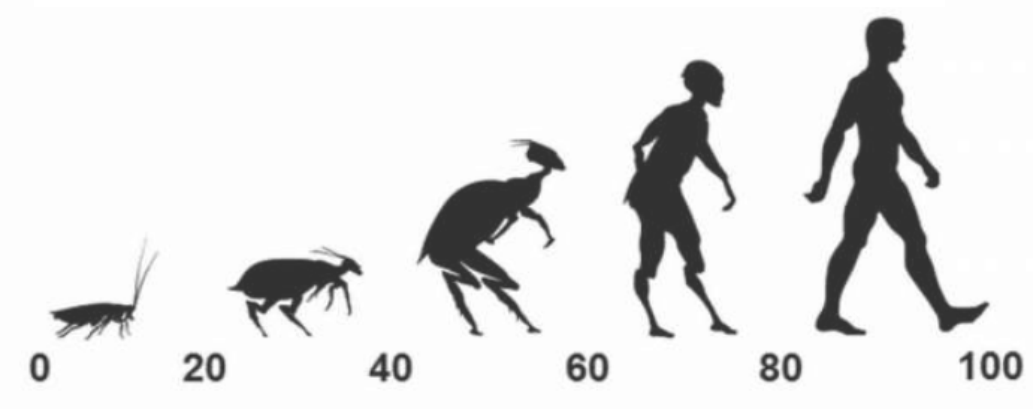
The ways roads are laid out provide cues to drivers to behave in certain ways, and the overriding message is often that "cyclists, this road is for cars, not you" (Laker 2016). There are many external factors relating to vehicles that impair a driver's view of others they share the road with, e.g. physical features such as door pillars and mirrors. It may also be difficult to see people riding bikes due to driving conditions, such as sunstrike, rain, mist, and low light. Despite this frightening situation, there are no questions in the New Zealand written driver licence test that mention driver distractions or ways of overcoming visual barriers. Nor is any reference made to driver distractions in the NZTA restricted and full test guides for testing officers (NZTA 2019).

5 ONCE BITTEN TWICE SHY: MAKING NEGATIVE ASOCIATIONS POSITIVE EXPECTATIONS

The 2017 NZTA survey showed that only 28% of motorists who do not ride themselves reported positive feelings towards people riding bikes. One bad experience with a rider can negatively colour future encounters (NZTA 2017). UK researchers discovered that, although riders are not usually at the front of drivers' minds, when asked to articulate their feelings towards them, they were clearly an "out group" with different features to other road users. The most frequently mentioned characteristics were "vulnerability" and "unpredictability", both of which create stress and often lead to negative attitudes (Basford 2012).

Edwards et al. (2013) showed a link between an increase in narcissism to the dehumanisation of those perceived to belong to "out group". History has shown that this sort of "dehumanisation" creates an environment where hostility is justifiable (Stuart 2018). This was also demonstrated by researchers at Monash University (2019), who asked respondents to place cyclists on an illustrated scale from cockroach to human. 30% of respondents who ride bikes and 55% of those who don't indicated they thought people riding bikes are not completely human. The researchers suggested that "*[p]utting a human face to cyclists would ultimately reduce aggression and improve the road toll".*

Figure 1 Cockroach to human scale. Credit: Monash University



Pressure to pass a person riding a bike is a widespread phenomenon, since drivers are reluctant to hold up the traffic behind them (Goddard 2017). Seeing a line of vehicles in the rear vision mirror can generate anxiety that leads drivers to view the rider as a problem. This may create or reinforce a negative attitude towards the rider and possibly prompt a dangerous attempt to pass them. Goddard also found that the perceived reason for the rider's trip influenced the attitude of survey respondents. The 2017 NZTA survey also found that a majority of respondents reported seeing "road" or "fast" cyclists on the road most frequently, and rated them the most annoying type of rider – even though only 6% of people who ride bikes self-identify as "road", "group" or "fast" cyclists. 42% of drivers held negative attitudes towards sport cyclists riding in bunches or groups, compared to fewer than 10% who held negative attitudes to people who commute by bike.

Negative attitudes are easily shared via social media. Online public consultation processes for introducing new cycling infrastructure have become a lightning rod for people who object to allocating road space to people on bikes instead of on-street parking or traffic lanes. 75% of people in New Zealand say they would ride if it were safer. And yet, when it comes to losing on-street car parking, there is often a "bikelash" on social media, which is readily picked up by mainstream media, and this can create the impression that the majority of people do not approve of cycling (Field et al. 2018). With regard to people whose perceptions of riders have been negatively impacted by bikelash, the challenge for driver licence testing authorities is to bring an appropriate "balance" to the these perceptions, within the limited resources they have available.

At present, to gain a New Zealand drivers' licence, candidates must be able to correctly answer 35 written road rules questions and pass a practical driving test. Candidates sitting the practical test are asked to provide a running commentary on hazards around them, and what they are doing to reduce risk. Astute testing officers may be able to pick up on their attitude toward the hazards and their awareness of other road users by following their eye movements and head turns. Where possible, test routes include a school zone, but it is still left to chance whether they encounter people riding bikes. In the New Zealand Road Code appear statements such as: "*Cyclists have a right to use the roads and to travel safely and enjoyably. Please understand and respect their needs.*"

If a driver's experience with people riding bikes includes being trapped behind a bunch of sport cyclists on a hilly, narrow road with lots of bends, it is conceivable that the driver may feel that the riders do not deserve any respect. More must be done to help candidates understand what it feels like to ride a bicycle amongst motor vehicles.

If drivers can "sit in the saddle of a bicycle," their attitudes based on past negative experiences can begin to be rebuilt, which encourages behaviours that ensure the safety of people riding bikes around them (Shahar et al. 2011). As part of a campaign called WheelSwap, Ford Europe produced a 360-degree film (Murison 2018). Of the 1,200 people who watched it with a virtual reality headset, 91% said the experience would hypothetically change their driving habits, and 60% subsequently confirmed it actually had. 70% said the experience helped them feel greater empathy toward riders they share the road with. We believe that this sort of enhanced storytelling technology can encourage learner drivers to interact safely with riders – even virtually – and in the process learn about their needs and feel greater empathy towards them.

We have so far discussed how the likelihood of doing the right thing is based on weighing a person's perceptions of cultural norms against the perceived consequences (positive or negative) of a particular action. We also looked at the various ways of shaping people's perceptions, i.e. we all belong to a "tribe" that has views on who is acceptable ("in group") and who isn't ("out group"). Then we examined the role of a driver's current physical state when making decisions or responding to situations on the road. Tiredness, health problems, impairment, emotional upsets, stress, and an individual's capacity for compassion and or empathy can all affect the way they respond to the behaviour or presence

of others on the road. In the next section, we set out our recommendations for increasing awareness of these factors.

6 WHERE TO FROM HERE? RECOMMENDATIONS FOR URGENT CHANGE

We recommend the following changes to the NZTA for consideration for further research:

1. Adopt the approach taken by the ACT authorities of adding extra questions to the written and practical driver licence tests that demonstrate to the testing officer that the candidate can appropriately scan and anticipate people riding bikes and other VRUs, and that they understand the risks that blind spots pose particularly around intersections and roundabouts, and when making turns and opening the car door. They must correctly respond to VRUs as they approach them, including slowing down and following at the correct distance.

2. Since candidates may not encounter people riding bikes during practical tests, make simulated road sharing experiences with riders a requirement of the learning and testing process.

3. Review the use of the word "cyclist" in the New Zealand Rode Code and written test questions and answers. Alternatives could include behavioural descriptions such as 'commuters riding to work', 'couples pedalling in the park' or 'children cycling to school'.

4. Include in the online supporting material for the New Zealand Road Code high-quality online interactive experiences of riding a bicycle around motor vehicles, stories from people who ride bikes and people who are good role models of compassionate behaviour, vignettes, and other online interactive experiences where the viewer identifies potential hazardous situations involving people riding bikes and selects the correct response from a number of options. Also make a version of these interactive films part of the testing process online. The goal of these measures is to mould the range of perceptions of different sections of the community into a perspective that understands and empathises with VRUs.

5. Establish a Code of Rights for VRUs (similar to the Code of Rights for Patients in the Health and Disability Act 1994) supported by relevant legislation. This code would provide a platform that lends legal support to the idea that, while all road users have equal rights and responsibilities, the duty of care weighs more heavily on motorists, who have the most power. Include the code in the New Zealand Road Code and driving tests, along with the consequences of breaching it.

6. Include ethics-based components in our learning and testing system to counter anti-social behaviour by drivers. Taking the example of the pressure to pass a rider, clear information should be added to the Road Code that demonstrates the generally negligible impact of pausing until it is safe to pass on overall travel time. This needs to be supported with questions in the written test and virtual or real-life scenarios in other parts of the learning and testing process.

7. Identify demographic groups of candidates and provide tailored supporting information for the test they are sitting to address attitudes that may lead them to make intentional or unintentional decisions that put VRUs at risk. This should include candidates for whom English is not their first language, teenagers, and the elderly.

8. Add to the Road Code and written driver licence test more information about cycling infrastructure, and how riders are likely to ride into, on, and out of it, e.g. examples of painted cycling lanes that direct riders to pedal through parked car door zones and heavy vehicle blind zones and an explanation of why riders might not follow such guidance.

9. Add to the driver licence test for teenage candidates a comprehensive on-road assessment that covers a wider range of social, economic, and driving environments than the candidate is likely to encounter when sitting their test in their area.

10. Make it compulsory for all drivers to re-sit their licences at least every 10 years.

7 CONCLUSIONS

Given that a person's attitudes have a significant influence over their behaviour, the driver licence testing regime needs to assess candidates' attitude toward people riding bikes in order to have confidence that they will behave safely when they encounter riders on the road. This assessment needs to be done in a way that ensures that candidates are not merely projecting socially acceptable attitudes while hiding negative feelings. Candidates must understand that people have every right to ride a bicycle on the road and to do so safely without harassment. They need to know how their attitude towards riders may affect their behaviour when encountering them.

In New Zealand, other vulnerable groups such as children and medical patients are protected by are legally enforceable codes of rights. And yet VRUs lack such defence. We recognise that assessing driver attitudes to VRUs in the context of a driving test can be challenging. When riders are perceived negatively by so many drivers, who have the power on the road, clear behavioural guidelines that are legally enforceable could make up for the difficulties inherent in assessing attitudes. The Road Code and testing processes must make it clear that people riding bicycles are not hazards, but social and environmental champions of sustainability.

Ann Rigg will be remembered by those who rode with her, and by her family and local community. But is it right that she became another statistic? Is it right that the much-talked-of Safe Systems Approach to achieving zero harm to road users has not evolved into something that could have prevented her death? Let's do the right thing and embark on actions that will empower people who were inspired by Ann's story take to our streets on bicycles – free from fear of injury and death – and ride in the knowledge that both the 'system' and everyone they share the road with owe them respect and care. Adequately preparing drivers to share the road with people riding bikes is one way to recognise the value riders bring to our society.

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