

## The Sentence

The Lucerne Criminal Court, in March 2002, declared Driver A guilty on the following counts:

- \* Multiple eventual intentional manslaughter
- \* Incompetent handling of the vehicle
- \* Multiple contravention of the legal and displayed maximum speed limit within and outside the urban areas as well as not adapting the speed to the road and traffic conditions
- Multiple tail-gaiting when driving in a formation; and
- Multiple unlawful overtaking.

Driver B was also found guilty on similar charges except for the incompetent handling charge and with the additional charge of “A conduct contrary to the legal norms in a traffic accident.” Both drivers were given custodial sentences of six and a half years.

“The point at issue was whether Drivers A and B could be considered responsible for the pedestrian deaths when they were merely involved in a road race.”

## Manslaughter with Special Ultimate Intent

Both men appealed to the Lucerne Supreme Court in June 2003. The Court dealt in great detail with ‘Specific Manslaughter’ and ‘Ultimate Intent’. The point at issue was whether Drivers A and B could be considered responsible

for the pedestrian deaths when they were merely involved in a road race. The Supreme Court decided that they could be held responsible, because they should have foreseen that a crash was a likely or possible outcome of the race and this could involve other parties. By participating in the race, both drivers were acquiescing to the possibility of dangerous consequences, such as actually occurred.

## Appeal to the Federal High Court

Driver A argued that the Supreme Court should not have relied on the expert traffic opinion. He argued that he had not swerved because of his high speed, but for unexplained, probably technical reasons. Driver B argued that there was no proof that he had been involved in a road race and that he had not caused Driver A to swerve. The Federal Court, however, rejected their appeal, arguing that they had been racing and should have recognised that there was a high probability that one or both of them would crash. The drivers had acted with reckless indifference to the possible consequences of their actions. Driver B was equally guilty, because he had cooperated with Driver A in creating the conditions that caused Driver A to crash and kill two people.

## The Future

Based on the decision of the Swiss Federal High Court, a general strengthening of the penalties with reference to speeding offences is likely.

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# Policies of the Australasian College of Road Safety

by Ken Smith RRSP, ACRS Fellow

## Pedestrians

### ACRS Policy Position

ACRS supports measures that take full consideration of the needs and desires of all road users in urban centres, local streets, shopping and community centres, and that improve urban amenity by separating pedestrians and vehicles while recognising the rights of both groups to urban space and freedom of movement.

The needs of elderly and young pedestrians, both of which are over-represented in pedestrian casualties, deserve special consideration.

### Objective

To reduce the risk to adult and child pedestrians posed by the movement of motorised vehicles.

### Discussion

Pedestrians are vulnerable road users and comprise the largest

single road user group. Within resource constraints, the management of pedestrian movement should be aimed at maximising safety without undue infringement on attractive environments and high-quality urban design. Because of the vulnerability of pedestrians, for maximum safety the pedestrian network should be separated from the motorised transport system. However, it must be integrated with it. Pedestrians must therefore be able to cross the road in some way to maintain the coverage and continuity of the network.

Pedestrian safety is a complex issue because of the highly variable characteristics of walkers and their behaviours and attitudes. It is well recognised, for example, that pedestrians will attempt to minimise walking distances by taking short cuts. Some traffic engineers, however, tend to consider pedestrians as being analogous to controlled vehicles operating on a network consisting of footways, stairs, tunnels and so on.

ACRS considers that planning for all pedestrians has to take account of people with disabilities. People with impaired vision have difficulty picking up visual cues and need strong contrast and delineation between roadways and pedestrian areas. Wheelchair users have difficulty with uneven surfaces and steep slopes. The ability of young children to cope with traffic is extremely limited until the age of about 12 years. Older pedestrians are at particular risk. Not only do older pedestrians have a lower than average walking speed, they take longer to make decisions on crossing roads, and they are more vulnerable to injury if involved in a crash than other adult pedestrians.

Numerical warrants using such factors as vehicle volumes and gaps, pedestrian crossing volumes, speed limits, local geometry and so on are specified by Australian Standard AS 1742.10 1990, which is used as a (non-mandatory) guide by all State and Territory road and traffic authorities. ACRS supports the use of this document, but in rural areas warrants should be used as a guide only because population numbers do not reflect the conditions that apply in urban areas.

ACRS recognises that grade separation for pedestrians provides the highest degree of priority for both walkers and for vehicles. However, reasons against providing such facilities include a high capital cost, and it has been shown in most countries that in general they are poorly patronised on roads where traffic is already interrupted by traffic signals. Further, there are difficulties in encouraging the use of overpasses and underpasses by the aged and the physically disabled.

Pedestrian overpasses or underpasses are not normally employed except where large numbers of pedestrians have to cross freeways and high-speed, high-volume trunk roads. Such cases may justify the high costs involved, or address specific matters of community concern such as the proximity of a large school or railway station.

ACRS believes that as a matter of principle, both pedestrians and drivers should approach any pedestrian crossing with care. Any device giving a pedestrian an illusory sense of safety can add to danger.

## Older Road Users

### ACRS Policy Statement

All older road users, whether pedestrians, drivers, riders or passengers, share similar characteristics of declining functional capacities and increased fragility associated with ageing which place them at increased risk during mobility - risks which undeniably increase with increasing age.

The ACRS recognises the need for research into the physical limitations of older road users, the mobility needs of this growing population sub-group, and for broader scoping research into how these factors may combine to affect the safety of all road users. ACRS considers that applicable design standards need to be reviewed to accommodate the mobility limitations of older road users.

### Discussion

Demographic changes associated with progression of the post-war generational cohort into old and older age over the next 20-30 years will have a significant effect on transportation in terms of independent mobility and the wider traffic environment. In social planning terms, the "baby-boomer" generation represents a challenge of proportions which cannot be ignored, yet which will also be of relatively short duration.

Measures that might be applied to help vulnerable groups include:

- Education of younger children about the dangers of crossing roads
- Education and increased awareness of parents of the limitations of children in traffic and the dangers to children as pedestrians
- Education of older pedestrians about the increased danger they face because of reduced mobility
- Providing better facilities to compensate such as median refuges, pelican/puffin crossings, improved land use planning, traffic light phasing.

### Comment

This policy statement is perhaps more a statement of principle than an action plan. Much of the principles of pedestrian safety are codified in traffic planning and management manuals that are used by all Australasian road authorities, and where followed do not present significant problems.

The policy statement does not cover alcohol affected pedestrians. This is a growing problem and very high BACs are a particular concern. There is a need to consider engineering solutions to reduce the vulnerability of alcohol affected pedestrians, and also public education programs.

Future generations of older drivers may not perpetuate patterns of ageing seen today, particularly in terms of the age of onset of physical health and mobility changes. People may live considerably longer, and expect to be mobile for considerably longer, but the ageing process may not follow the same pattern as that seen today because of better nutrition, improved access to health services, and the diagnosis and treatment for diseases at much earlier stages.

The current generation of older Australian drivers (ie those over 70 years of age) were born in the 1920s - at about the same time as the automobile. They have survived the Depression of the 1930s and World War II. They have experienced arguably the most significant expansion of mobility and of technology in history. During their lifetimes, antibiotics came into use for the first time, work patterns changed from highly physical to noticeably sedentary, and diets have changed from home or farm-grown produce to mass-produced and packaged materials. The pattern of diseases has changed, as have health practices and treatment technology.

Post-war "baby-boomers" now in their 50s, have experienced peace and plenty. They have had access to better and longer education than their parents, and are prepared to assert and defend their perceived rights. Most have grown up with the car as part of the family, and learned to drive from either or both their parents and a driving school. They learned road

rules before gaining a provisional driving licence. They have grown up with, and indeed formed a large part of the increase in traffic density. They expect the cars they drive to have a significant number of safety features, and are comfortable with rapid technological change. Their health problems are not due to poor nutrition in infancy or childhood, or from exposure to inhalation of noxious fumes (other than tobacco), but are more those of excess - diabetes and cardiovascular disease - both of which are currently undergoing major advances in diagnosis and treatment.

A more concerning illness in an ageing and mobile population is dementia. Almost always associated with increasing age, the disease characteristically includes lack of insight resulting in denial, is progressive, and is not fatal. The transport consequences of this disease alone, across a larger than previous aged cohort, living into extended old age, and which is also markedly more mobile, cannot be over-estimated.

However, although the way we age physically may change, the process cannot be denied. Ultimately everyone will confront the undeniable physical evidence of advancing age. Ageing is a physiological process of slowing down and approaching mortality. There are some clear indicators of such physiological changes in vision, and physical-functional capacity which can be measured, and may frequently be treated. However, declining cognition is both more difficult to detect and to treat. Increasing fragility of the skeleton, external and internal tissues cannot be reversed, and must be accepted as a given - making the "old" old very high risk participants in all forms of mobility.

In summary then, we have an ageing, educated and mobile population, still largely in denial of their approaching old age and its implications, technologically pushing back the barriers of ageing, who will nonetheless become frail older road users in need of support and protection in the foreseeable future.

Thus three key research and practical, policy areas emerge:

1. Clear identification of road users who present an unacceptably high risk to themselves and other road users - via a physical/functional screening process
2. Identification of a range of Engineering solutions to separate and protect vulnerable pedestrians from vehicular traffic
3. Implementation of alternative transport solutions to meet the needs of non-drivers to access services and maintain a healthy, involved lifestyle.

These areas apply to all road users, regardless of age, but present an opportunity to address the specific needs of older road users, through the adoption of sound road safety measures which will benefit everyone. As such they should form the basis of all transport policy.

## 1. Identification of "high-risk" road users

Once drivers over 70 years of age reach the predicted >25% of the driving population, it makes good sense to know that they have acceptable standards of vision, physical-functional control, and cognition to be able to safely drive a motor vehicle on a public road.

Clear and objective separation is required of the physiological limitations of ageing from the practical skills, habits and experience acquired over a lifetime of driving.

Since there is currently no available "tool" to measure or collect standardised data on the health status of drivers, it is premature to claim that there is no place for such information in policy planning, or that such processes are not effective in reducing crash rates. Only when a standard assessment tool has been developed and has been in use for some time can valid arguments be made or policy formed.

The existing negative perception of medical assessment processes for older drivers can be turned around, by focusing on the positive aspects, such as the diagnosis of developing conditions before they become licence-threatening. Annual assessment of fitness to drive can also positively reassure the capable driver, and provide information from which the competent driver can start planning to retire from driving.

Society in general clearly benefits from regular screening for treatable health conditions - this is clearly recognised for cancer of the breast or cervix - where all women over a certain age are screened bi-annually. It also makes sense that such processes are conducted by trained health professionals. Regardless of local (state) policy relating to when older drivers are screened for "fitness to drive", or who refers them for assessment, health professionals need appropriate tools to be able to achieve their task effectively. They need to be trained in the use of the screening tools. Pathways of care are needed from health professionals into the community, to ensure that those who lose their license are supported through the process and guided into appropriate transport options.

However, it must be recognised that such health screening cannot necessarily predict which drivers will, or even might, crash. Road crashes are multiple-factor events. Data on road crashes is typically collected by police officers at the scene, and focuses on whether or not any traffic violation occurred to cause the crash, rather than any pre-event health condition which may have contributed.

Medical practitioners are in a unique position to review the health status of their patients, but again, it may be misleading to assume that in future, all GPs will know their older patients as well as they do now. With changing patterns of practice, more part-time practitioners, and multiple-doctor, multiple-site practices, it may not be possible for the same patient to see the same doctor on each occasion.

It is important that a standard screening process exists which does not rely heavily on the doctor-patient history, or on long-term knowledge of social and familial history. An objective record of assessment acceptable to all practitioners can provide a more informed basis for decision-making, than anecdotal evidence or review by a familiar and trusted family doctor.

Evidence suggests that patients do respect information and advice from doctors, even when it is unwelcome. However, all health practitioners would benefit from raised awareness of the effects that ill-health and disease processes can have on the critical factors required for safe driving, including the effects of medications.

Again, the current generation of 50+ drivers are typically better informed, more educated, more likely to ask questions before taking medication, and may require less medication than the previous generation due to improved health status. This generation has grown up knowing and accepting mass screening, and are perhaps less likely to view it as a threat.

## 2. Road environment

Changing baselines for the visibility of signs, lighting and delineation from that of a fit young male to an ageing driver can benefit all road users through increased sight distances and warnings.

Reduced speed limits may provide an "easy" engineering solution to what may become a difficult situation when 25%+ of all drivers are aged over 70. Reduced speed limits could decrease trauma and thus improve outcomes for all road users. Although the poorer outcomes of fragile participants cannot be changed, reduced speed of impact may help to change injuries sustained from "life-threatening" to survivable.

## Bicycle Helmets

### ACRS Policy Position

ACRS acknowledges that bicycle helmets substantially reduce the risk of head injury in a crash. This is shown by biomechanical and epidemiological evidence. Scientific research has provided evidence on the benefits of bicycle helmet wearing, quite independent of issues related to the acceptability and effects of legislation.

ACRS supports legislation that requires the wearing of Australian Standards-approved protective helmets by all bicycle riders, adults and children. There should be effective, high profile enforcement of helmet wearing laws, together with appropriate publicity. There is a need for uniform advice regarding the correct method of wearing approved bicycle helmets.

### Objective

To encourage and support the wearing of bicycle helmets by riders at all times.

### Discussion

Bicycle riding is a world-wide activity and an important means of transport for millions of people. Head injuries have emerged as a serious problem for bicyclists involved in crashes, and for the community as a whole because in large part the cost of an individual's injury is a cost to the community.

Rural drivers have special needs for access to essential services. However they are also likely to be living on roads carrying heavy traffic - therefore rural areas have other road users at increased risk. This is particularly difficult for drivers alone, or with an invalid partner, and whose family support may not be locally available.

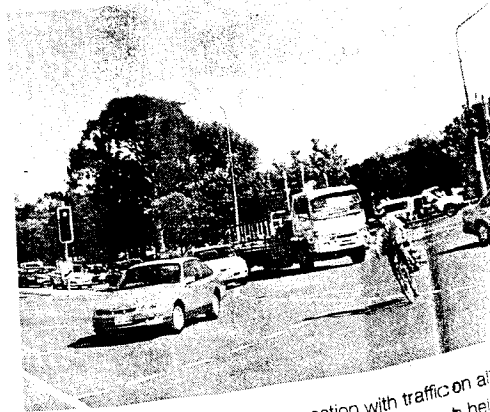
Again, caution should be taken against assuming that the next generation of older road inhabitants necessarily reflect the attitudes of the current cohort. The "young" aged (retirees from 55+) are selling up their home and moving into inner city apartments and retirement villages with more transport options. Whilst this may add to the density of larger regional centres, it may also reduce the provision of alternative transport to manage.

Finally, the current generation of ageing Australians is far more likely to demand to be involved in discussions and planning surrounding their mobility options. It makes good political sense to ensure that their views are canvassed and encouraged.

### Comment

There has been a good deal more research in recent times on the problems of older road users, of which the most recent is the research and review by ACRS member and Churchill Fellow Roland Anderson. This statement could benefit from updating to take account of recent research and up to date knowledge.

Over the 20 years 1970 to 1990, bicyclist fatality rates per 100,000 people have fallen by an average of 1.0% each year. This is a rate of fall less than one-third of that shown by other user groups. Further, non-fatal injuries resulting from bicycle crashes are grossly under-reported in official road crash statistics. Injury rates are especially high in children and in males.



A cyclist negotiates a difficult intersection with traffic on at the most vulnerable road user in the picture, his cycle helmet prevent life-threatening head injuries in the event of a crash.

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Rural drivers have special needs for mobility to access essential services. However they are also likely to be driving on roads carrying high-speed traffic - thereby putting themselves and other road users at increased risk. Typically rural areas have little or no access to alternative transport. This is particularly difficult if the driver lives alone, or cares for an invalid partner, and where family support may not be available locally.

Again, caution should be taken against assuming that the next generation of older rural inhabitants will necessarily reflect the attitudes of the current cohort. Already the "young" aged (retirees from 55+) are selling up the family home and moving into inner city apartments and retirement villages with more transport options. Whilst this may further add to the density of larger regional centres, it may also make the provision of alternative transport easier to manage.

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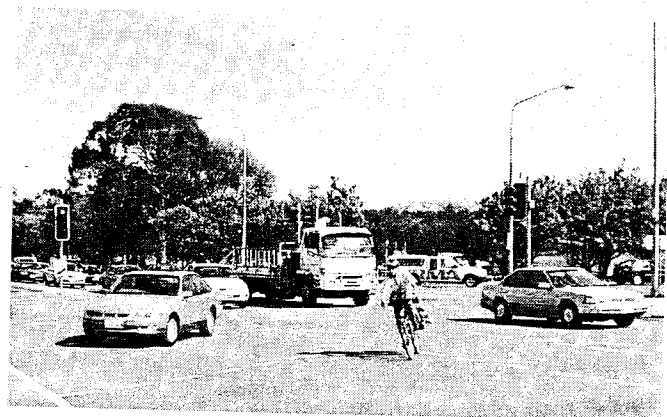
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A cyclist negotiates a difficult intersection with traffic on all sides. While he is the most vulnerable road user in the picture, his cycle helmet would help prevent life-threatening head injuries in the event of a crash.