

## **REASONS FOR EXCLUSION: ATTITUDES TO PEDESTRIAN SAFETY IN NEW ZEALAND**

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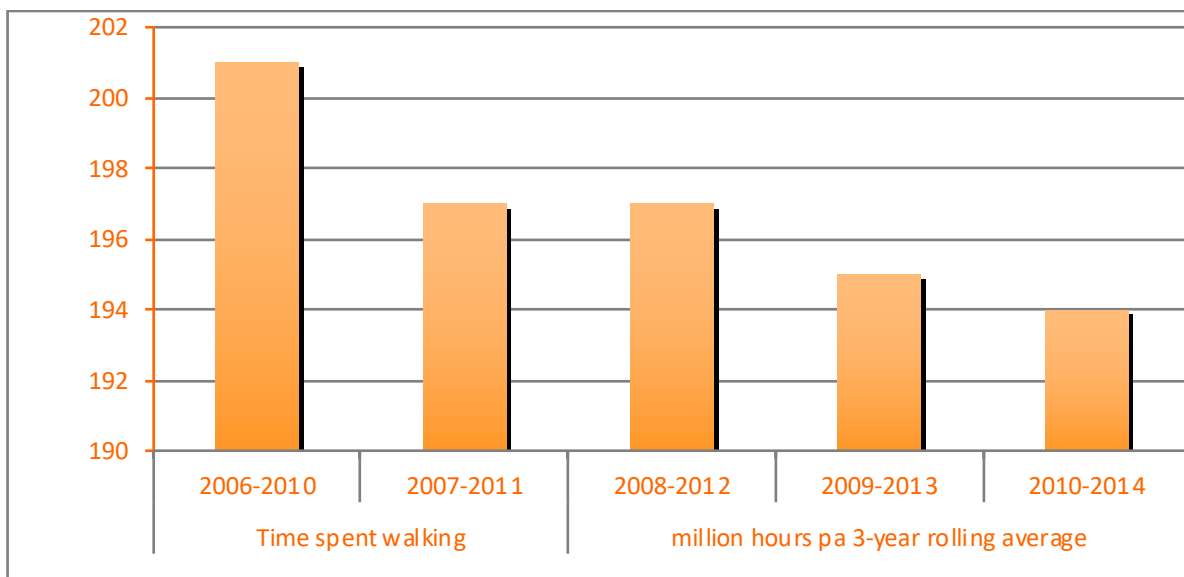
### **ABSTRACT**

Although the safe system approach to road safety recognises that people make mistakes and are vulnerable, and the basic requirements for providing for walking are generally understood, safety for pedestrians is not approached in this manner. Police pedestrian crash reports cite pedestrian behaviour as the cause of pedestrians being injured or killed. Accident codes such as "crossing", "crossing heedless of traffic" or "pedestrian wearing dark clothing" reinforce a perception of the pedestrian as being in the wrong for entering the road. The systemic changes in the design of safe and forgiving road environments for motorists and cyclists, and the specific emphasis on speed management policies, are not being matched for pedestrian safety. In fact, some well-intentioned policy initiatives reduce the perceived safety of walking to the point where walking is abandoned by the most vulnerable pedestrians. This paper considers the effects of habits of thought, institutional structure, process inflexibility and homogeneity of decision-makers on providing for the needs of walkers. The treatment of pedestrian deaths and serious injuries on New Zealand roads and paths is compared to that of cyclist deaths and serious injuries. The paper probes the difficulties in meeting the needs of walking in the absence of any type of national walking strategy, or team or budget. It notes how inappropriate approaches to pedestrian safety can effectively normalise social exclusion and isolation of groups with mobility disability. These are the often invisible barriers to meeting society's demands and needs for walking, and to politicians' attempts to deliver change.

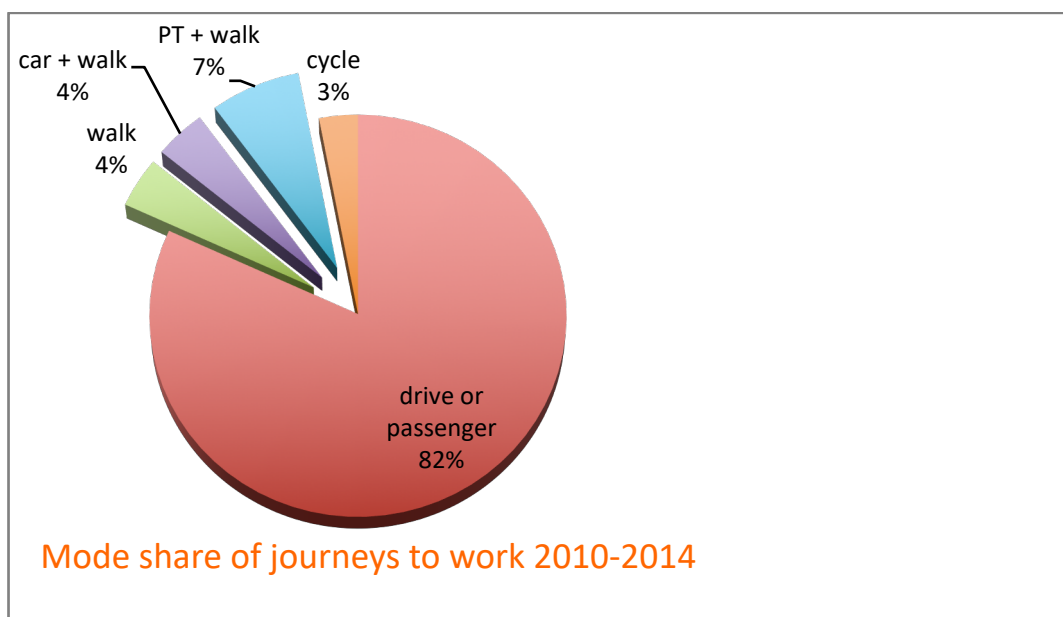
## Introduction

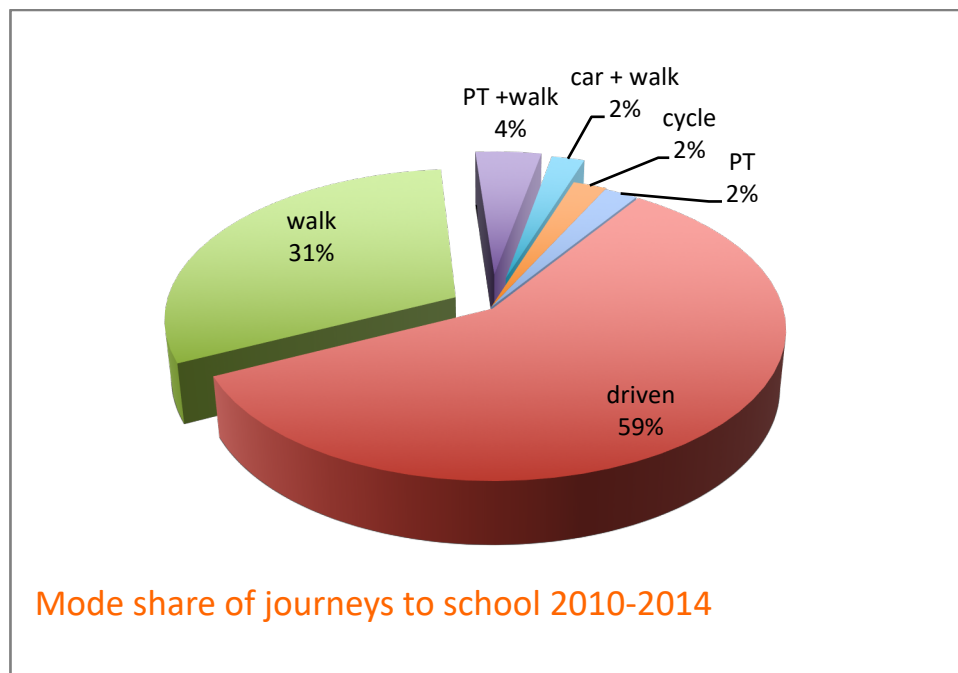
Pedestrian safety has been accorded a lower priority in New Zealand when compared to attitudes to motorist or even cyclist safety. A safe system approach has not been applied to pedestrian safety. Instead, the pedestrian has generally been blamed for being killed or injured. Design changes to deliver a safer walking environment have often been actively resisted. Inappropriate approaches to pedestrian safety have frequently effectively normalised exclusion and isolation for groups with mobility disability.

In common with almost all Western societies with a high car dependency, walking has declined as an activity and a mode of transport in New Zealand.

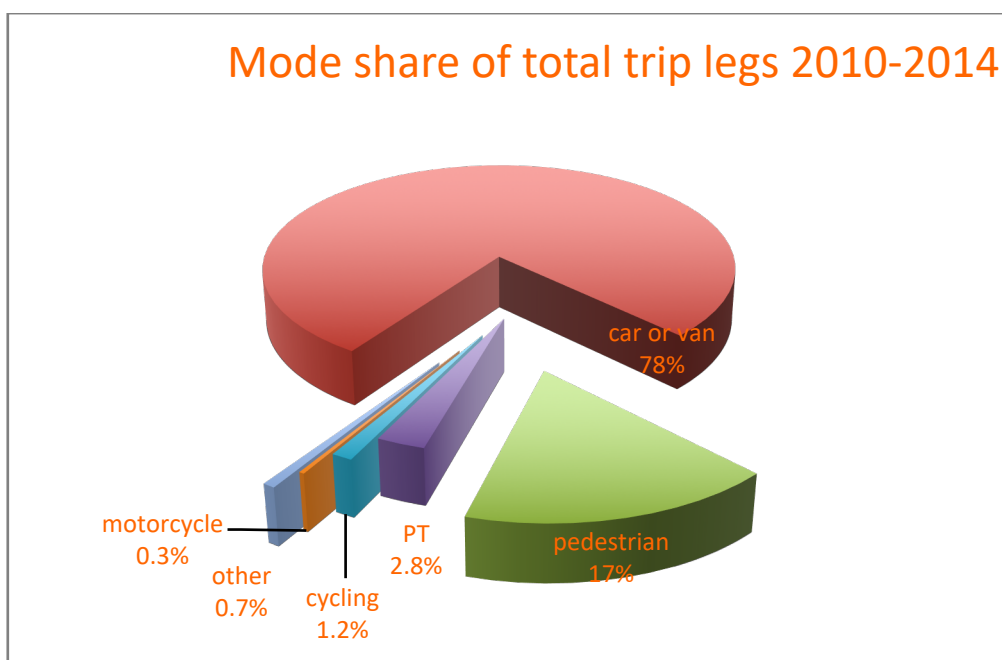


Walking has been declining as a mode of transport in New Zealand for much longer than just the past decade. Nevertheless, it still forms a component of most journeys by public transport and private motor vehicle, so that 15% of all journeys to work and 36% of all journeys to school involve some walking.





Overall, walking still represents 17% of all trip legs and is thus New Zealand's second most important transport mode.



Nevertheless walking has remained barely visible in New Zealand transport policy. In fact, over recent years it has been cycling, which represents just 1.2% of total trip legs, that has taken a far higher profile. Making cycling a safer and more attractive transport choice is a key priority for the New Zealand Transport Agency.

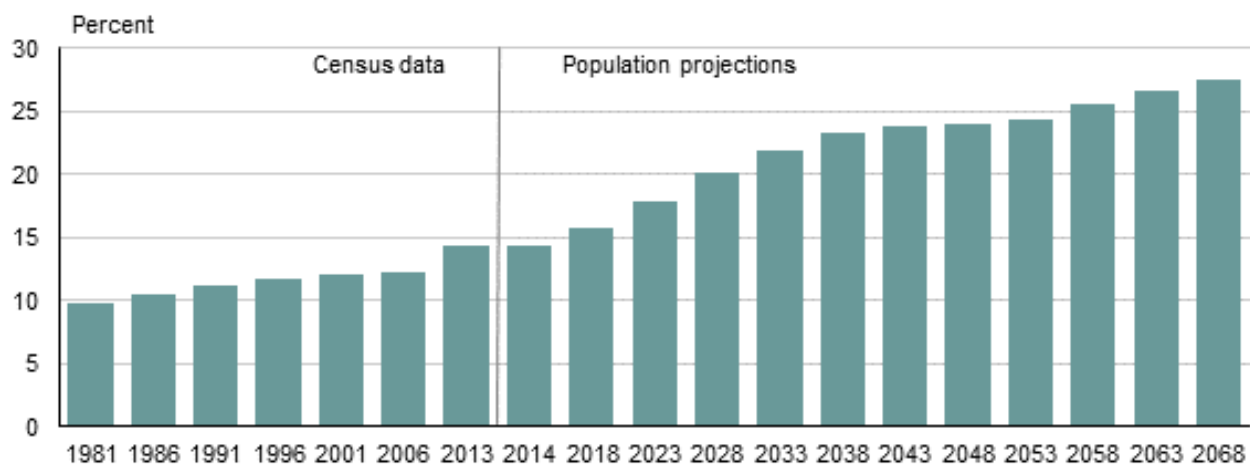
A similar approach to the provision for walking has been markedly absent. Spending on footpaths and road crossings forms a very minor part of transport budgets.

The obstacle to making pedestrian safety a key priority for New Zealand transport policy appears to lie within an institutional culture and an attitude towards walking and the relative importance of pedestrian safety that regards pedestrians as largely responsible for the collisions they are involved in.

The focus of policies is on protecting pedestrians from the dangers of their own folly. Such policies fail to provide the safe and forgiving road environments for pedestrians that have become the accepted means for addressing motorist safety. Instead, approaches to pedestrian safety frequently deliver reduced levels of service and decreased safety and security for walking. Such approaches not only reduce the attractiveness of walking; they reduce the accessibility of personal mobility and independence for persons with a mobility impairment. They can, in effect, normalise dependency, social exclusion and isolation for persons who have a disability, or merely impaired mobility from ageing.

And New Zealand has a rapidly ageing population. For people aged over 65 walking is a means to participate in social, economic and recreational pursuits that are themselves determinants of good health, because they combat social isolation and loneliness. Older people are vulnerable to injury as pedestrians, and fear of such injury, deterring them from walking, reduces their activity. This has an impact on both their physical and mental fitness, but can also contribute to social isolation as travel on foot becomes relatively more important for older people.

**Population aged 65 years and over**  
1981–2068



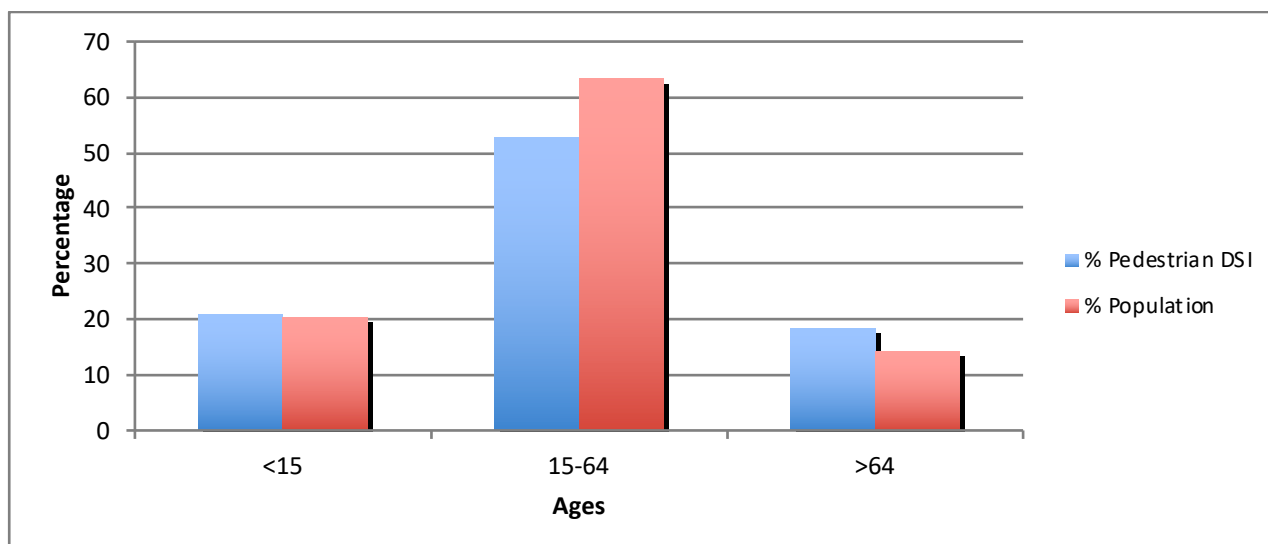
In addition, 24% of the New Zealand population has a disability (rising to 59% for persons over 65). More than half of people with disability have more than one impairment and 64% of all adults with any disability had some physical impairment. Decision-makers providing for the needs of walkers do so from a position of remoteness from the daily experience of people with disabilities seeking access to transport. Personal experience of disability is less likely to be present among decision-makers than, for example, a personal experience of driving or cycling.

### **Pedestrian data is lacking**

For driving, traffic volumes are measured and monitored extensively. Data is collected. Accident rates at specific locations on the road network can be calculated. Sophisticated crash prediction models enable precise targeting of investment to risk. Comparable data for walking is lacking. There is no robust way to calculate prospective risk for pedestrians in any particular location and thus no effective basis for pedestrian safety investment.

Reported crash data does suggest, however, that New Zealand has a pedestrian safety problem. There has been no significant decline apparent in fatal and serious pedestrian crashes over the last ten years commensurate with the decline in walking numbers. The official Crash Analysis System reports the death or serious injury of 2,838 pedestrians over the decade to 2015.

Pedestrians are at greater risk of injury in a collision, and older pedestrians are at relatively greater risk of injury than younger adults. People aged over 64 represented 14% of the population, but comprised 18% of pedestrian fatal and serious injuries.



Older pedestrians are also at relatively greater risk of more severe injury from a collision. The average number of days hospitalised as a result of a crash increases markedly with age, from less than three days for those aged less than 15 years, to over 15 days for those aged over 64.

## Responses to Pedestrian Injuries

The response to such collisions and injuries has not been to see them as indicative of a problem with the road design. Instead pedestrians (and older pedestrians in particular) are exhorted to “take more care on the roads”. In fact, pedestrian crash reports reinforce a perception of the pedestrian as being in the wrong. Despite observational studies of pedestrian behaviour that indicate that older adults are, in fact, more careful, cautious and law-abiding pedestrians than younger adults, older pedestrians especially are largely held responsible for their traffic-related collisions and injuries. Pedestrian behaviour is far more frequently cited as the cause of pedestrians being injured or killed.

Phrase	Frequency across 2,734 Reported Crashes	% of all DSI crashes mentioning phrase
"crossing"	1962	69%
"heedless of traffic"	1176	41%
"alcohol impaired non-driver"	306	11%
"did not see or look for other party until too late"	186	7%
"pedestrian wearing dark clothing"	184	6%
"unnecessarily on road"	159	6%
"child escaped from supervision"	71	3%
"walking on footpath"	68	2%
"intentional collision"	48	2%
"Car1 alcohol suspected"	32	1%

Table 1 Frequency of phrases within English Language Crash Listings from Crash Analysis System

The New Zealand National Road Safety Committee has noted that communications around road safety often focus blame on the driver, rider or pedestrian instead of taking a wider Safe System view that considers vehicles, roads and roadsides, speed, and all road users. Accident codes such as “crossing” or “crossing heedless of traffic” or “pedestrian wearing dark clothing” clearly focus blame.

## Safe System Approach

The Safe System approach aims for a more forgiving road system that takes human fallibility and vulnerability into account. The goal is a transport system designed to protect people from death and serious injury by recognising that people make mistakes, some crashes are inevitable and our bodies have a limited ability to withstand crash forces without being seriously injured or killed.

Under the Safe System approach, the safety of all parts of the system is designed so that, if one part fails, other parts will still protect the people involved.

The safety of all parts of the system is not being designed so that, if one part fails, other parts will still protect the pedestrians involved. Traffic signals do not physically separate pedestrians from traffic. Pedestrian signals and zebra crossings without physical traffic calming interventions can and do result in relatively high speed collisions if drivers fail to stop.

Speed management and removing unnecessary traffic from mixed-use streets are recognised as the most desirable outcome for any road crossing where pedestrians are expected to interact with motor vehicle traffic (NZ Transport Agency, 2009). The ideal is self-explaining roads resulting in operating speeds of no more than 30kmph (Charlton et al., 2010).

In fact, Wellington City offers a case study for exactly this. The direction of bus flows had been changed in parts of the central city late in 2010. Following several serious collisions in 2011, the City Council carried out an extensive survey of pedestrian crossing behaviours. Contrary to public perceptions, use of cellphones and headphones had little effect on pedestrians' "looking" behaviour before crossing. Of more importance were the degree of kerbside clutter and the clear delineation of the kerb line. Vehicle speed management was also found to be vital and the 30 kmph area was extended. At signalised crossings, mid-crossing refuges combined with long signal sequences encouraged risk-taking behavior. The refuges were removed and shorter, more frequent crossing times were introduced. Where vehicle flows were low at mid-block signalised crossings, the signals were set to dwell on 'Walk' until several vehicles were waiting (Barker, 2017).

Nevertheless, at the national level it remains commonplace to hear of proposals to improve accessibility and pedestrian safety being supported only if they would not impede the speed and flow of traffic. Accessibility is reduced in the name of safety. New crossing designs frequently deliver increased travel times, less convenience, and decreased use, such as where a direct crossing is replaced by a crossing for cyclists only, now requiring pedestrians to cross in two sequences.

## Combining Pedestrians and Cyclists

A lesser level of service for pedestrians seems to be accepted as the *quid pro quo* for delivering a better one for cyclists. Pedestrians are four times more likely to be killed on New Zealand roads than cyclists; we have held a national enquiry into cyclist safety, but not for pedestrian safety. A recent review of the Road User Rule recommended that pedestrians walking alongside a road corridor who wish to cross a side-road should not have priority over traffic entering or leaving, because the consequence of error by the motorists would typically impact a lot more on the pedestrian. A nearly identical proposal for people cycling on a separated cycle facility along a road corridor to have priority over traffic entering or leaving side roads was recommended, however, with no suggestion that the consequence of error by the motorists would equally impact a lot more on the cyclist. The resulting Rule, if adopted, would mean that cyclists using a shared path would have priority over turning motor vehicles when crossing side roads, while pedestrians using the same path would not.

And pedestrians are increasingly encountering such situations where they must share the path with cyclists. Older persons and people with disabilities, irrespective of age, are particularly sensitive to perceptions of safety and have very similar patterns of risk aversion towards footpaths shared with cyclists. Both groups are also more generally reliant on pedestrian networks as their primary mode of transport.

While there is significant investment in understanding the trip generation of people who use vehicles for mobility, the same understanding is lacking for how people without access to a vehicle, who rely on pedestrian access as the foundation of their mobility in order to obtain the essentials of life, make their trips. In particular, a robust understanding of the people who are *not* using footpaths shared with cyclists is absent. Pedestrian surveys without data for the potential demand from all potential users are meaningless.

Potential pedestrian-cyclist conflict has been addressed primarily in terms of reported crash data and rates of injury resulting in hospitalisation. These injuries account for less than 1% of all pedestrian transport accidents, but 45% of the injured pedestrians were aged 65 years or over and 70% were female. As for the perception of risk and fear of being injured, observational studies suggest a pedestrian has almost a 1:4 risk of a near-collision on a shared path.

Such pedestrian-cyclist conflict has long been recognised as an inevitable consequence of sharing the footpath (Mellifont et al, 2006). The principal causes cited for such conflict are: pedestrians failing to keep to the left or to maintain a predictable path, walking side-by-side, stopping to chat, wearing headphones, having a dog on a lead or walking with small children, and not wearing high-visibility clothing. These cited causes of conflict reveal the footpath seen as a form of carriageway and the attitude to pedestrians remains the same; they are at fault for behaving in a way that does not fit the planner's interpretation of behaviour appropriate for a traffic lane.

The response has been almost invariably to reinforce the appearance of the shared path as a vehicle lane, by adding a centre line or signs or markings exhorting users to keep to the left, not to walk side-by-side, to get off when stopping to chat, and to keep dogs and small children under control.

Cyclists are considered to contribute to conflict on shared paths by passing too close at relatively high speed, but this is seen as a function of a natural desire to maintain speed. The policy response, therefore, has been to facilitate cyclists being able to maintain their desired speeds, rather than to reinforce a lower-speed shared-space environment. There is potentially a substantial diminution in social function and amenity if a footpath is treated as a vehicular traffic thoroughfare, but more to the point, the adopted approach of facilitating potentially excessive speeds in inappropriate situations is inimical to a safe system approach that is forgiving of human error.

Policy initiatives that seek to integrate cyclists and pedestrians on existing footpath networks are indicative of a broader failure of national transport policy in the application of a safe systems approach. Providing wider footpaths and keeping cyclists and pedestrians separate has been recognised consistently as critical to improving walking safety and cycling safety. Borrowing footpath space from pedestrians has been recommended as the least preferred alternative to policies that reduce traffic density and achieve a lower speed differential, or provide room in the road corridor to cater for cyclists by removing or modifying parking lanes (IHT, 1996). In the face of public resistance to proposals to reduce traffic volumes and speed, or to reallocate road space, however, many projects now underway are seeking to provide cycling facilities separate from the traffic lanes by the least desirable option: looking to footpaths as an easy alternative.

The investment logic underpinning these projects again illuminates the contrast in approaches being taken to support increased safety and participation for cycling and for walking. Over the 2009-2014 period, collisions with a car, light truck or van accounted for 77.2% of pedestrian injuries coded as transport-related and requiring hospitalisation. For the same period, for cyclists the comparable figure was 12.5%. Non-collision falls produced 66.9% of cyclist injuries coded as transport-related and requiring hospital treatment, while a further 8.1% were the result of collisions with stationary objects.

## **Disability and Accessibility**

This approach to pedestrian safety has the potential to normalise social exclusion and the isolation of groups with mobility disabilities. For a person with a disability, personal safety is paramount and an explicit factor in decisions about where, and even whether, to walk. People with disabilities report that every journey involves constant anxiety about whether they will complete the journey safely.

We know that improved accessibility delivers reduced travel times, better service quality, greater convenience, and improved safety for every user, not only for the disabled and the elderly. We know the potential beneficiaries of improved accessibility are far wider, therefore, than only those

with disabilities. And we know the travel made possible by enhanced accessibility for the disabled and the elderly is potentially transformative.

At present, however, older people and those with a disability find travel as pedestrians frequently difficult, stressful and tiring. People with a disability choose to make fewer trips, and explicitly plan their routes to maximise perceived safety and personal security. Delivering a safer and more accessible walking environment thus has the potential to deliver the freedom to fulfil personal capabilities and avoid the loss of human dignity, through increased participation, better access to services, to work or to learn, reduced dependency and reduced psychological burden.

## **Conclusion**

There is an increasing urgency for a coherent national strategy to deliver a safer and more accessible walking environment. The most persistent barrier to developing such a strategy appears to be the attitudes to walking, pedestrian safety and the relative value of pedestrians in the transport hierarchy held by decision-makers. This might be in part an effect of habits of thought more comfortable with vehicular movement, and the priority assigned to that movement, that are themselves frequently a product of last-century learning. It is likely to be both a cause and an effect of institutional structures that almost invariably dilute responsibility for walking in some seldom fully-compatible combination.

The homogeneity of decision-makers providing for the needs of walkers also needs to be considered, less in terms of a general lack of diversity in background and training, but primarily in terms of their almost complete dissimilarity and disconnection from those most affected by their decisions. The current response to pedestrian deaths and serious injuries appears explicable only if the official and political attitudes towards pedestrian safety are understood to be essentially paternalistic.

The response to a crash involving a pedestrian is moralistic; the cause is sought in the behaviour of the victim. Pedestrians are regarded as irrational and are held to be responsible for the outcomes of their own errors. This attitude precludes a systemic approach to pedestrian safety in national transport policies that is able to provide the changes in the design of safe and forgiving road environments, with a specific emphasis on speed management policies, to deliver enhanced pedestrian safety. Instead, inappropriate approaches to pedestrian safety tend to deliver lower levels of service, safety and security for most pedestrians, and for older persons and those with disabilities in particular. For a nation with an aging population, these approaches risk continuing to normalise dependency, social exclusion and isolation for a substantial and increasing number of people.



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