

## Alternative Transport

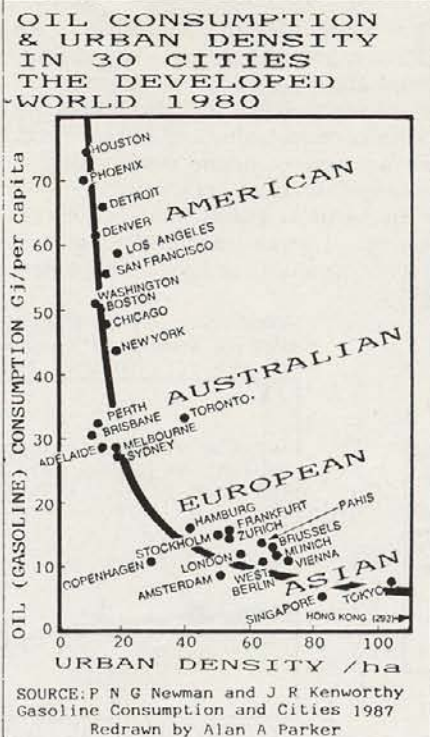
### Getting the Green Light

Alan Parker, bicycle advocate and Vice President of the Victorian Town and Country Planning Association, has for many years been researching, planning and expounding better systems of transport for Australian communities. Parker maintains that, if we are to slow down the greenhouse effect, the bicycle has a vital role to play in tomorrow's transport systems. The following article is extracted from his paper, "Greenhouse: Managing Motor Vehicle Emissions and Creating an Alternative Transport System".

The 440 million cars on this planet are responsible for 25% of global warming. As well as carbon dioxide (CO<sub>2</sub>), cars emit the greenhouse gas, nitrous oxide (NO<sub>x</sub>), and carbon monoxide which destroys a gas that acts as a methane scavenger, thus indirectly increasing concentrations of one of the worst greenhouse gases. Equipping cars with catalytic converters to reduce the emissions which cause smog increases CO<sub>2</sub> emissions by 15% and nitrous oxides three to five times.

The Federal and Victorian governments have accepted CSIRO advice that CO<sub>2</sub> emissions must be reduced to 80% of their 1988 level by 2005. Yet no State's road authority plans to reduce car use. Meanwhile cities continue to sprawl outward, increasing the need for travel. The Victorian Roads Corporation has predicted an 85% increase in car use by 2005.

There is a need to manage the demand for increased motor vehicle use while encouraging more energy efficient means of transport. The total passenger transport system must change so that different kinds of vehicle use are coordinated and complementary. Giving effect to the following four transport strategies would produce steady reduc-



tions in CO<sub>2</sub> emissions of about 1.25% per annum to meet the 2005 deadline. Cyclists can contribute to the success of all four.

### Better Use of Cars

An effective car sharing scheme is needed to overcome present car use trends. Car passenger rates declined from 1.21 in 1976 to 1.14 in 1986.

The economics of car use would change dramatically if incentives to car use for personal transport, such as provision of free company cars, were eliminated and future car parking restricted. Raising petrol prices to Japanese and European levels would encourage both car sharing and use of smaller, more efficient cars.

Complementary actions to facilitate and encourage car sharing would include tax incentives, parking priority, special freeway access lanes and computerised matching of travellers.

Bicycles could play a role by giving flexibility at either or both ends of trips. Fitting bicycle racks to cars would extend the potential of the car share option.

### Using Bicycles for Short Trips

Worldwide the bicycle is still a more important form of transport than the car. Yet in Australian cities few

people cycle to work, though bicycle sales have overtaken car sales and the percentage of households with serviceable bicycles is steadily growing. In Melbourne, that figure is expected to reach 80% by 2005, with Perth then boasting an even greater proportion of biking households and Sydney somewhat fewer.

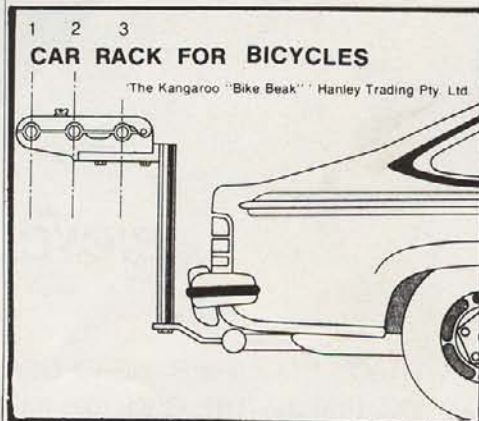
Distances and fear of traffic are the main constraints on bike commuting, though the death rate for cyclists has dropped in Australia and cycling safety can be expected to continue to improve.

The potential for bike travel could be exploited in Melbourne by raising the priority of implementing the city's bike plan, approved in 1986, and creating short cuts for cyclists by linking backstreet networks and cycle paths. Bicycle use of residential streets can also be promoted by traffic calming measures, such as introduction of 40 km/h speed limits.

### Bicycle Access to Public Transport

Three million Japanese bike-rail users are just some of the reasons why Japanese cities are four times more energy efficient than Australian cities. As well as high density living areas, Japan, like Australia, has satellite and dormitory towns. Many of their inhabitants cycle the two or three km to the station for their trip to work.

While only 12% of Melbourne's population live within walking distance of stations, 85% are within easy cycling distance. Bike rail commuting in Melbourne is nevertheless in decline due to bicycle theft and vandalism at stations. Japanese engineers have overcome these problems with secure, vandal-proof storage systems. Funding goes to these rather than to car parking which would take up space wanted for shops and services.





Australia needs modernised stations with surveillance systems to improve passenger and bicycle security, development of adequate bicycle storage systems and funding (\$500,000 per annum for five years in Sydney and Melbourne and somewhat less in other capital cities) to provide bicycle storage. Installation would be based on detailed studies of local needs.

Given the right facilities, 2005 should see over 200,000 bike rail and bike/express bus commuters in Australian cities.

## Improving Public Transport

In Japan and the Netherlands, the boost given to rail by bike rail users helps allow provision of better services to all users. Japan has also reaped the benefits of its high speed rail in energy savings and economic development in communities along train routes.

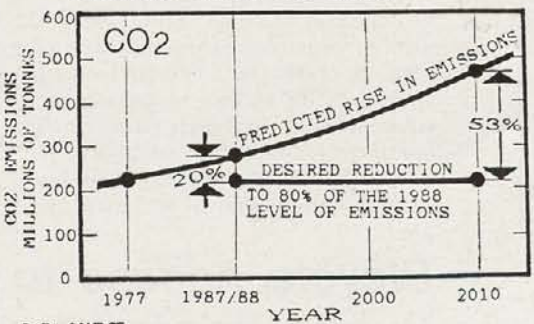
In Australia, public transport is stagnating. Though community groups, environmentalists and user groups have

advocated an improved national railway network linked to effective urban services, little has been done to develop the infrastructure since the 1930s. Rail lines are being "unplugged" and services eroded.

Governments need to divert funds from new main roads and freeways to public transport and bicycle facilities, improve railway services and security and plan high speed rail links.

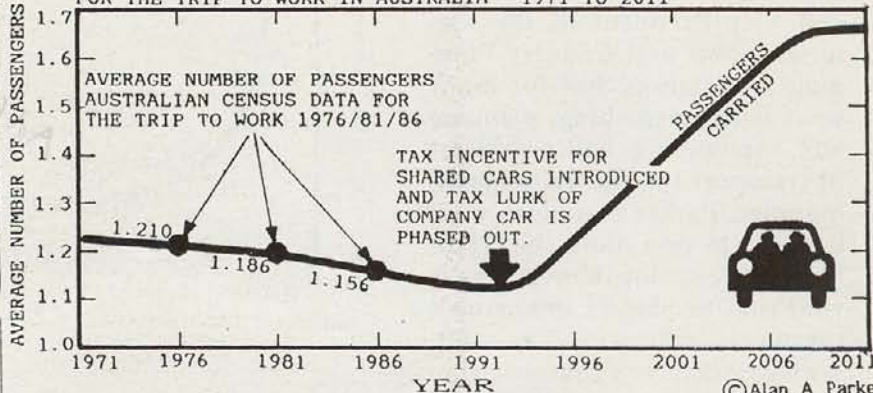
The federal government is expected to sign a protocol to reduce emissions at the 1992 inter-governmental conference

PREDICTED AND PROPOSED CARBON DIOXIDE (CO<sub>2</sub>) EMISSIONS FOR AUSTRALIA PERIOD 1988 TO 2010



DATA SOURCE: Forecasts of energy demand and supply, Australia 1987, 1986/7 to 1999/2000, Department of Primary Industry and Energy 1987. © AAP

MAKING BETTER USE OF AUSTRALIAN CARS AVERAGE NUMBER OF PASSENGERS CARRIED ( INCLUDES DRIVER ) FOR THE TRIP TO WORK IN AUSTRALIA 1971 TO 2011



AVERAGE NUMBER OF PASSENGERS AUSTRALIAN CENSUS DATA FOR THE TRIP TO WORK 1976/81/86

TAX INCENTIVE FOR SHARED CARS INTRODUCED AND TAX LURK OF COMPANY CAR IS PHASED OUT.



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MELBOURNE 1986; SBC SURVEY. TRIP DESTINATION CATEGORIES LISTED BY CYCLISTS AND FREQUENCY OF TRIPS PER MONTH RANDOM SAMPLE OF 1250 OVER 12 YEARS OF AGE.



% OF DESTINATIONS CYCLISTS CLAIM THEY RIDE BICYCLES TO	DESTINATION CATEGORY		FREQUENCY OF RIDING TO A DESTINATION NUMBER OF TRIPS PER MONTH.											
			0	5	10	15	20	25						
70	60	50	40	30	20	10	0	LEISURE, RIDING AROUND	15	10	5	2	1	0
								VISIT A FRIEND	10	5	2	1	0	
								SHOPPING	8	4	2	1	0	
								TO RECREATION SITES	12	8	4	2	1	
								EXERCISE OR TRAINING	10	6	3	1	0	
								PLACE OF WORK	20	15	8	4	2	
								SECONDARY SCHOOL	15	10	5	2	1	
								RAILWAY STATION	10	5	2	1	0	
								BICYCLE TOURING	5	2	1	0	0	
								PARTICIPATORY SPORT	5	2	1	0	0	
								TERTIARY EDUCATION	5	2	1	0	0	

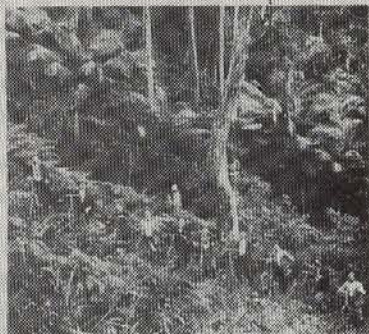
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on sustainable development. The lead-up to that conference is a political opportunity to persuade governments to plan transport systems which will better equip Australia to survive climate change and global pressure towards emission controls. It is also the time to press for a national transport plan and for a national transportation organisation involving cyclists and users of public transport.

Governments should set and monitor progress towards performance objectives, including raising car passenger rates to 1.65 by 2010, a 1% shift per year from private to public transport, a shift from short car trips to bicycle or moped (figure to be determined), a 1% shift from long car commuter journeys to dual mode journeys and an increase in urban density of 1% per year.

Now is the time to create the transport system of the future, a system which will reduce, not only greenhouse emissions, but also traffic noise, smog, the future possibility of forest-destroying acid rain, road accidents, oil imports and their adverse effect on our balance of payments.

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