

MORE WOMEN RIDERS IN THE NINETIES

Recent research predicts more Australian women cyclists than men in the 1990's. Furthermore, women are safer riders according to Australia's foremost bicycle researcher.

BY ALAN A PARKER

IN THE USA THERE ARE FIVE million more adult women cyclists than men. There are approximately 25 million adult female cyclists, most of whom are health conscious and are seeking fitness and companionship through recreational cycling.

More Australian women are now buying bikes for the same reasons as American women but it is not known how strong this trend is because there is no accurate sales data collected by the bicycle trade associations here like there is in the USA.

What we do know from the limited

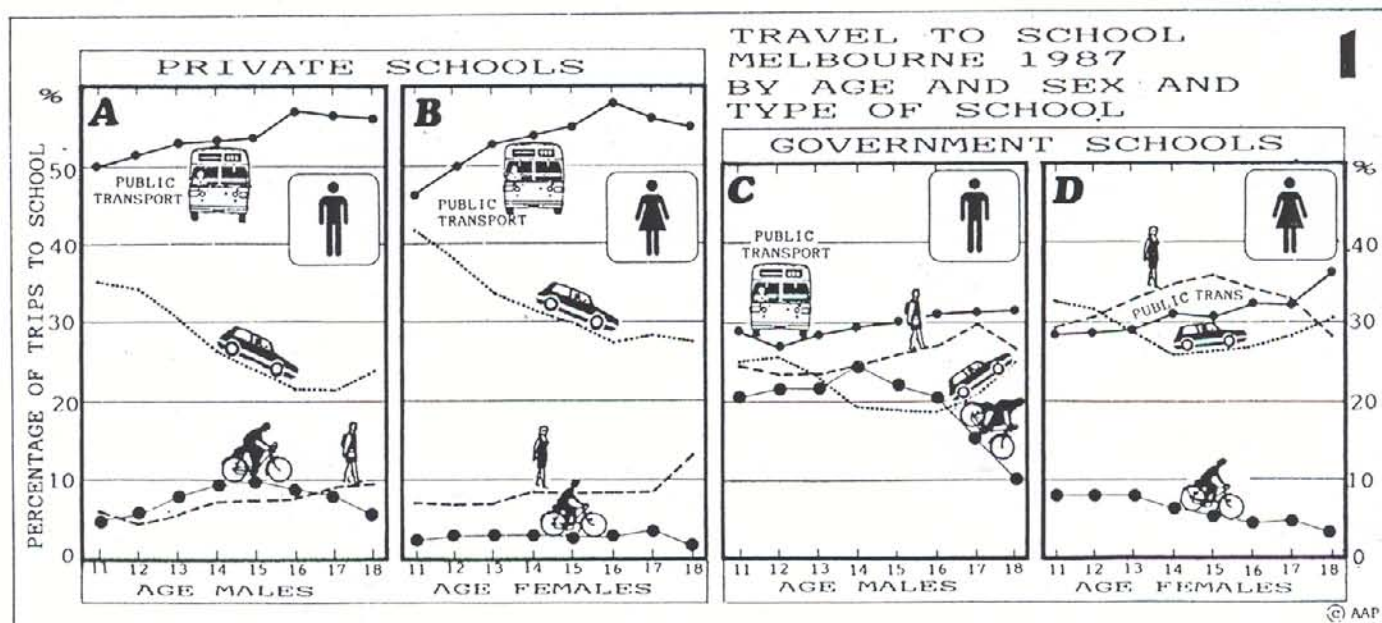
information available is that Australia is following American life style trends the more physically active forms of recreation are now very popular. Following past trends in USA the insignificant proportion of women commuter cyclists will increase but still be insignificant compared to commuting by car or to the very large increase in cycling for fitness and recreation. Indeed when it comes to commuting we have accurate census data showing that women are using cars more and choosing to walk or use trains and buses less.

The majority of adult women cyclists also drive and are choosing the car for their commuting trips. Less than 5,000 of the 150,000 to 200,000 women who bought bicycles last year will commute by bicycle.

Another source of accurate information about women cyclists is bicycle accident data which leads me to the conclusion that the great increase in leisure cycling will not increase the proportion of bicycle accidents and its likely the number of bicycle accidents will reduce precisely because there will be so many more women choosing to cycle in less hazardous areas.

The most comprehensive survey on destinations of women's bicycle trips is the Australian Bureau of Statistics' 1984 Adelaide study. Melbourne now has accurate data about women's bike/rail trips to work and school and female students trips to school by bicycle. If this data is added to the accident and census data a picture begins to emerge of new cycling trends in our capital cities.

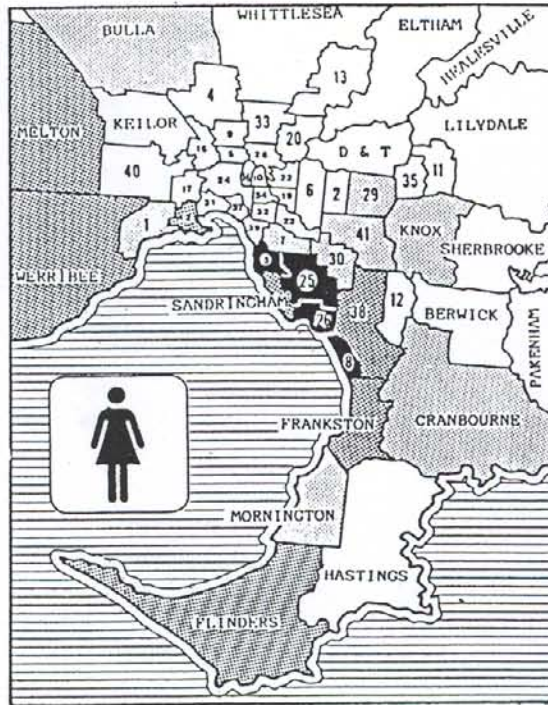
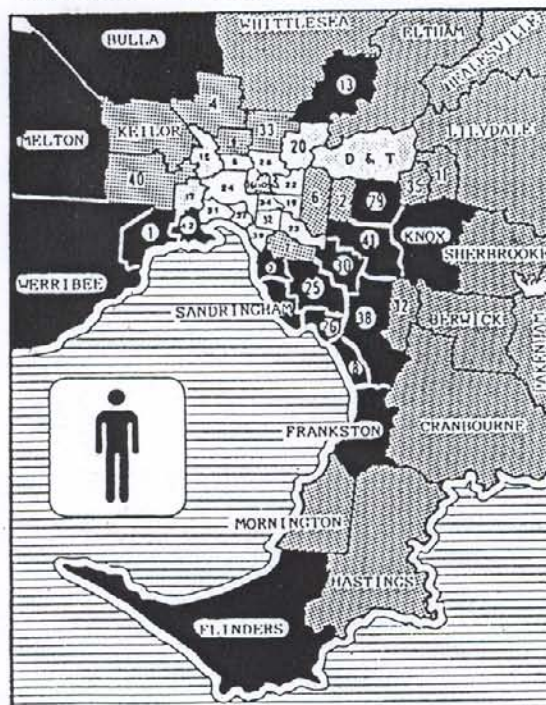
Today's secondary school students will be adult women in the early nineteen nineties so the bicycle riding skills and the experience of cycling gained today will to some extent condition tomorrow's women and their willingness to cycle in traffic.



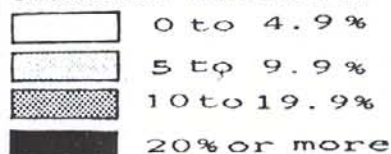
Municipalities

- 1 ALTONA
- 2 BOX HILL
- 3 BRIGHTON
- 4 BROADMEADOWS
- 5 BRUNSWICK
- 6 CAMBERWELL
- 7 CAULFIELD
- 8 CHELSEA
- 9 COBURG
- 10 COLLINGWOOD
- 11 CROYDON
- 12 DANDENONG
- 13 DIAM VALLEY
- 15 ESSENDON
- 16 FITZROY
- 17 FOOTSCRAY
- 19 HAWTHORN
- 20 HEIDELBERG
- 22 KEW
- 23 MALVERN
- 24 MELBOURNE
- 25 MOORABBIN
- 26 MORDIALLOC
- 28 NORTHCOTE
- 29 NUNAWADING
- 30 OAKLEIGH
- 31 PORT MELB
- 32 PRAHRAN
- 33 PRESTON
- 34 RICHMOND
- 35 RINGWOOD
- 37 STH MELB
- 38 SPRINGVALE
- 39 ST. KILDA
- 40 SUNSHINE
- 41 WAVERLEY
- 42 WILLIAMSTOWN

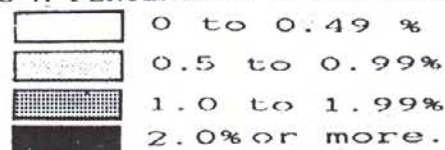
MALE AND FEMALE BICYCLE TRIPS TO SECONDARY SCHOOL MELBOURNE 1987



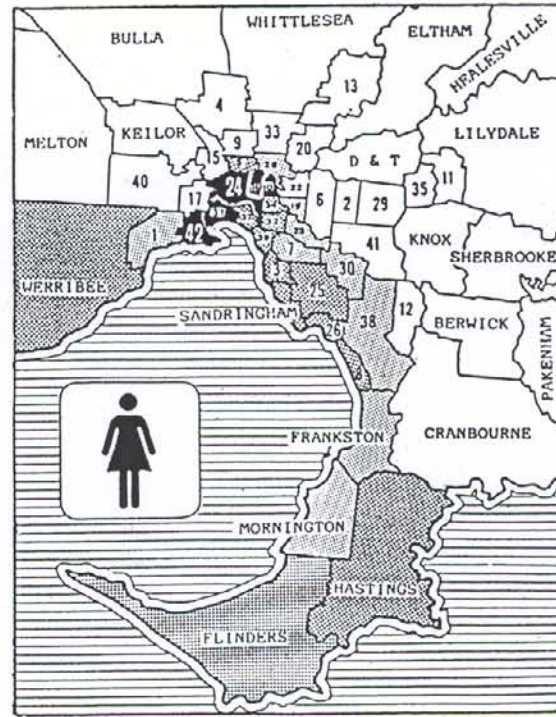
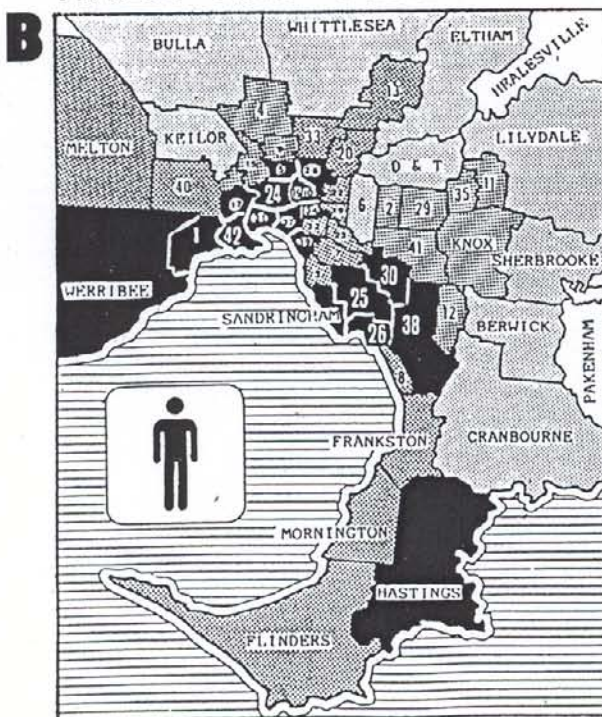
BICYCLE TRIPS AS A PERCENTAGE OF ALL MALE AND ALL FEMALE TRIPS TO SECONDARY SCHOOL 1987



BICYCLE TRIPS AS A PERCENTAGE OF ALL MALE OR ALL FEMALE TRIPS TO WORK 1986



MALE AND FEMALE BICYCLE TRIPS TO WORK



The movement of secondary school students to school is a mass movement in any city and Melbourne is typical capital city in this regard. There is a higher percentage of girls cycling to secondary schools in Adelaide and Perth and a lower proportion in Sydney.

A recent survey by the Metropolitan Transit Authority in Melbourne found that of the 130,000 female secondary school students surveyed only 7000 girls cycled to school (see map A).

In Map A we can see the percentage of bicycle trips to school by both boys and girls. There is a great difference between the sexes and between municipalities. The largest proportion of female bike riders go to school in the City of Chelsea which has 33% with one in five of these using both bike and train to get to school. Mordialloc has 23% and Moorabbin 22%, Brighton 21% of female students riding to school and there is a gradual reduction suburb by suburb with less than 1% in some suburbs.

Note the concentration of high levels of bicycle use in the bayside suburbs shown in black and the very low level in the northern and eastern suburbs away from the bay. A typical working class suburb with an average level of female bicycle use is Oakleigh with 5% of all trips to school.

As only 7000 girls ride to school com-

pared with 23,000 boys it indicates the low level of exposure that girls have to heavy traffic and suggests that the adult female lack of confidence in traffic may be due to the reduced level of early exposure to traffic and the skills learnt as a consequence. It poses the interesting question of how much is the feeling of greater vulnerability that women have in traffic due to lack of experience and how much is due to genetically determined feminine behavioural responses due to hormonal differences.

Fortunately some girls have come to grips with the problem of riding our heavily trafficked streets. Traffic researcher, Barry Elliot, makes the relevant comment that: 'Girls find bikes a good form of transport, when mum and dad can't take you.' He adds that they ride a great deal on the roads, although rarely at night. They do not feel as safe as boys, and are more timid on busy or cluttered roads than boys. They positively hate buses and trucks. Whilst feeling confident in their skills as competent riders, they do feel more vulnerable on the roads.

I asked two 16 year old high school girls from schools in the bayside region, which has a very high percentage of girls riding to school, to tell me why girls do not ride to school. In considering their response it must be noted that relatively safe routes are available to them via

traffic-managed local streets. Both of these young women talked to their girlfriends to find out why, "more boys than girls ride bikes to school".

Kris Roomer

I think that boys tend to be more active than girls, therefore they want to get out of the house and burn up energy. We find that boys seem to be more independent, they would just like to get on their bikes and go somewhere, like going to school, if that is the case. Although girls would rather go by train to socialise with each other.

Girls often don't want to ruin their appearance such as messing up their hair because of wind or helmets when riding their bikes, whereas boys usually don't care too much about what they look like.

Nina Kristenson

I think girl's don't consider riding a bike a very cool or trendy thing to do. Guys on the other hand think it's sort of tough. Guys in general are more active physically than girls in general, therefore having the extra energy needed to ride a bike to school each day.

IN MOST SUBURBS HAZARDOUS road conditions are the principal deterrent to cycling to school and some schools have a ban on cycling to school.



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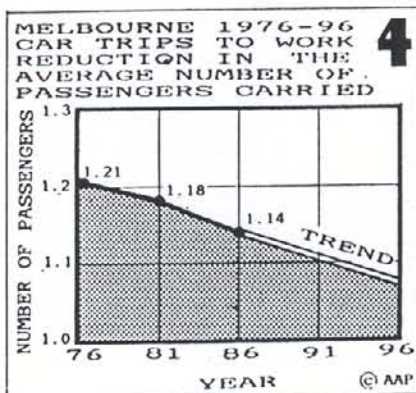
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Even in those areas with relatively safe routes to school there are other legitimate feminine reasons for not cycling however, the most important long term trend is the increase in the percentage of girls going to private schools. The four graphs showing the level of cycling to both public and private schools in Melbourne clearly shows that a very small percentage of girls cycle to private schools.

Fitness is less of a problem with the boys as Miss Roomer and Miss Kristenson have clearly stated. It is obvious if boys don't cycle to school they still burn off a lot of energy. It seems reasonable to assume that cycling to school would make a bigger contribution to the fitness of most female students than the male students.



Clearly the trend towards private education is counter productive in terms of increased sedentary travel, as a burden on the public transport system and a future constraint on the use of bicycles for transportation.

The working woman's trip to work

AUSTRALIAN CENSUS DATA (1976/86) shows that proportionally fewer women are choosing to cycle to work than men and that women are choosing to drive cars to work to a much greater extent than ever before. If we break out figures for Australian females who cycle to work as percentage of all employed females it is only 0.9% while the number of Australian female bicycle trips to work has increased by nearly 10,000 since 1976. This is not a big rise at all when we consider that up to 200,000 bicycles were sold to females last year.

Since 1976 three quarters of the additional drivers on the road have been women males driving to work had only increased by 165,000 but the

number of female drivers has increased by 481,000.

While overall number of female bicycle commuters has increased since 1976 the ratio of female car drivers to bicycle riders has also increased indicating that even more women will be choosing to drive to work in the future. Outside the capital cities more women cycle to work. The percentage of women cyclists commuting to work in Melbourne (0.55%) is below the national average but looking at the pattern of female bicycle trips to work will give an indication of what is happening in other cities. The pattern of trip distribution will have some similarities even though there are only 0.23% of all female trips to work in Sydney, 2.0% in Adelaide, 0.43% in Brisbane and 0.68% in Perth.

On Census day in Melbourne there were only 2,600 female bicycle commuters and Map B shows the suburbs where they live. The percentages on the black to white map shading are one tenth of those on Map A showing the distribution of secondary school bicycle trips. There is a considerable difference between both sexes and the suburbs in the percentage of trips.

There seems to be a general correlation between the low levels of female bicycle trips on both maps A and B.

The consequences of growing preference of women for car commuting is seen in the reduction in the proportion of women carried as passengers in cars.

In 1976 Australian cars had on average 1.21 passengers but by 1986 cars had only 1.14 passengers and this trend is likely to continue as is shown on Chart 4. What this means is that more cars are needed now to carry the same number of people.

The only conclusion that is possible from the data presented (knowing also that urban sprawl has lengthened the average trip) is that the growth in female car commuting will create problems of noise and air pollution, traffic congestion and no reduction in road accidents.

It's probable that the urban situation will continue to degenerate unless some way is found of stabilizing the number of cars on the road or ensuring they carry more passengers. These trends indicate that the use of bicycles for recreation and fitness will continue but the perceived and mostly very real traffic hazards in our capital cities will restrict the growth of cycling as a means of transport particularly for women.

I would expect that Australia will follow another trend in which increasing numbers of women cyclists drive out of town or to recreational bike paths with bikes mounted on car racks. This type of bike/car dual mode trip will really take off in a few years but bike/rail dual mode travel is unlikely to take off because of the lack of secure bicycle parking facilities at railway stations.

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In 1986 there were only 150 regular bike/rail users on the Met and about 100 of these were secondary school students.

Womens opinions on why they commute less than men

NOT MUCH HAS BEEN written in bicycle plans on attitudes of women cyclists so I made up a file of all the written opinions of women cyclists I could find and talked to women cyclists I know. The following list of womens opinions of why they don't commute as much as men gives an indication of both current attitudes and some practical problems that are capable of solution. These are listed in order of importance as constraints to cycling in our capital cities.

Safety and security

- Women are on average more traffic sensitive and safety conscious than men and are not as likely to mix on the main roads with cars, trucks and buses.
- Men are naturally more aggressive and prepared to take more risks which makes them feel more comfortable in traffic.
- Married women also worry about what would happen to the kids if there was an accident and perceive that driving a car is much safer and public transport to be safest of all.
- Physical harassment is much more of a problem for women and the fear of having to fix a tyre alone in some suburbs is rather frightening. Some women prefer to cycle in groups and avoid cycling alone which is why they will not commute.

Trip length and self image

- The average trip to work is quite long in our capital and getting longer as they grow larger. Women are less inclined to commute longer distances than men for two important reasons. Firstly women are very sensitive about smelling good at work and sweating is a major problem especially in the summer. Secondly that the longer, urban cycling trip requires cycling attire. Women also like to look good at work so that changing clothes making up the face and hair is perceived as a major problem or at least an additional hassle.

- Working class women often feel that riding a bike is demeaning giving people the impression that they can't afford to travel any other way. It is often impossible to get children to childcare with a bike. For some there is the fear of being discriminated against at work by males who see bicycles as being very low status.

Uncomfortable bicycles that don't fit

- Up until very recently the bicycle industry displayed an incredible ignorance of women's basic anatomy and failed to produce a range of bicycles to properly fit smaller women or those with short torsos and arms. Good quality brake levers that fitted small hands and wider saddles were not available.

- Many women find the upright style bike more comfortable for commuting for the following reasons: 1. You don't get the embarrassing irritation from the saddle that comes with a bent over position on a typical ten speed. 2. Its easier to control the bike and relate to other road users especially if you learnt to ride on that type of bicycle. 3. The upright bicycle usually comes equipped with more effective chain covers that keeps the dirt and oil off the legs.

Many of the women taking up recreational cycling did not do a lot of cycling at school and take a bit more time to acquire traffic sense and that feeling of being safely in control. Being sold bicycles that don't fit them properly makes this learning process so much more difficult and many just give up.

Lack of maintenance skills

- The lack of personal confidence in basic mechanical skills required to keep a bicycle on the road often puts an end to the practice of cycling. Some women are embarrassed by the need to seek help from male in the family who usually fixes things. There is a need for more trouble free quality bicycles that women can afford to take to a bike shop on the rare occasion that they break

down and for some the need for bicycle maintenance classes is often expressed.

Fear of theft and lack of secure storage

- This problem is the same for men and women except that the usually inferior status of women in the work place hierarchy means that they have less success in getting employers to provide facilities.

Women are safer cyclists

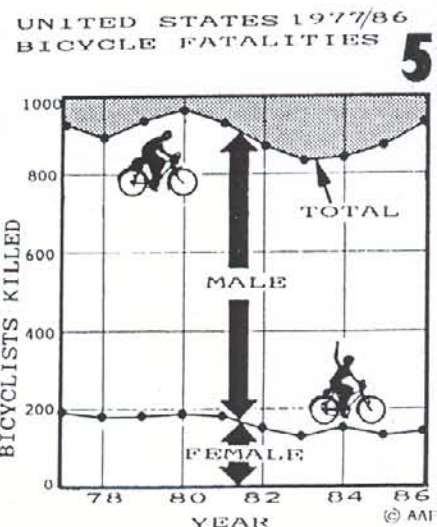
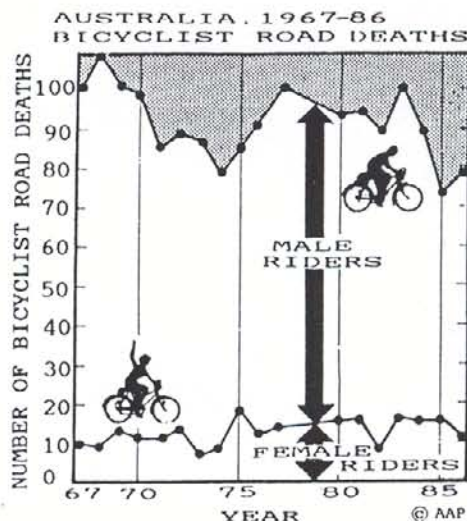
THE GREAT INCREASE IN leisure cycling will not increase the proportion of bicycle accidents and it is likely the number of bicycle accidents will reduce precisely because there are so many more women cycling.

Chart 5 shows that in the USA female cyclists have less fatal accidents than men even though there are more women than men. This difference cannot be explained away by saying male cyclists do a lot more cycling and therefore, are more exposed to risk of an accident. Nor can it be explained away by saying that off-road cycling for physical fitness is more popular with women cyclists and that reduces their risk of being killed on the roads because women choose to cycle away from traffic because they are more traffic wary.

The cautious and defensive approach to driving vehicles that women have particularly the younger women in comparison to young males must be responsible for much of the lower female accident rate.

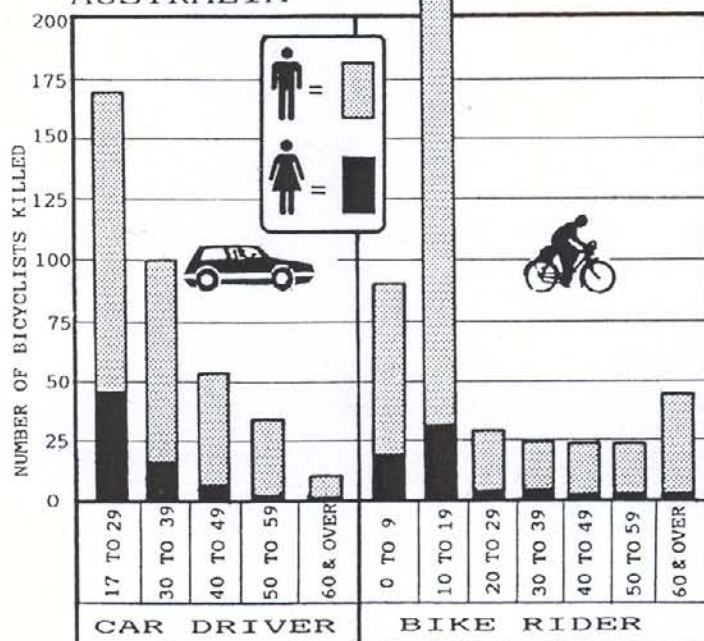
Women cyclists are mostly self taught and start off well by being safer cyclists at school.

The old adage that the safe cyclist of today is the safe motorist of tomorrow is true when we consider the appalling accident figures for both male child cyclists and young adult male drivers shown on Chart 6.



DEATHS

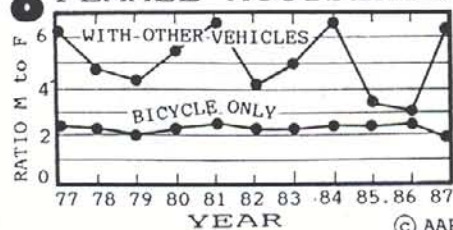
AGE AND SEX OF CAR DRIVERS AND BIKE RIDERS INVOLVED IN FATAL BICYCLE ACCIDENTS OVER FIVE YEARS 1981-85 AUSTRALIA



Australian data for male and female accidents shows that women have a better safety record than men as drivers of cars (Chart 7) as bicycle riders (Chart 5) and by their low level of involvement in bicycle accidents as motorists as shown on Chart 6. This applies for both bicyclist injuries and fatalities in accidents involving motor vehicles. The proportion of females killed as drivers is higher than for cycling and that is probably due to so many women being innocent victims of male recklessness on the roads. Chart 6 indicates that the typical killer motorist is under 30, is male and its common knowledge that he is likely to be in the fastest ten percent of drivers in any stream of traffic aggressively trying to overtake or close up on other drivers to make them go faster.

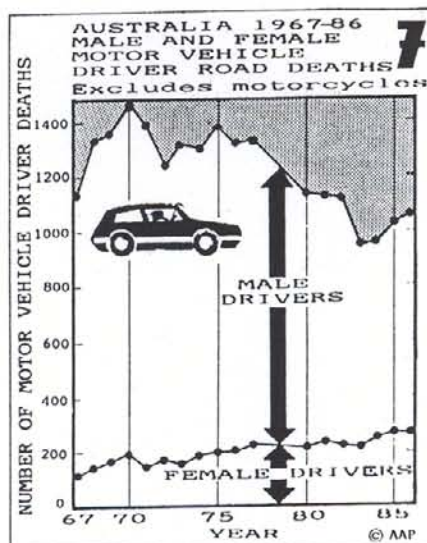
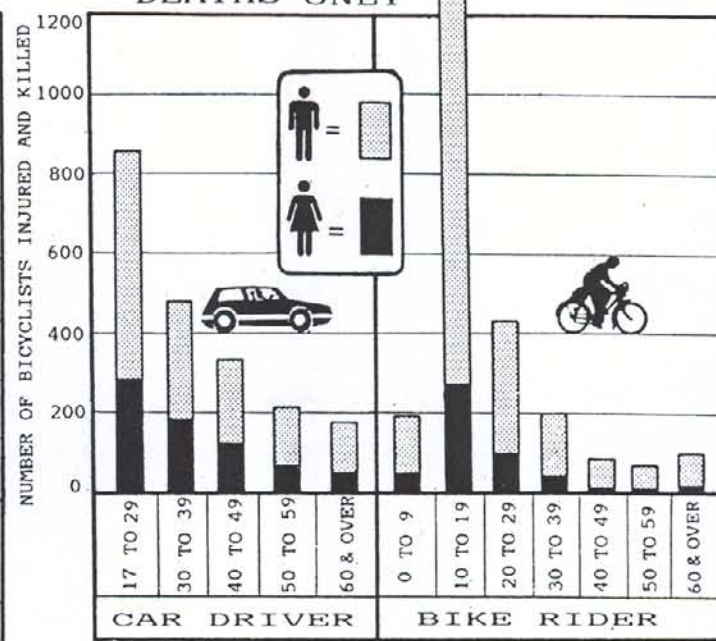
The good overall safety record of women in accidents involving other road vehicles is less pronounced in bicycle accidents that don't involve motor vehicles. The only state in Australia that collects bicycle accident data for bicycle-only accidents is Western Australia and the graph showing the ratio of male

8 WESTERN AUSTRALIA RATIO OF MALE TO FEMALE ACCIDENTS



INJURIES

AGE AND SEX OF CAR DRIVERS AND BIKE RIDERS INVOLVED IN BICYCLE ACCIDENTS VICTORIA 1986 & 1987. INJURIES AND DEATHS ONLY



to female accidents shows female involvement in bicycle-only accidents is much higher. There is a 5.5 to 1 ratio for accidents involving other vehicles but a 2 to 1 ratio for bicycle only accidents over a ten year period.

Women cycle for recreation

THE FEDERAL DEPARTMENT responsible for sport and recreation conducts surveys every year of the 'Physical Activities of Australians'. This survey monitors the kinds of exercises people take to keep fit and the

summer 1987 survey states that 49% of Australians did regular exercise to keep fit which compares with only 38% exercising ten years ago so it does seem that Australians are becoming more active.

The survey states that both walking and swimming continued to be the most popular form of exercise for both men and women but that cycling was the fourth most popular form of exercise for women. It appears that nearly as many women (48%) as men (50%) exercise but cycling is not in the top five activities preferred by men. In this sense we follow trends in America. 18% of the women said they exercised daily, 5% 5-6 days a week, 22% 1-4 days a week.

9 AUSTRALIAN PHYSICAL ACTIVITY LEVELS 1987

Activity Type	Women (%)	Men (%)	Total (%)
Walking	67	48	58
Swimming	23	23	23
Calisthenics/Aerobics	21	20	21
Jogging/Running	10	22	16
Bicycling	14	18	16
Cricket/Football	6	22	14
Tennis	11	10	11
Golf	4	15	10
Squash	4	9	7
Sailing/Boating	4	8	6
Table Tennis	3	6	5
Netball/Basketball	6	3	4
Lawnbowls	3	3	3
Athletics	2	3	2

The participation rates for men and women are shown in Chart 9.

According to the Survey report there are policy implications for fitness programs run by state agencies which are quoted as follows:

There is a need to increase the overall participation rates amongst women. Seventy-three percent of men and 69% of women were active. There were no noticeable sex differences in the frequency of activity, but fewer men than women tended to exercise at sufficient levels of energy expenditure to obtain fitness benefits. It is clear from these surveys that the next step for the active woman is to spend more time on exercise that is vigorous enough to increase and maintain fitness.

While active women exercise as often as men, they are not exercising at sufficient levels of energy expenditure to gain fitness benefits. The challenge for fitness programmers is to achieve this, given that women and men prefer different types of activities and programs. Programs should be developed to cater for the needs and interests of women and encourage them to exercise at levels which will allow them to achieve and maintain higher levels of fitness.

To achieve these goals the following broad objective has been set by the department:

● By the year 2000, 60% of the adult population should participate in sufficient activity to achieve and maintain physical fitness and health.

If the state agencies successfully implement these programs it will result in more women participating in regular exercise and many women transferring their physical effort from walking to the more strenuous forms of exercise including cycling. These state fitness programs will reinforce the general trend for more women to ride bicycles.

The only large scale recent survey that provides accurate data on female bicycle use is the ABS Survey of Bicycle Use and Safety in Adelaide (Oct 84) which studied those cyclists who cycled more than once a week.

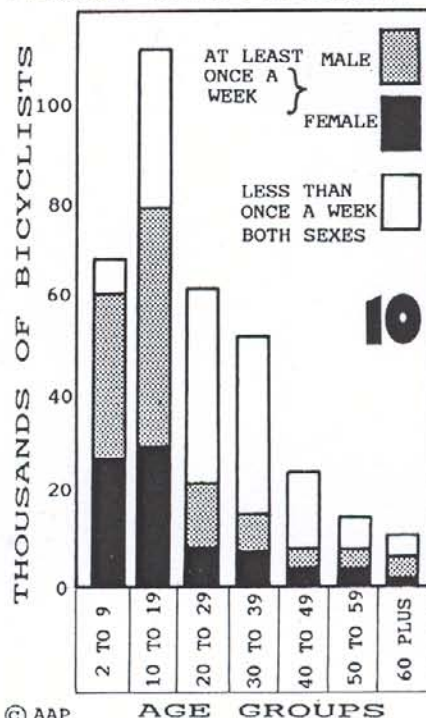
As only 1.2% of all female trips to work were by bicycle in Adelaide (Census 1986) most of the bicycling was done for other purposes. Of the 80,700 female cyclists who cycled at least once a week less than 2500 cycled to work regularly because in the census on trips to work two years later there were only 2,281 female bike commuters.

Chart 10 shows that in all age groups that cycled at least once a week there were about four women for every five men and dispels the myth that men cycle a lot more than women.

Chart 11 shows the different destinations that cyclists ride to and it can be clearly seen that there is around seven female trips for every ten male trips in all categories except trips to work, college or university.

Cycling is more popular in Adelaide than Melbourne or Sydney and 36.5% of all persons who usually reside in Adelaide rode a bicycle in 1984, and 48% of all households had at least one bicycle in working order.

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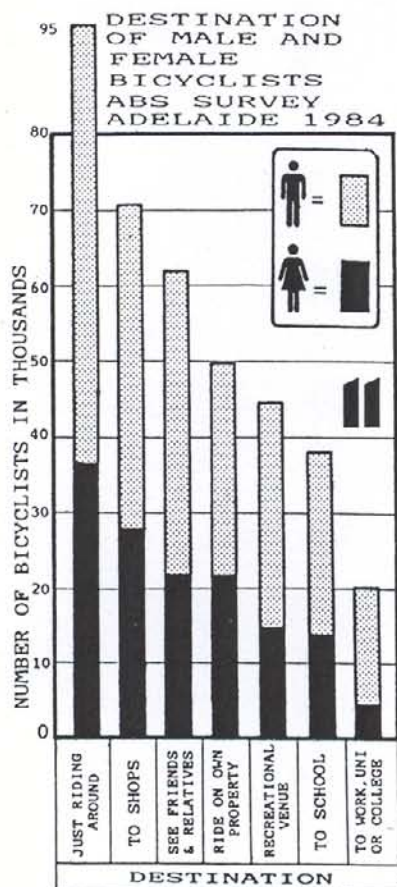
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The potential for women cyclists to share cars

AS THE NUMBER OF women recreational cyclists with car mounted bicycle racks increases it then becomes possible to conceive other ways of using the bike and car together for transportation.

For most women in the outer suburbs of the capital cities and the middle suburbs of Sydney and Melbourne, who do not work in the central business district, public transport is not an alternative to car travel because there are very few cross suburban services. For many women the option of riding a bike to another woman's home to share her car would be a lot more convenient than trying to use public transport.

Most women don't cycle to work because it's too far or there are hazardous road conditions and surveys show that women make shorter trips and are more traffic wary than men with a greater preference for back road and off-road routes. Gaining access to shared cars is therefore ideally suited for women cyclists because most of the potential driv-

ers will be in the middle and outer suburbs in quiet residential areas that can be reached by residential street back routes.

Married women sharing a car in this way would enable their family to avoid the purchase of a second or third family car and would be a major cost saving. For the single working woman sharing a car means making better use of their own car with reduced parking repair and maintenance costs and for some being able to avoid having to pay for a car and being able to afford a taxi. For women with unemployed or disabled husbands or trying to bring up the kids on their own, being able to avoid the purchase of a car would be a major family cost saving.

The decline in the percentage of car passengers over the last ten years shows that the present informal system of sharing cars is contributing to an overloaded road system because the great potential to make better use of cars is being ignored by government. The government's policy of doing nothing is obviously not working. A way must be found of enabling workers to reduce their transport costs by sharing their cars. Furthermore adult cyclists most of whom drive to work need to be encouraged to ride to fellow workers homes and then be driven the rest of the way to work.

Government needs to develop this concept further because bicycles have great potential as feeders to shared cars. Relative to walking, cycling increases the catchment area around the shared car drivers home by 9 to 14 times dependent on the type of bicycle and local terrain.

What is needed is a computer based community service that will match drivers to passengers much as computer dat-

ing services match people. Such a service would not only tell drivers or passengers who one might share with, but short lists them in terms of compatibility to special needs such as work hours and domestic timetables. Surely then it would be possible for hundreds of thousands of women nationwide to be able to come together to share cars.

More women riding but fewer commuters

IT SEEMS LIKELY THAT the women cyclists will outnumber men by the early nineties and the main use of the bicycle will be for fitness and recreation in off-road areas or on back roads. The decline in cycling to school will continue and bicycle commuting will not significantly increase because of the totally inadequate provisions of the government. The only form of bicycle dual mode travel that will significantly increase will be for recreational purposes in the form bikes carried by the cars of women drivers.

There is potential for introducing innovative forms of car sharing for commuter cyclists. If this included accessing shared cars on relatively safe back routes, car sharing would be very attractive to women cyclists.

There is considerable potential for promoting bike-rail trips to women cyclists however it is unlikely to happen because it demands initiatives by the rail authorities.

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