

**ATTITUDES OF ADULT HOME-OWNERS TO UTILITY
CYCLING IN HILTON**

Pamela Sherriffs

**Attitudes of adult home-owners to utility
cycling in Hilton**

By

Pamela Sherriffs

**Submitted in fulfillment of the academic
requirements for the degree of**

Master of Environment and Development

at the

**Centre for Environment and Development
(CEAD)**

University of Natal

Pietermaritzburg

2002

ACKNOWLEDGEMENTS

I would like to acknowledge the help and support I received from my supervisor, Professor Rob Fincham, during this study. I would also like to thank David Catherine for his help with computer-related issues.

CONTENTS

	Page
Executive summary	1
Chapter 1: Introduction	
1.1 Overview	2
1.2 Aims and objectives	3
1.3 The study area	4
1.4 Limitations of the study	8
1.5 Structure of the thesis	8
Chapter 2: Literature review	
2.1 Car invasion	9
2.2 Impacts of cars	11
2.2.1 Global warming and air pollution	12
2.2.2 Roads	15
2.2.3 Health	16
2.2.4 Social inequity	16
2.2.5 Communities	18
2.2.6 Congestion	19
2.3 Costs	20
2.4 The technological fix	21
2.5 Cars and the developing world	23
2.5.1 The situation in South Africa	24
2.6 Reducing dependence on the car	26
2.7 Benefits of bicycles	27
2.8 Bicycles around the world	28
2.9 Attitudes to cycling around the world	30
2.9.1 The importance of attitudes in the success of cycling promotion programmes	31
Chapter 3: Methodology	
3.1 Approach	35
3.1.1 Advantages of focus group interviews	35
3.1.2 Limitations of focus group interviews	36
3.2 Detailed methodology of study	36
3.2.1 Structure of the focus group interviews	39
Chapter 4: Results	
4.1 Cycling histories and current cycling habits	42

4.2	Deterrents to utility cycling in Hilton	46
4.2.1	Direct deterrents	47
4.2.1.1	Traffic	47
4.2.1.2	Stranger danger	50
4.2.1.3	Hills, weather, dogs, theft, perceived difficulty of carrying goods	51
4.2.1.4	Perceived pace of life	54
4.2.2	Indirect deterrents	55
4.2.2.1	Car culture	55
4.2.2.2	Inertia	61
4.3	Image of cyclists	62
4.4	General attitudes to cycling and why people would like to cycle more	66
4.5	Life stage	70
4.6	Contradictions	70

Chapter 5: Discussion

5.1	The potential for increasing utility cycling in Hilton	68
5.2	Turning potential into action	69
5.2.1	Direct deterrents	70
5.2.1.1	Traffic	70
5.2.1.2	Stranger danger	72
5.2.1.3	Time	74
5.2.1.4	Carrying	74
5.2.1.5	Hills, weather, dogs	75
5.2.2	Indirect deterrents: car culture and inertia	75
5.3	Suggestions for a campaign to encourage utility cycling in Hilton	77
5.3.1	Physical infrastructure	78
5.3.2	Safe routes to school	79
5.3.3	Behaviour	79
5.4	From attitude to behaviour	83
5.5	Potential utility cyclists	86
5.6	Suggestions for further study	88
5.7	The big picture	89
	References	90

List of illustrations

Figure 1	Location of Hilton in relation to Pietermaritzburg. Insert: Location of Hilton within KwaZulu-Natal	4
Figure 2	Hilton Avenue with mid-morning traffic on a weekday	5
Figure 3	A residential road in Hilton	6
Figure 4	Sign outside the Quarry Shopping Centre	7
Figure 5	Bicycle rack at the Old Shopping Centre	7
Figure 6	Car ownership levels per thousand population (1999)	10

Figure 7	Projected growth in car ownership per thousand population in selected developing regions by 2020	11
Figure 8	Major CO2 emitters since 1950	14
Figure 9	Estimated number of bicycles per 100 persons	28
Figure 10	Current cycling habits of focus group participants	44
Figure 11	Participant drawing and quote illustrating fear of traffic as a deterrent to cycling	47
Figure 12	Participant drawing and quote illustrating hills as a deterrent to cycling	52
Figure 13	Participant drawing and quote illustrating traffic and weather as deterrents to cycling	52
Figure 14	Participant drawing and quote illustrating dogs and traffic as deterrents to cycling	53
Figure 15	Participant drawing and quote illustrating perceived lack of time as a deterrent to cycling	54
Figure 16	Participant drawing and quote illustrating enjoyment of surroundings while cycling	57
Figure 17	Comparative attitudes about cars and bicycles	58
Figure 18	Collation of responses on comparison sheets	59
Figure 19	Predominant image of a typical utility cyclist in Hilton	63
Figure 20	Predominant image of a typical cyclist in Hilton	64
Figure 21	Participant drawing and quote illustrating personal fitness benefits as a reason to cycle	67
Figure 22	Participant drawing and quote illustrating utility cycling as a shared family activity	67
Figure 23	Interaction between a cyclist and other road-users	69
Figure 24	Graphic representation of the proportion of time spent by the cyclist and the car driver on various components of the total trip to the shops	71
Figure 25	A utility cyclist with a small backpack for carrying goods	77

List of tables

Table 1	Reasons for bicycle use in South Africa	30
Table 2	Breakdown of focus group participants	38

Appendices

Appendix 1	Comparison sheet: utility cycling	94
Appendix 2	Comparison sheet: driving a car	95

EXECUTIVE SUMMARY

Negative environmental and social consequences of car-centred transport systems make it important to encourage less destructive ways of getting around. One of these is utility cycling, which is an effective means of transport over short distances. Hilton, a small town in KwaZulu-Natal with a well-developed road system, low levels of traffic, a mild climate and relatively flat topography, is well suited to utility cycling. However, this transport option is uncommon in the town, even though bicycle-ownership is high. Privately owned cars are the main form of transport for residents.

Focus group interviews were used to collect information regarding attitudes of adult Hilton home-owners towards utility cycling as a transport option within the town. It was considered important to understand attitudes as a first step towards learning how best to encourage an increase in utility cycling in Hilton.

Attitudes towards cycling in general were found to be positive. It was considered to be a community-friendly, environment-friendly, healthy activity. Recreational cyclists were regarded as fit, healthy and trendy. Awareness of utility cycling was low but respondents nonetheless regarded it in a positive light when they thought about it. However, there were found to be direct and indirect deterrents to utility cycling. Direct deterrents were traffic, crime, hills, weather, dogs, perceived difficulty of carrying goods on a bicycle and perceived lack of time. Indirect deterrents were ingrained car-driving habits and inertia.

It was found that the potential to increase utility cycling as a transport option in Hilton does exist. However, measures to encourage this would need to take these deterrents effectively into account in order to achieve success.

CHAPTER 1

INTRODUCTION

1.1 Overview

"Of all the new products of the 20th century, the car had the greatest ... impact." Ponting (1991, 330).

SINCE the beginning of the 20th century, the global car fleet has increased from a few thousand vehicles to hundreds of millions and the number continues to rise. Although cars have brought benefit to many people, they have also had widespread negative social and environmental effects (section 2.2). Some of these negative effects can be decreased by technical improvements to cars themselves, but others can only be mitigated by reducing or avoiding their use. There are many ways of doing this, including the creation of efficient public transport systems, the redesign of cities and lifestyles in such a way that the need to travel is reduced, and a focus on non-motorised means of transport for relatively short distances. The bicycle is one such non-motorised option which is widely used in some parts of the world for utility purposes. Utility cycling, which involves making a journey not for the sake of cycling itself but for the sake of doing something at the journey's end, is an under-utilised transport option in South Africa, however.

De Saint-Laurent (1998) has said that modest pilot projects relying primarily on existing infrastructure are a good way to illustrate the feasibility of new transport concepts in South Africa. This study looks at the town of Hilton in KwaZulu-Natal as an area in which utility cycling could be encouraged as a transport option. Hilton can be considered a manageable site for a pilot project to encourage cycling for a number of reasons. Although private cars are the predominant means of transport in the area, bicycle ownership and ability to ride are high. The area is geographically suitable for cycling and most of the trips taken within the town, for example to the shops or to schools, are short and easily achievable by bicycle. The existing road system is well-developed and traffic on all but the two major roads is relatively light. If it was found important to put down cycling tracks, this would not require a vast amount of new infrastructure and would only be necessary along the town's main roads.

1.2 Aims and objectives

The aim of this study was to investigate the attitudes of adult home-owners resident in Hilton towards utility cycling in Hilton. To achieve the aim the following were set as the key objectives:

- To conduct a literature review on the impacts of cars and the need for alternative means of transport; on bicycles as an alternative to cars for short journeys; and on attitudes towards cycling around the world;
- To investigate the cycling histories and current cycling behaviour of adult home-owners resident in Hilton;
- To identify direct and indirect deterrents to utility cycling in Hilton;
- To identify general attitudes to cycling and reasons that would prompt greater use of cycling for utility purposes;
- To identify types of potential utility cyclist in Hilton; and
- Given the results of the study, to suggest interventions most likely to encourage utility cycling in Hilton.

1.3 The Study Area

Hilton is a small town situated to the north-west of the city of Pietermaritzburg in the South African province of KwaZulu-Natal. From the centre – designated as the Old Shopping Centre - to the periphery of the town is not more than three kilometres in any one direction. Figure 1 shows Hilton in relation to Pietermaritzburg and its locality within KwaZulu-Natal.

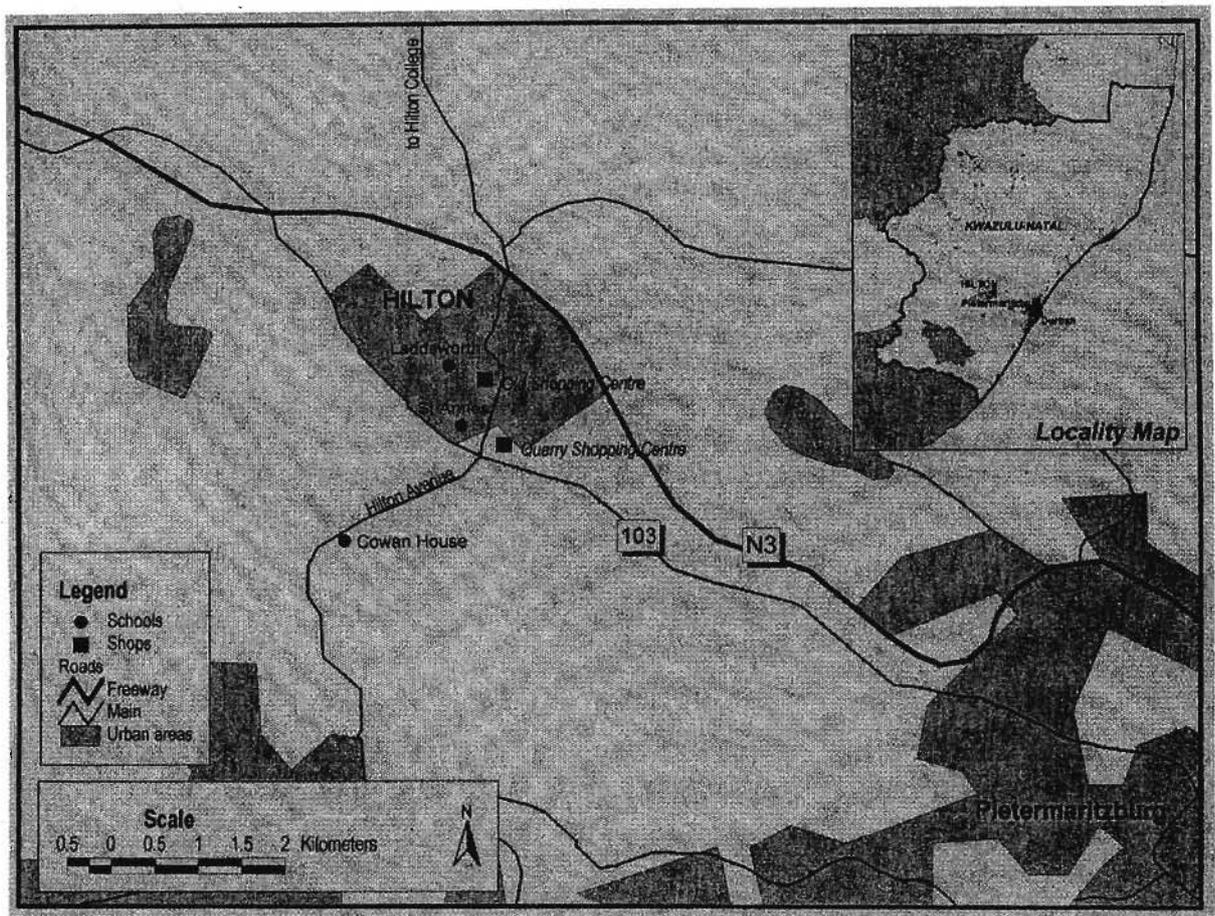


Figure 1 Location of Hilton in relation to Pietermaritzburg.
Insert: Location of Hilton within KwaZulu-Natal.

Although Hilton is predominantly a residential area and many working residents commute daily to Pietermaritzburg, there are a small number of businesses along Hilton Avenue and two shopping centers, the Quarry Centre and the Old Shopping Centre. There are two primary schools, Laddsworth and Cowan House – although

Cowan House falls outside the boundary of Hilton itself; one high school, St Anne's; and one private college, Grace College, which is situated in the Quarry Centre.

Under the apartheid system, Hilton was classified as a "white" area and it is still the case that the majority of residents are white. There are approximately 7000 residents in approximately 1600 households. The area is relatively affluent: property prices are among the highest in the Pietermaritzburg area and minimum property size is 2000 square metres.

The predominant form of transport is the private car. Public transport aimed at the residents of Hilton is poorly developed. The town has a well-developed road system. Levels of traffic are relatively light as Hilton is by-passed by the N3 highway and there is little through-traffic. The speed limit through the town is 60km per hour on the main roads and 30km per hour on some smaller residential roads. Figure 2 shows Hilton Avenue, the main road through the town. Figure 3 shows a typical smaller residential road in the town.

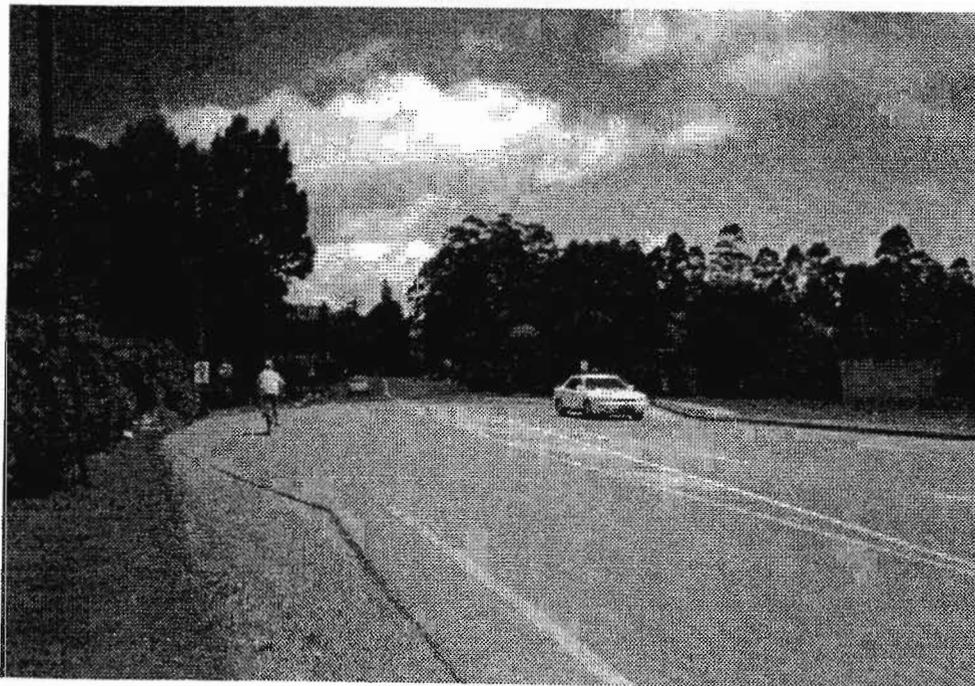


Figure 2 Hilton Avenue with mid-morning traffic on a weekday



Figure 3 A residential road in Hilton

Hilton has a temperate climate and is relatively flat, although there are some steep hills within the town. These conditions make Hilton suitable for outdoor activities and non-motorised means of transport like cycling. (Although Hilton at an average altitude of 1050m above sea level is considerably higher than the centre of Pietermaritzburg, which has an altitude of approximately 650m, this study is not concerned with any trips outside of Hilton itself.) However, utility cycling is relatively rare in the town and little effort has been made to encourage it as a transport option. The road system caters specifically for motor vehicles although there are pavements for pedestrians along some of the roads. There are no cycle tracks in the town. Businesses offer parking for cars but most do not offer parking for bicycles. Awareness of cycling as a mainstream transport option is low. Figure 4 shows a sign at the Quarry Shopping Centre which specifically discourages bicycles. There are no bicycle racks at the Quarry Shopping Centre. The Old Shopping Centre does have a bicycle rack with space for five bicycles, shown in Figure 5. It is situated about 20 metres from the entrance to the supermarket. Both shopping centres have ample parking places for cars.

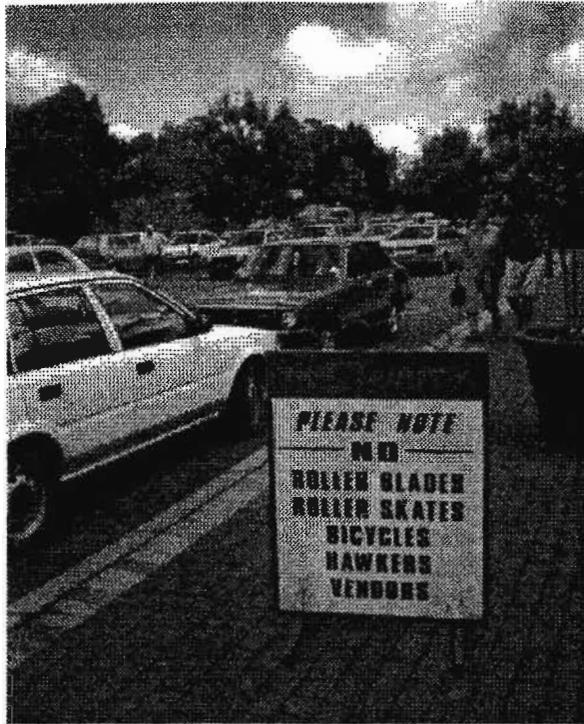


Figure 4 Sign outside the Quarry Shopping Centre



Figure 5 Bicycle rack at the Old Shopping Centre

1.4 Limitations of this study

Urban transport is a vast and complex subject which cannot be dealt with comprehensively in a single study. Cars will continue to play a major role for the foreseeable future and the problems they cause will need to be tackled in many different ways. This thesis focuses on utility cycling as one potential means of reducing the number of car journeys in one area. As urban transport is an issue which has not yet been tackled at the Centre for Environment and Development, from where this thesis was produced, this study is exploratory in nature.

The short time span available for this study meant it was not possible to canvas as many responses as the researcher would have liked. In order to narrow down the scope of the study to a manageable size, the researcher focused specifically on adult Hilton householders. This meant that the attitudes of children and teenagers living in Hilton were not canvassed, although adults' attitudes to children cycling were covered. As school children are responsible for many of the car trips undertaken by their parents in Hilton, they form a key group in any strategy to reduce car journeys and should form the focus of further studies. Attitudes of people who work but do not live in Hilton, and those who live in Hilton but do not own houses in the area, for example domestic workers who live on properties in Hilton, were also not canvassed.

1.5 Structure of the thesis

Chapter 2 offers a review of relevant literature. Chapter 3 presents the methodology used to collect data regarding the attitudes of adult home-owners resident in Hilton towards utility cycling. In Chapter 4 results of the study are presented and in Chapter 5 the results are discussed. There are some suggestions on how the findings could be applied in order to encourage an increase in utility cycling in Hilton, and reflection on how to apply the findings in a wider South African context.

CHAPTER 2

LITERATURE REVIEW

This chapter reviews the increase in the use of cars since the beginning of the last century and the negative environmental and social effects of this growth on a local and global scale. Attempts to mitigate negative effects through technological improvements to cars are discussed. The situation regarding cars in the developing world and South Africa is reviewed, followed by a look at the need to reduce and/ or avoid dependence on the car. The bicycle is presented as a socially and environmentally-friendly alternative to the car for short distances. Benefits of bicycles, bicycle use around the world and attitudes to cycling are discussed.

2.1 Car invasion

"A biologist from a pedestrian planet, peering at some stretch of North America from a height of 500 feet, will conclude that its dominant species is a shiny lozenge-shaped reptilian creature that alternately basks in the sun and sprints at great speed. It is host, he will note, to small endosymbiotic organisms which at intervals emerge, move about slowly, then reenter the host. Further observation reveals why the host puts up with these seeming parasites. They are devoted to the care and feeding of the host. They suck energy-rich organic compounds from the bowels of the planet and feed them to the host, something it is unable to do for itself. At times they even fight other colonies of their own species for access to the host-food. They make over ecosystems to meet the host's needs, replacing vast forest and grasslands with flat surfaces on which the host can bask or sprint more easily, and building hives or dens in which the host can shelter from the elements." Eisenberg (1998, 56).

At the beginning of the 20th century there were a few thousand motorcars in the world. Cars were largely regarded as playthings for the very rich. But then in 1908 the widely-affordable Model T Ford was produced. Car ownership in the United States rocketed to 26 million by 1930 and continued to double roughly every two decades until the 1970s before beginning to level off. Europe followed suit, although a few decades behind. Between 1950 and 1980, the number of cars and light trucks in the

world increased 800% from 50 million to more than 400 million (Eisenberg, 1998; Ponting, 1991). The car had become the dominant form of transport for people in mature industrialized countries (Freund and Martin, 1993). There are currently more than 500 million cars in the world and an annual output of 48 million new cars – more than one new car per second (Carbusters, 2001). Figure 6 shows car ownership levels in various regions of the world.

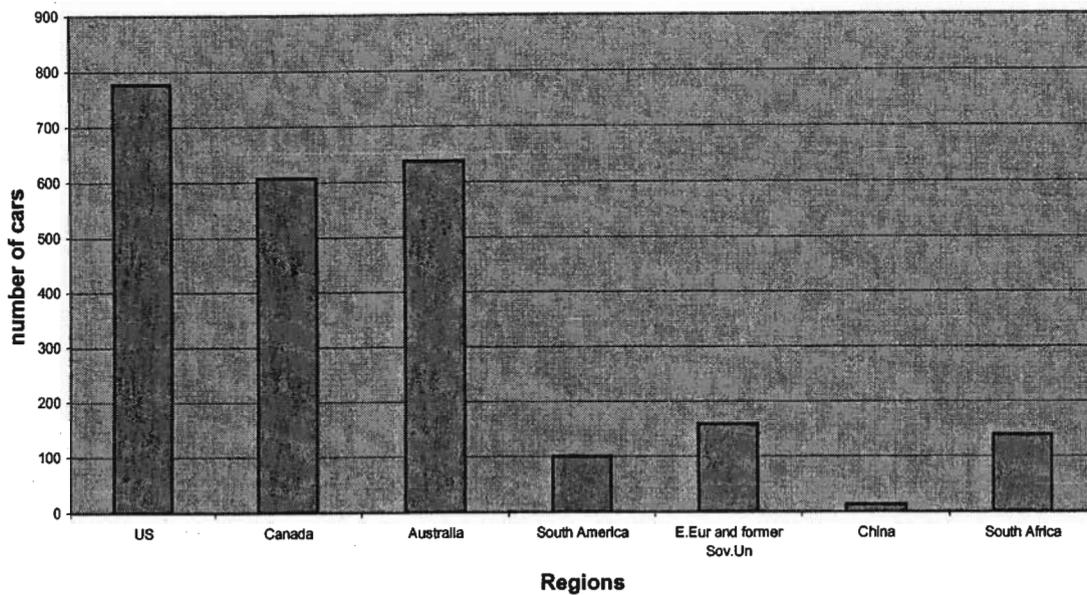


Figure 6 Car ownership levels per thousand population (1999)

(Adapted from International Energy Outlook 2001 and Department of Transport, 1998)

The majority of cars are to be found in the developed world, but car ownership and use is increasing in the developing world. Auto density in the bulk of Africa, Asia and Latin America is about one thirtieth what it is in the developed world, but this is where the fastest growth rates in auto consumption are occurring, even though car ownership is restricted to the elite and middle classes (Freund and Martin, 1993). Figure 7 shows projected growth in car ownership levels in selected regions of the developing world. Although car ownership in most of Africa is low, it is relatively high and increasing in Africa. Between 1972 and 1996 the number of cars in South Africa increased by 72% to reach approximately 5.5 million. Forecasts suggest that it will increase another 64% by 2020 (International Energy Outlook, 2001; de Saint-Laurent, 1998; Department of Transport, 1998).

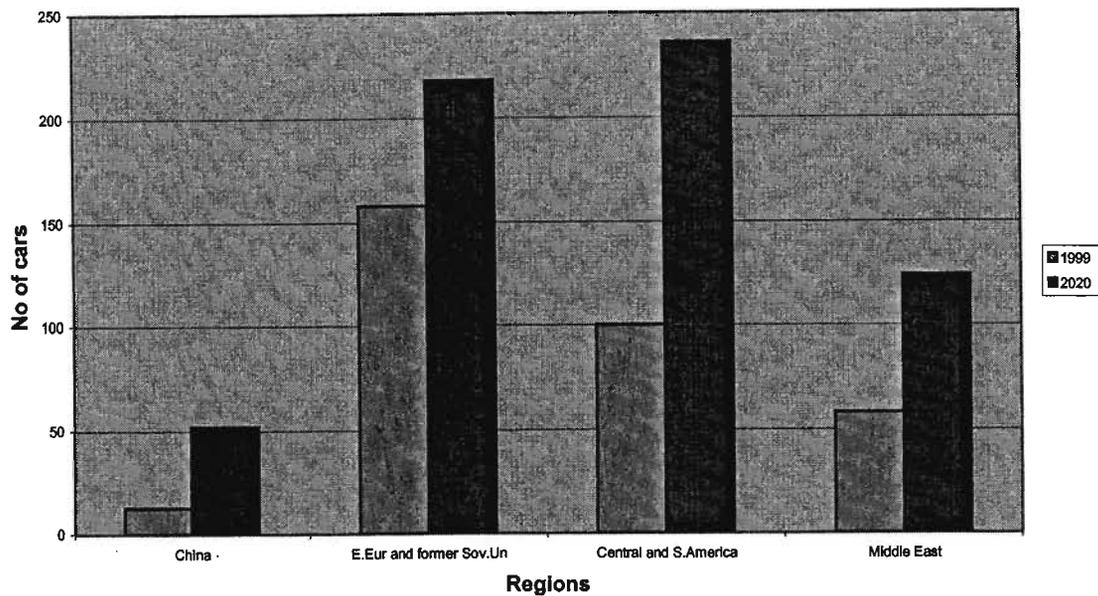


Figure 7 Projected growth in car ownership per thousand population in selected developing regions by 2020

(Adapted from International Energy Outlook 2001)

2.2 Impacts of cars

Cars are associated with freedom, power and modernity. To many young people, getting a driver's licence is a rite of passage. Seventy two percent of young people in a survey in England given the choice between the right to vote and the right to get a driving license said they would choose the latter (O'Meara Sheehan, 2001). Most people view individualised usage of the car as natural, inevitable and desirable (Freund and Martin, 1993). However, although cars have created new opportunities for many people, these have come at a high cost which is not borne only by the 8% of the world's population that owns a car (Whitelegg, 1993). The negative consequences of car-centred transport systems are shared – not always equally – by everyone. These consequences include a wide range of problems at local and global level: air pollution and global warming; social inequity; traffic congestion; health-related problems; urban sprawl and breakdown of communities; loss of forests, farmland, open spaces and wildlife habitat.

2.2.1 Global warming and air pollution

"The most profound danger to world peace in the coming years will not stem from the irrational acts of states or individuals but from the legitimate demands of the world's dispossessed. Of these poor and disenfranchised, the majority live a marginal existence in equatorial climates. Global warming, not of their making but originating with the wealthy few, will affect their fragile ecologies most. Their situation will be desperate and manifestly unjust." Statement by 100 Nobel Laureates, Oslo, 2001.

At first, cars were considered less polluting than horses, which in 19th century urban England produced 6 million tons of manure annually. However, emissions from cars are now recognised to be far from innocuous. Approximately two thirds of the carbon monoxide, one half of the nitrous oxide and two thirds of carbon particulate emissions from human sources are created through traffic. The pollutants emitted by automobiles, including carbon monoxide, nitrogen oxide, hydrocarbons, lead, fine particulate matter (aerosols) and fibers (asbestos), photochemical oxidants, acid deposition, chlorofluorocarbons and carbon dioxide, have significant negative effects on human, animal and plant health. The effects can be caused directly by the pollutant before it undergoes chemical transformation (if it does) in the atmosphere, and indirectly by a mixture of atmospheric pollutants, often at sites distant from the pollution source. Nitrogen and sulphur travel beyond urban areas and acidify lakes, forests and farms (O'Meara Sheehan, 2001; Freund and Martin, 1993; Zuckermann, 1993).

Perhaps the most significant effect of emissions from cars has been their contribution to the greenhouse effect and global warming. Global warming is one of the "most serious pollution threats the world has ever faced" (Ponting, 1991, p383). One hundred Nobel laureates, in a statement made at the Nobel Peace Prize Centennial Symposium in Oslo in 2001, warned that united action to counter global warming was vital in the quest for social justice and future global stability. The basic mechanism of the "greenhouse effect" is that some of the radiation from the sun that is reflected off the surface of the Earth is trapped in the atmosphere by carbon dioxide (CO₂) and

other “greenhouse gases”. An increase in greenhouse gases in the atmosphere means that more radiation is trapped leading to a rise in the average temperature of the Earth’s surface and lower atmosphere. The major gases responsible for the greenhouse effect are methane, chlorofluorocarbons (CFCs), nitrous oxide, ozone, water vapour and CO₂. The concentration in the atmosphere of all of these gases (with the possible exception of water vapour) has risen in the past 200 years as a result of human activity. CO₂ concentrations have increased 28% since 1850 and the temperature of the planet has risen by 0.6 degrees Centigrade. 70% of this additional warming can be attributed to CO₂ alone. Human-induced production of CO₂ is predominantly the result of the burning of fossil fuels, such as coal or oil, to generate electricity and to power automobiles (Globe, 2001). In January 2001, the Intergovernmental Panel on Climate Change issued a report stating that the trend towards a warmer world has begun. Impacts attributed to global warming already evident around the world include rising sea levels, disappearing glaciers, melting permafrost, widespread drought, more frequent El Nino events triggering devastating weather, bleaching of coral reefs, expansion of the range of tropical diseases, disrupted migration patterns for wildlife and shifting ranges of plants and animals (Kluger and Lemonick, 2001).

Worldwide the transport sector is the fastest-growing source of carbon emissions. The share of global CO₂ from transportation rose from 17% in 1971 to 23% in 1997. Motor vehicles’ contribution of transportation carbon emissions grew from 58% in 1990 to 73% in 1997. Even as efficiency gains have lowered energy use in manufacturing, these have been overtaken by trends in personal mobility toward higher levels of motor vehicle use with fewer passengers per vehicle, and by the boom in larger, more energy-consuming “light trucks” such as minivans and sport utility vehicles. In industrial countries passenger trips – primarily in cars – generally account for 60-70% of energy use and emissions from transportation. Between 1973 and 1992 Denmark, which shifted emphasis away from private cars, was the only industrial country with a clear decline in energy use and emissions from transport (O’Meara Sheehan, 2001).

Industrial nations, which have 19% of the world’s population, use 59% of all energy that goes into transportation. However, while average transportation fuel consumption

in the industrial world increased 1% between 1996 and 1997, the equivalent figure for developing Asia was 6% and for Latin America 5%. In Africa, transportation energy use was unchanged (O'Meara Sheehan, 2001). According to Marland *et al* (2001) total emissions for Africa have increased 8.5-fold since 1950, but are still less than the emissions for some single nations including the US, China, Russia, Japan, India, and Germany. Figure 8 shows the major CO₂ emitting regions since 1950. Only two African countries have per capita CO₂ emissions higher than the global average: South Africa and Libya.

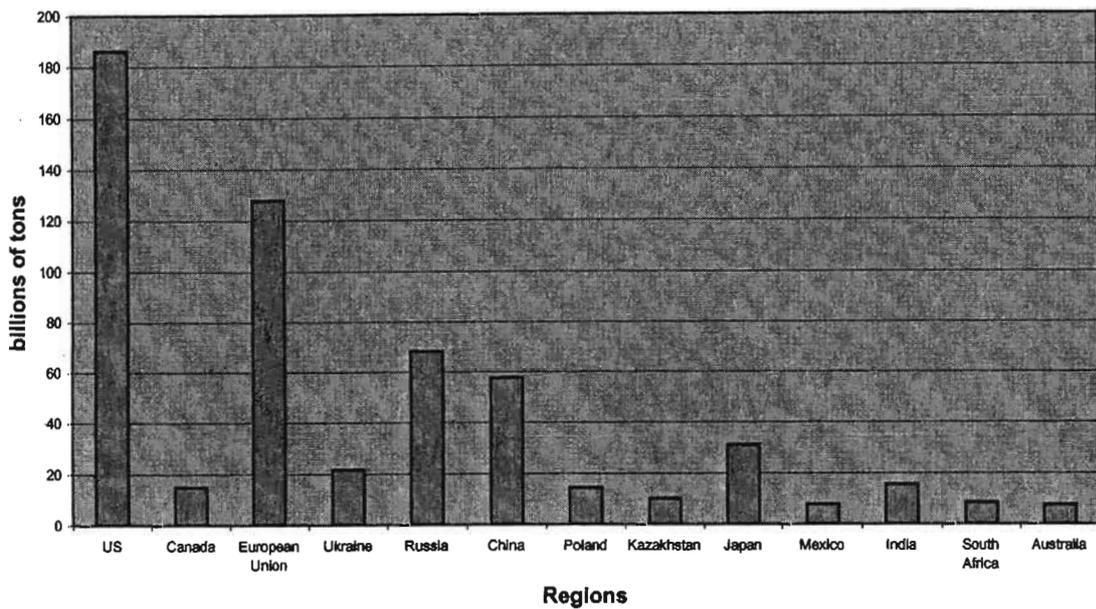


Figure 8 Major CO₂ emitters since 1950 in billions of tons
(Adapted from Time, April 2001)

The transportation sectors in much of the developing world are expected to expand rapidly as the economies of the developing nations become more industrialized. Energy use for transportation is projected to increase annually by 4.8% in the developing world between 1999 and 2020, compared with average annual increases of 1.6% in the industrialized countries where transportation systems are largely established and per capita car ownership expected to reach saturation levels. Projected average annual increase for transportation energy use in Africa between 1999 and 2020 is 3% (International Energy Outlook, 2001).

Globally, motor vehicles use one third of the world's oil. Finding oil involves habitat loss, oil spills, air and water pollution, emissions of CO₂, humanitarian abuses and

wars. Demand for cheap oil lies behind increasing pressure to drill environmentally sensitive areas. On average, an accidental oil spill of a million gallons occurs every month. Non-accidental oil pollution of oceans is 3 to 4 million tons of oil per year (Carbusters, 2001).

2.2.2 Roads

Roads promote the dispersal of non-native species, block wildlife corridors and divide populations of species into smaller, less viable sub-populations. Plants and animals are killed during construction of roads, and by traffic. Roads can present an impenetrable barrier to land-bound animals. Studies have shown that forest beetles and mice almost never crossed two-lane roads, and small forest mammals stay clear of roads when the clearance was more than 20 metres (Eisenberg, 1998; O'Meara Sheehan, 2001).

Each year 100 000 tons of fine dust from tyre abrasion are generated on the former West Germany's roads. Auto-related structures like highway commercial strips and billboards degrade visual pleasure (Freund and Martin, 1993). Paved roads decrease the ground's capacity to retain rainfall, which can increase flooding. Water quality and quantity suffer in proportion to the amount of paving over a watershed. Tarred roads also consume petroleum in the form of asphalt (O'Meara Sheehan, 2001). Compared with most other regions of the world, sub-Saharan Africa has a low proportion of paved roads (Mkandawire and Soludo, 1999) so these problems are not yet as acute in the region.

Automobile fleets require vast amounts of land. A driver in a car takes up about 100 times the space that is needed by a pedestrian (Freund and Martin, 1993). In car-dependent cities each car needs as much road as 4 – 8 bicycles, and as much parking space as 20 bicycles (O'Meara Sheehan, 2001a). It takes 12 lanes of a given size to move 40 000 people across a bridge in one hour in their cars but only one lane for them to pedal across on bicycles (Illich, 1974). "The faster the mode of transport, the more space it requires ... Low speeds and non-polluting modes require very little space" (Whitelegg, 1993, 78).

2.2.3 Health

Vehicular pollution is responsible for disease, including emphysema, lung cancer and other respiratory disorders, and death. Noise pollution produced by traffic can lead to heightened stress levels, high blood pressure, disturbed sleep patterns and psychological distress. Driving deprives people of exercise, but the spaces adapted to the needs of the motorcar also limit access to means of keeping fit like walking and cycling. Nearly a million people are killed in traffic accidents on the world's roads each year, many of them neither drivers nor occupants of motorcars (O'Meara Sheehan, 2001; Freund and Martin, 1993). For every child pedestrian that was killed by traffic in England and Wales between 1980 and 1990, 10 children were admitted to hospital with injuries (Whitelegg, 1995). In South Africa, between 9600 and 10 000 people die in road accidents every year and almost 150 000 people are injured (Department of Transport, 2001a).

2.2.4 Social inequity

At first glance, car-centred transport systems appear to be democratic and to help level social differences. But there are problems with this view. Cars are unaffordable or financially burdensome to large numbers of people, they impose their social and environmental costs unequally, they dominate the social organisation of space to the disadvantage of many people and they disenfranchise those who do not drive, which includes children, the elderly, the disabled and the poor (Freund and Martin, 1993). Although car travel is the only viable means of transportation in some US cities, roughly one third of the nation is too young, too poor or too old to drive (O'Meara Sheehan, 2001). Even given the improbable assumption of universal affluence, it is likely that there will always be a minimum of 40% of the population who do not qualify as car-drivers and therefore do not have full participating rights in a car-owning "democracy" (Freund and Martin, 1993).

Transport is a serious problem for the elderly. Busy roadways discourage older drivers, walking is made dangerous by conditions that favour the car and pedestrian facilities are often inadequate (Freund and Martin, 1993). Independent mobility is also becoming more difficult for many children. Over the last 30 years, children's freedom

has been steadily diminished by parental restrictions imposed on their being out and about on their own. More and more children are escorted on their leisure and school journeys, up to an ever-later age in childhood. British children are now less likely to cycle or walk to school alone than at any other time since the introduction of compulsory education. 80% of 7 and 8 year olds in Britain went to school on their own in the early 1970s, but less than 10% were doing so by the 1990s. While most children own a bicycle, few are allowed to use it as a means of transport. This deprivation of social and spatial learning experiences in their immediate neighbourhoods has implications for children's health and development (Hillman, 1999; Whitelegg, 1993).

Parents restrict their children's independent mobility because of a growing perception of the outside world as a dangerous place, where children can be hurt by motor vehicles or assaulted by strangers. As traffic increases, and parents stop their children crossing roads, walking and cycling, "(p)arents and other adults will then spend thousands of hours sitting in cars ferrying children to and from schools" (Whitelegg, 1995, 119). In Britain in 1990, over 900 million hours were spent escorting children. A disproportionate share of the time spent ferrying children falls on women; being a chauffeur has become a principle role for the modern middle class mother (O'Meara Sheehan, 2001a; Freund and Martin, 1993; Zuckermann, 1993). This situation is self-perpetuating: it adds to traffic volumes and thus increases the perceived danger. Yet, where safe cycling facilities exist, children do still cycle. At one Suffolk school, 60% of pupils cycle to school, and according to the Danish Ministry of Transport most Danish children, even at the age of 5, do so (Hillman, 1999). There was a 30% increase in scholar commuting after completion of Cape Town's 22km network of cycle paths in the Rondebosch/ Newlands area (De Waal, 2000).

2.2.5 Communities

"The automobile sprinkles people across the face of the land like grass seed dispensed by a spreader." Eisenberg (1998, 253).

Cars have changed the way people live. Cities have spread out over large expanses of land as builders have constructed wide roads and ample parking to accommodate cars.

As cities sprawl, cars become essential while bicycling and walking become less practical (O'Meara Sheehan, 2001). In many car-centred suburbs there are few alternatives to the car. Public transit between suburbs and within suburbs is virtually non-existent, as are other alternatives to the private car such as car-pooling, walking or cycling. This has had an effect on community interaction. The car changes the way in which humans interact by spreading travelers out and distancing them. Drivers speeding past in closed containers do not rub shoulders or have eye-contact like pedestrians might do. Suburban communities encourage a "turning inward to private worlds" consisting of the home and a few "mini-environments" like favoured restaurants and malls. Movement between these private worlds is through "dead public spaces" by car. These dead public spaces inhibit alternatives to the car as well as opportunities to exercise and to socialise. Public spaces for resting, playing, pausing and interacting are sacrificed for cars. Many suburbs do not even build pavements (Freund and Martin, 1993, 119-121).

The dominance of the car has contributed to a decline of street life in urban areas. High vehicular traffic flows cause people to withdraw from streets, which reduces the sense of community, neighbourliness and security. A study by Appleyard and Lintell in 1969 found that people who lived in streets with heavy traffic had fewer friends and acquaintances than people who lived in streets with light traffic. High traffic flows have been shown to be associated with social isolation and to limit social networks of support (Whitelegg, 1993; World Health Organisation, no date).

Car-centred transport can be detrimental to local environments in direct and indirect ways. The quality of the urban environment in Europe is "generally very poor and is deteriorating rapidly under the onslaught of traffic" (Whitelegg, 1993, 80). "(T)he ubiquitous, everyday use of autos ... erodes a sensual and aesthetic engagement of the natural environment ... (and) has real consequences for our sensitivity to the environment" (Freund and Martin, 1993, 178).

2.2.6 Congestion

"The world has gone car-crazy, and the measure of a metropolis is the size of its traffic jams." Levinson (1998,3).

Cities from Bangkok, Sao Paulo and Mexico City to Paris, Atlanta and Moscow have all experienced the effects of traffic congestion. Although many South African cities and towns may not yet have reached the levels of congestion seen in other parts of the world, this may not always be the case. "Cars can be put on the market (in South Africa), but it is not sure that sufficient road infrastructure will be affordable when requirements will double or triple. This time will come soon. In Gauteng, for instance, most motorways are already close to saturation during peak hours" (De Saint Laurent, 1998, 2). Building more roads, however, does not necessarily solve problems of congestion. As new roads attract more cars, regions that have invested heavily in roads have fared no better at easing traffic than those that have invested less. Rather than trying to cater for more cars, measures to reduce the number of car trips should be adopted. These include incentives to reduce motor vehicle use and boost alternatives, and changes in urban design that enhance the viability of cycling, walking and public transit (O'Meara Sheehan, 2001).

2.3 Costs

"The typical American male devotes more than 1,600 hours a year to his car. He sits in it while it goes and while it stands idling. He parks it and searches for it. He earns the money to put down on it and to meet the monthly installments. He works to pay for petrol, tolls, insurance, taxes and tickets. He spends four of his 16 waking hours on the road or gathering resources for it... The model American puts in 1,600 hours to get 7,500 miles: less than five miles an hour." Illich (1974, 30).

Although the car can save large amounts of time spent on some journeys, and make possible some journeys that could not otherwise be undertaken, it cannot be obtained and maintained without an expenditure of time and effort. Expenditure of time on transport in developed countries is approximately one hour per person per day and accounts for 15% of disposable income. The car also causes changes in land use

allocations and spatial organisation that spread people out, so time savings are quickly absorbed by the necessity to travel further to do things. When factors like time spent stuck in traffic, working to pay for the vehicle, looking for parking, washing and filling up the car are taken into account, the bicycle offers a much better return on time expended than the car (Whitelegg, 1995).

In spite of the high cost of cars, motorists do not pay the full costs of their traveling behaviour. "In the Boston (US) area, a working mother ... taking the subway at rush hour pays 80% of the cost of her trip, while a stockbroker driving his BMW ... pays only 20% of the true cost of his – an arrangement that has justly been called 'car welfare'" (Eisenberg, 1998, 254). Car costs are low in South Africa and likely to decline between 1997 and 2002 because of a variety of subsidies for parking and car ownership that warp the economics of the decision to own cars (Department of Transport, 1998). The cost of road transport not covered by drivers is an estimated 5% of GDP in industrial countries and higher in some developing country cities (O'Meara Sheehan, 2001). Hidden subsidies in the form of "externalities" are not reflected in the price of driving. Social costs not counted in include pollution, global warming, damaged health, accidents and damage to communities (Whitelegg, 1993). "If the price of gasoline included the direct costs of maintaining a permanent fleet (let alone fighting a war) in the Persian Gulf, our transportation system would reform itself in a hurry ... Dramatically raising the price of gasoline to reflect its real costs – a ready military, poisoned ecosystems ... polluted low-income neighbourhoods next to refineries – would shortly result in increased fuel efficiency and reduced automobile usage" (Power and Rauber, 1993, 415).

2.4 The technological fix

Much of the effort to reduce the negative impacts of auto-centred transport has been directed towards technical solutions such as designing "greener", less polluting vehicles. These include electric cars, cars with cleaner internal combustion engines that use cleaner fuels and computerised "smart" cars and freeways that reduce congestion and idling (Freund and Martin, 1993). Better engine design and catalytic converters have reduced emissions to below 5% of the level of the 1960s. The fuel cell, which generates electricity from hydrogen with fewer carbon emissions, is a

possible successor to the combustion engine (O'Meara Sheehan, 2001). Several car manufacturers expect to be selling fuel-cell cars directly to the public early in the 21st century. "Ideally, the hydrogen would be produced sustainably with renewable electricity from the sun or wind. But even under the most optimistic predictions for improvements in renewable technology, the electricity required to split H₂O into H and O would be prohibitively expensive. So the first large-scale plants will probably wrest hydrogen from old-fashioned fossil-fuels" (Lemonick, 2000, 62).

Whitelegg (1993, 11) writes that the conversion of the developed world's car fleet to vehicles run on biomass fuels such as ethanol or methanol supplied from the developing world would, for example, clean up local urban air quality, but would "do little for the source countries denied adequate land for food crops and forced back into the kind of survival behaviour which currently destroys fragile environments through over-exploitation of forests or marginal agricultural land. Sustainability 'purchased' in this way might provide temporary relief to cities in Europe or North America but would represent a new kind of cash crop to be exported at enormously disadvantageous rates." He suggests that the switch to "zero-emission" electric vehicles is in effect a transfer of pollution to the site of electricity generation and that the final balance sheet for its pollution effects is far from clear.

Technical solutions can solve one problem but cause or exacerbate others. Catalytic converters reduce carbon monoxide and volatile organic compound emissions but increase nitrogen oxides. The addition of methyl tertiary butyl ether to gasoline in the US to reduce carbon monoxide emissions has led to cleaner air but dirtier water, because of leaks in underground pipes and storage tanks (O'Meara Sheehan, 2001).

Improvements in fuel efficiency might be a step in the right direction, but they are likely to be overwhelmed by increases in the size of the global car fleet. Car densities and fleets have been increasing all over the world. Car production is outstripping population growth. The total number of cars grew by more than 300% between 1960 and 1990, while population grew by 100% (Freund and Martin, 1993). In the US, the number of household vehicles increased at six times the rate of the population between 1969 and 1995 (O'Meara Sheehan, 2001). A movement towards quite

modest car ownership rates in India and China (300 per 1000 population) would deliver more additional vehicles than the existing global car fleet (Whitelegg, 1993).

Improvements in fuel efficiency also do not solve such problems as traffic congestion, traffic accidents, wildlife disruption, waste disposal or the consumption of resources involved in manufacturing cars. Car production consumes 20% of the world's steel production, 10% of the aluminium, 35% of the zinc, 50% of the lead and 60% of all natural rubber (Ponting, 1991). "(T)he car itself is a major environmental problem. It consumes vast amounts of energy in its manufacture, is used for only 5% of the time and when in use is occupied by an average of 1.2 people. It creates enormous problems of waste disposal which are particularly serious for tyres, exhaust systems and batteries, is manufactured and sold on the basis that it can and does break speed limits ... and initiates environmental damage on an enormous scale to provide itself with roads, car parks and artifacts to generate even more cars (e.g. out-of-town shopping centers)" (Whitelegg, 1993, 9). In Western Europe, Japan and the US, nearly 40 million cars are discarded every year. On average, each dumped vehicle contains six litres of lubricating oils, three litres of fuel, five litres of cooling liquid and three litres of sulfuric acid (Carbusters, 2001).

Some product stewardship practices are evolving in attempts by the vehicle manufacturing industry to achieve greater resource use efficiency and pollution prevention. Practices include designing cars and trucks for easier disassembly and greater recyclability, using recycled materials in manufacture of new car parts and supporting the collection and resale of vehicle parts (US Environmental Protection Agency Office of Solid Waste, 2001).

Although technological fixes offer only partial reduction of the pollution created by cars, they are the most prominent solutions put forward by the auto-industrial complex. "The reason is that these technologies do not challenge auto hegemony. They do not address the central social necessities to upgrade alternatives to the auto and to restrain auto use" (Freund and Martin, 1993, 25).

2.5 Cars and the developing world

“It is as if the peoples of the world stand mesmerised before the private automobile. Even in the poorest Third World countries, governments favor cars over other means of transport, perhaps because the officials themselves use them, or perhaps because ... the automobile is seen as a symbol of power, a way to become strong, rich and fast-moving, like people in the better-off nations ... The world thus appears to be divided into those who have been able to acquire ... automobiles ... and those who dream of nothing better than to follow their example.” Zuckermann (1993, 252).

In many developing countries the volume of traffic has grown at a rapid and environmentally unsustainable rate (Devas and Rakodi, 1993). As families become more prosperous, one of the first things they want is a car. The income elasticity of car ownership is roughly two: each 1% increase in average household income means a 2% increase in the number of cars. In Mexico, the number of private vehicles rose 30% between 1991 and 1998; in Seoul, the number of cars doubled between 1990 and 1996. In Bangkok, before economic crisis struck in 1997, 300 extra cars were wheeled out on to the streets each day (Levinson, 1998). Between 1980 and 1995, while Gross Domestic Product trebled in South Korea, the nation’s fleet of vehicles increased 16-fold (O’Meara Sheehan, 2001). In South Africa, car use begins to dominate once household income rises above R30 000 per annum (Department of Transport, 1998).

Wealth, however, is not the main impetus towards car-centred cities: car use tends to be highest where no other options exist and is tightly linked to government transportation policies (O’Meara Sheehan, 2001a). Pedestrians and traditional modes of transport are increasingly being marginalised, even in countries where such modes are used by the overwhelming majority. Some developing countries actively discourage non-motorised transport. In Jakarta, Indonesia, three-wheeled cycle rickshaws were banned because they prevented the smooth passage of cars. “Even the Chinese are beginning to worship the private car and disdain the bicycle which is their transport mainstay” (Zuckermann, 1993, 254). In Africa, where the majority cannot afford motor vehicles, many cities elevate the needs of motorists over non-motorists. “Attitudes of junior officials [in Accra, Ghana] are unfavourable towards non-motorised modes; (sometimes) bicycles ... were confiscated for being in places of

high human or vehicular traffic density” (Turner *et al*, 1995, 5). As roads become more dangerous for cycling, more people take cars even for short trips. 60% of very short trips in Surabaya, Indonesia, are now made by motor vehicle; in Germany, where streets are more inviting for pedestrians and cyclists, only 15% of such trips are made by motor vehicle (O’Meara Sheehan, 2001a).

2.5.1 The situation in South Africa

South Africa has a dual urban transport system: “a car-based system in the most developed areas, where an American way of life generously distributes houses, malls, services and offices in such a way that automobile use is almost compulsory; (and) a ‘semi-managed’ system in the poorest areas, where people have to get by moving through various modes, from on-foot transportation or bikes, to buses, minibus taxis, commuter trains and sometimes cars or trucks” (De Saint Laurent, 1998, 2).

Moving South Africa, which sets out the South African Department of Transport’s long-term policy, divides urban passengers into six different “customer segments”. Many people living in the developed areas fall into the segment referred to as “Stubborn”. This group (representing 3 million people or 14% of the current urban population and expected to grow significantly by 2020) will only use cars. They opt out of the public transport system altogether. Their car dependence is enabled by the excellent urban road network in cities and adjacent suburbs where they tend to live. The “Selective” segment (4.1 million people) can afford a car but is willing to use public transport if it meets their needs. This group is predicted to be the fastest growing group between 1998 and 2020, with growth of 39%. The “Strider” segment, accounting for 5.4 million people in 1996, prefers walking or cycling as the most convenient way to travel. Many are scholars. “This group is generally satisfied with dimensions of travel time, affordability and availability, since they enjoy good low-cost access to their preferred destinations”. The “Stranded” segment, accounting for 2.8 million citizens many of whom are scholars or unemployed, lack affordable access to motorised transport. Distances for travel in this section tend to be long, making it difficult for them to afford motorised modes of transit. Their principal need is for low cost public transport. This group is expected to grow by 28% by 2020 if nothing is done to address their needs. “Survival” passengers (4.1 million people) can afford

public transport but are “captive” to the least expensive option. The majority of this segment spends over 10% of their household income on transport services. The “Sensitive” segment (2.1 million people) is still captive to public transport, but able to choose the preferred mode (Department of Transport, 1998).

Transportation problems in cities of the Third World develop as the city quickly expands in size (Gruehl Kipke, 1991). In small towns, the number of vehicles on the roads is limited and trips tend to be short. But “urbanisation invariably means more vehicles and more travel. Within a metropolis, population density tends to decline as new housing is built on the urban outskirts, while trip distances become longer. In poorer countries, an increase of one million in a city’s population means an additional 350 000 – 400 000 public transport trips per day” (Levinson, 1998, 3). The transport challenges facing South Africa are already serious, but are set to intensify as urbanization of the population gathers pace. Sub-Saharan Africa has the fastest urbanising countries in the world. Africa’s population is expected to grow from 784 million in 2000 to 1406 million in 2030. Of those millions in 2030, 55% will be urban (O’Meara Sheehan, 2001a).

The performance of the South African transport system is likely to deteriorate over the next 20 years unless drastic action is taken: the number of “Stranded” will grow, the number of car users will double and road congestion will consequently worsen (Department of Transport, 1998). De Saint Laurent (1998, 1) warns that South Africa, having inherited a lavish land use model and facing acute short-term priorities, faces serious urban transport problems. “Urban transport is a time bomb: if several issues are not treated now (for instance ... restoration of the public transport image, management of private transport demand) it will be very difficult to recover control of the situation...”

2.6 Reducing dependence on the car

“Transport is a vital indication of the quality of our individual lives, as well as the quality of our relationships with each other and with the earth.”

Freund and Martin (1993, 184).

Developed and developing countries have the choice to reduce or resist car-dependence by giving priority to “softer” forms of mobility such as walking and cycling. “Softer forms make less impact on other people and the environment ... Harder forms make greater impacts on and carry greater risks to oneself, to others and to the environment, as well as consuming more resources and energy; the auto is the best example” (Freund and Martin, 1993, 53). Given that cars embody social meanings regarding power and speed which “resonate in particular with the dominant masculine ethos in our culture – bigger, faster and more powerful are better” (Freund and Martin, 1993, 18), it is not necessarily going to be easy in South Africa to encourage softer forms of transport, particularly given the magnitude of the forces pushing for greater auto-dependence in the developing world. According to the head of product strategy for Fiat, which plans to develop a low-cost car tailored to consumers in places like South Africa, India and Brazil, “over the period 1999 – 2007 all the (car market growth) is predicted ... in the emerging markets” (in O’Meara Sheehan, 2001a, 16).

The political sway and advertising power of the motor vehicle industry is a common obstacle around the world to reforming transportation systems. The automotive sector spent more on advertising than any other sector in 1998. Western car and construction companies are eager to expand into new markets, such as Eastern Europe. Car advertisements promising individual freedom can be especially appealing to people newly freed from communist rule (O’Meara Sheehan, 2001). The same could apply to people recently freed from apartheid. Even so, the need to reduce and avoid dependence on private cars is recognized in the South African Department of Transport’s White Paper on Transport.

2.7 Benefits of bicycles

The bicycle is one of the best available non-motorised transport technologies which can take the place of the car for certain trips. It is cheap to acquire and run, does not pollute, keeps the user in good health, takes up little space while moving and while stored and has a manageable range up to 15 or 20 kilometres (De Waal, 2001). Bicycle transport for door to door distances up to five kilometers is often faster than bus, underground and car in urban areas. “(Bicycles’) efficiency from an ergonomic point of view matches their efficiency in coping with urban form where city form still reflects the needs of people rather than those of cars” (Whitelegg, 1993, 83). The World Bank’s Sub-Saharan African Transport pilot projects between 1995 and 1999 found that in medium-sized cities, cycling provides a high level mobility at low cost and can significantly increase the mobility of women (Tembele, 2000).

Thirty minutes of walking or cycling on most days of the week, even if carried out in 10 to 15 minute episodes, provides health benefits. This can be easily achieved through two trips per day by cycling or walking. Cycling reduces the risks from cardiovascular diseases and contributes to lowering blood pressure. It encourages psychological well-being, keeps weight down and can counter depression. Although it is sometimes argued that increased exposure to risk of accident outweighs the health benefits associated with cycling, some research has demonstrated that years of life gained from the exercise involved in cycling exceeded the years of life lost through accidents. More importantly the risks associated with cycling are very easily reduced or eliminated through policies that slow down traffic or eliminate it altogether (Whitelegg, 1993; World Health Organisation, no date).

Bicycle use can help reduce crime: the bike path is one of the safest places in some cities because it creates a kind of solidarity and people help one another (O’Meara Sheehan, 2001). The bicycle can also be a source of excitement and speed – some of the sensual pleasures many people associate with driving cars (Freund and Martin, 1993).

2.8 Bicycles around the world

Bicycle ownership levels vary considerably from country to country. Figure 9 shows the estimated number of bicycles per 100 population in countries around the world.

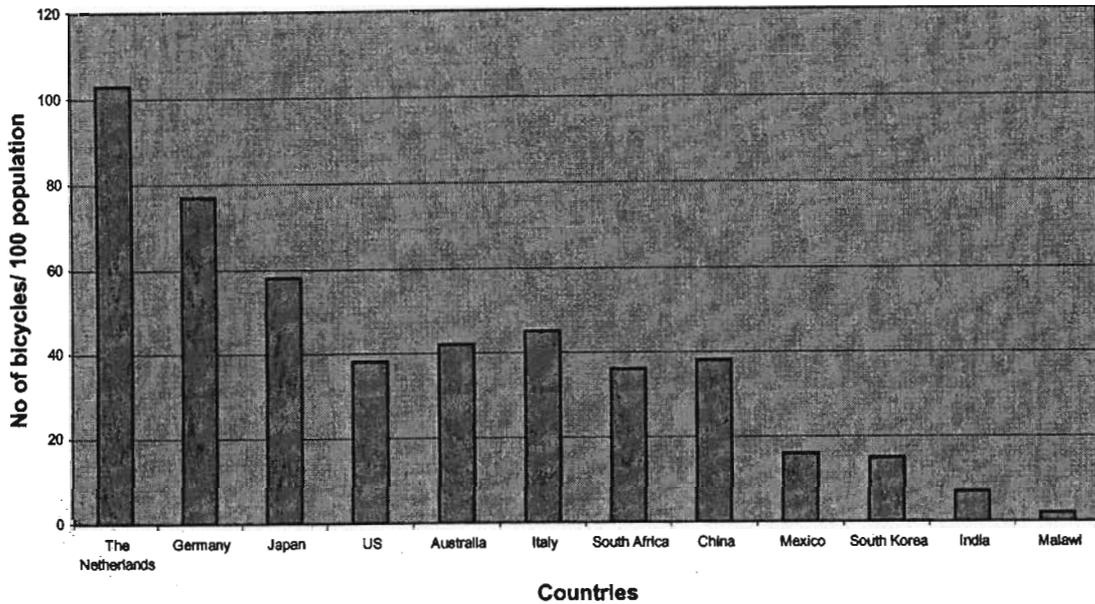


Figure 9 Estimated number of bicycles per 100 persons (2000)
(Adapted from De Waal, L [2001]).

Although the world population of bicycles outnumbers cars two to one and bicycles in Asia transport more people than all the world's cars do, motorcycles and cars are supplanting bicycles for short trips. Bicycles are on the decline even in Asia, the world's leader in production and use (O'Meara Sheehan, 2001; Whitelegg, 1993). All is not bad news for cyclists, though. Significant increases in bicycle use have been planned and realised in cities in Continental Europe. Cycling represents a significant percentage of all journeys in some town centres, for example Copenhagen (30%), Groningen (54%) and Munster (43%). "Other successes are equally impressive. Austrian and Swiss cities have implemented cycling as a means to combat air pollution. Italian cities are starting to promote cycling as a cure for congestion. Historic cities from Delft to Krakow are closing their centres to car traffic but continuing to allow cycle access. Even large cities such as Munich have increased

cycling's modal share from 6% to 15%" (Mathew, 1995, 2). In Paris, exclusive bus, bicycle and taxi lanes have been set up to make alternative transport easier and car travel less appealing (The Natal Witness, 2001). Cities like Portland, Oregon (US) and Curitiba (Brazil) have also made transportation decisions that take account of the needs of bikers and walkers and are reaping the rewards of cleaner air and more vibrant communities. Citizens' groups and local officials in the United Kingdom, the United States and elsewhere have adapted Danish "safe cycle routes to school" programmes. Elements of Curitiba's network of cycle paths are being replicated in other Latin American cities (O'Meara Sheehan, 2001a). In Tanzania and Zambia many single speed roadster bicycles are in evidence, often with a carrier, transporting food or a passenger, and the work-related bicycle is in great demand in Zanzibar. Efforts have been made in Harare, Zimbabwe, at intersections to assist cyclists to cross safely although in general the bicycle has to move with traffic in southern African cities and towns (De Waal, 2000).

Prior to implementation of the Group Areas Act of 1950 utility cycling was common in black communities in South Africa. Sales of workbikes were brisk and bicycle commuters were a regular feature on the roads. This declined when black people were relocated to isolated townships where local, independent economic activity was discouraged. Distances between homes, jobs and markets were no longer manageable by bicycle. South Africa does not currently have a strong utility cycling culture; the concept of using a bicycle to replace walking and/ or taxi trips does not occur to many people, and the lack of access to affordable bicycling resources is a formidable obstacle. Distribution networks are geared towards affluent recreational cyclists, making access to appropriate cycling goods for the majority of the population difficult, especially in peri-urban and rural areas. For women the barriers are even greater, as prevailing cultural gender roles discourage many women from cycling. But the most frequently cited deterrent to cycling in South Africa is the mix of rapid motorisation, a road network that does nothing to protect cyclists and drivers who ignore the rules of the road (White, no date). This echoes the findings of a 1979 survey which identified major problems perceived by potential cyclists as safety (particularly from cars), the lack of facilities for crossing streets and

lack of consideration shown by motorists (Oettle, 1980). In 2001 the South African Department of Transport launched the national Shova Kalula (Pedal Easy) bicycle transport project which aims to improve the mobility of South Africans through promoting bicycle transport use. It targets users in the most disadvantaged rural and urban settings who currently have to walk long distances to get to work. Over time, it is also intended to promote city-wide bicycle transport infrastructure networks (Department of Transport, 2001b).

Bicycle sales in South Africa are approximately 300 000 per annum. Bicycle use can be broadly classified as shown in Table 1.

Table 1 Reasons for bicycle use in South Africa

Activity	%
Sport-related (mainly racing bikes)	20
Leisure/ touring/ recreation (mainly mountain bikes)	35
Work/ transport of goods	10
Commuting (adults)	5
Commuting (scholars)	25
Social	5
Total	100

(Source : De Waal, L [2001])

2.9 Attitudes to cycling around the world

“We get a lot of television from the US, a lot of car races and highways. But we don’t get many TV shows from Copenhagen. People would never think that an advanced country would have people riding around on bikes.” Mayor of Bogota, Enrique Penalosa (in O’Meara Sheehan, 2001a, 64).

Even though it is some of the most prosperous and progressive cities in Europe which are the most enthusiastic to achieve more cycle use, the bicycle is under attack in the

developing world because of its unglamorous, underdeveloped image and its conflict with the car (Mathew, 1995; Whitelegg, 1993). In southern Africa a number of attitudes need to be overcome for bicycle use to increase, namely that the bicycle is for the poor and status in life is gained from graduating from riding a bicycle to owning a car. In some areas there is also a stigma attached to women riding bicycles (De Waal, 2000). Attitudes to cycling differ between ethnic communities in Accra, Ghana. "It is the differences in 'transport cultures' that exist among different ethnic communities which produce widely varying ridership levels" (Turner *et al*, 1995, 2).

In an auto-dominated culture bicycles tend to be viewed as second-class vehicles – used by poorer people, as toys by children, or for recreation (Freund and Martin, 1993). In the UK, attitudes to cycling are generally positive but it is still seen as a minority activity and cyclists are regarded as eccentric and non-conformist, although this attitude does not apply to cyclists in European countries like Holland, Denmark and Germany where cycling is seen as more "normal" (Davies *et al*, 1997). In some parts of Europe, cycling is a respected means of transport (Turner *et al*, 1995).

2.9.1 The importance of attitudes in cycling promotion strategies

Attitudes influence people's behaviour and decisions, like whether or not to accept a new way of doing things. "(A)ttitudes affect how citizens feel about such issues as energy conservation, land use ... environmental controls ... and other community issues ... Among the factors affecting the acceptance or rejection of new community action programs are the attitudes of community members... Prior to developing strategies for gaining the acceptance of new ideas and action programs, it is essential ... to understand the existing attitudes of people ... Knowledge and understanding of attitudes will aid you in selecting an appropriate strategy to successfully carry out your program. Although not assuring success, understanding people's attitudes and the range of strategies which might be used to influence them should enhance the chances for acceptance of community action programs" (Schafer and Tait, 1981, 3).

There is not very much literature on attitudes to cycling in South Africa, so the researcher borrowed quite heavily from Davies *et al*'s 1997 UK study entitled *Attitudes to Cycling*. Davies *et al* found that in addition to improved physical

infrastructure and safety measures, a major change in attitudes is required to bring about a large-scale shift to cycling. Promotional strategies would need to address individual and institutional attitudes and select marketing approaches accordingly. People's attitudes to cycling are linked to life stage and the influence of the car, which had associations with status, sexual potency, convenience and safety which the bicycle lacks. Direct deterrents to cycling in the UK were found to be danger from traffic, time pressure, personal safety fears, sexual harassment, cycle theft and vandalism, traffic fumes, weather, hills, cycling's lack of status, personal image, poor image of cyclists, and cycle technology, purchase and maintenance difficulties.

The physical and cultural dominance of the car, combined with its availability and convenience, was the main reason for cycling not being more common. Although bicycle ownership was widespread, drivers tended not to see a reason to consider an alternative mode of travel, such as the bicycle. For non-cyclists, choosing to go by bike involved extended decision-making which was not the case for choosing to drive. Drivers did not objectively consider the advantages and disadvantages of going by bicycle and by car before deciding whether to drive or cycle. Gardner (in Ryan, 2000) found that most leisure cyclists in the United Kingdom consider that the use of the car for almost every non-leisure trip is a rational choice.

Strategies to break the car-driving habit are more likely to be successful if they emphasise the positive side of cycling rather than confronting car use directly (Davies *et al*, 1997). According to Arnold and Settle (2001), car use is habitual and even addictive for most drivers. Car trips are usually made without any consideration that alternatives exist and for this reason, rational arguments won't necessarily stop people driving. Campaigns to reduce driving in favour of cycling need effectively to help drivers kick the driving habit. Kicking the habit requires an acknowledgement that the driving behaviour is a problem, then a decision to do something about it, and then sticking to the decision. Providing physical infrastructure like cycle paths assumes that people are already at the stage of deciding to kick the habit and doesn't necessarily provide the social support needed to get through the final step.

Much of the work aimed at promoting cycling has been founded on the notion that by promoting and advertising the personal and environmental benefits of cycling, people

will cycle more. This approach is not particularly effective because it rests on a flawed model of personal behaviour change, the Knowledge-Attitude-Behaviour model, which assumes that knowledge affects attitudes and then behaviour. “Behavioural psychology has exposed the inadequacy of this model, evidenced in the fact that most smokers believe smoking is bad for you and want to give up, yet continue smoking” (Davies *et al*, 1997, p19). Experience from the health promotion field, for example HIV/Aids and anti-smoking campaigns, suggests that attempts to increase cycling in place of driving should not present an “either/ or” decision but should offer an approach that says that there can be room for both. “ ‘Cars will inevitably continue to be a significant transportation mode, but for some short trips, why not try a bike sometimes?’ ” (Davies *et al*, 1997, 19)

The 1998 Canadian National Survey on Active Transportation gives insight into how attitude analysis can help cycling activists understand auto-dependence and the barriers it sets up between people and cycling (Cubberley, 2001). The survey revealed an underlying desire to adopt active mobility choices, but one that is inhibited by perceptions of present conditions. Among the top five reasons for choosing to cycle for transport, “exercise and health”, “pleasure” and “practicality and convenience” ranked highest, suggesting that there is broader appeal in promoting cycling with messages emphasizing health and personal enjoyment benefits than on saving the environment or money. Meaton and Anderson (1996, in Davies *et al*) found that information on the environmental, social and financial costs of people’s travel behaviour would be insufficient to change behaviour significantly. Dutch researchers also found that while factual information concerning environmental effects of cars helped raise individuals’ awareness, the information did not lead to a change in respondents’ behaviour. Dire warnings can be counterproductive as they cause overwhelming feelings of despair and helplessness among the target audience. “The fact that we must immediately cut our emissions by over half just to stay even in the race against climatic disaster has not convinced many people to ... use boots, bikes and buses for the short distances which constitute almost half of all car journeys (Zuckermann, 1993, 269).

Ryan (2000) writes that any cycling strategy should be based on a clear understanding of the profile of not just existing, but potential cyclists. Davies *et al* (1997) suggest the adoption of “the innovation model”, a marketing approach used to identify segments of the market which are predisposed to taking up innovations – in the case of utility cycling, a travel behaviour change. Categories include “innovators” (venturesome people who might comprise a minority sub-culture); “early adopters” (who like to be trend-setters); “early majority” (who follow a trend once it has been set); “late majority” (who come on board once it’s clear that most people are going along with it) and “laggards” (who resist and are suspicious of change). Generating early change means identifying and targeting the innovator/ early adopter market; aiming at the late majority/ laggards is pointless until significant and visible success is achieved in the former groups.

Urban transport is a complex issue that cannot be fully dealt with in any single thesis. However, it is clear that although the car is likely to remain a major transport option for the foreseeable future, attempts to mitigate its negative impacts are becoming increasingly urgent. Utility cycling for short distances is a viable transport option that can, and in some cities already does, replace car journeys.

CHAPTER 3 METHODOLOGY

3.1 Approach

The study was based on the collection of qualitative rather than quantitative data. As was the case with Davies *et al*'s 1997 study, *Attitudes to Cycling*, the principal research method used for the Hilton study was focus group interviews. Focus groups were the chosen method of research because "they help to explore issues such as image and trends ... get beyond rational and 'acceptable' answers; encourage creative and tangential thinking" (Davies *et al*, 1997, 5). Focus groups are widely used by market researchers, policy analysts, political consultants and other social scientists and when used appropriately can provide a rich way of gathering credible, useful qualitative information. Although focus group research can produce quantitative data, it usually has the collection of qualitative data as the primary purpose. It is often followed by quantitative research using larger groups of respondents (Stewart and Shamdasani, 1998; Patton, 1990).

Focus group research involves a group discussion of a topic that is the "focus" of the conversation. The most common purpose is to stimulate an in-depth exploration of a topic about which little is known. This method lends itself to diagnosing the potential for problems with a new programme, service or product (Stewart and Shamdasani, 1998). Given that the promotion of a culture of utility cycling in Hilton would be in effect the marketing of a new transport choice, this method was considered appropriate.

3.1.1 Advantages of focus group interviews

Some advantages of focus groups are that they are relatively quick and cost-effective compared with individual in-depth interviews; they allow researchers to interact directly with respondents and to probe and clarify responses in a way that is not possible with quantitative methods such as surveys; the open response format provides the opportunity for the researcher to obtain large amounts of rich data from which to determine deeper levels of meaning; respondents can react to and build upon

the responses of other group members; and ideas and data might be uncovered that might not have been in individual interviews (Schurink *et al*, 1998; Stewart and Shamdasani, 1998).

3.1.2 Limitations of focus group interviews

Some limitations of focus group interviews as a method of data-collection are that the small numbers of respondents and the convenience nature of most focus group recruiting practices limit generalisation to larger populations; it can be difficult to recruit the right participants and to assemble the groups together at the same time; the moderator has less control over proceedings than an individual interviewer; data are relatively difficult to analyse; the interviews can be biased and subjective; focus groups can vary considerably, making it necessary for enough groups to be included in the study; responses from members of the group are not independent of one another; an unskilled or inexperienced moderator may bias results by providing cues about desirable responses; and the data, while being minimally artificial, can also be idiosyncratic (Schurink *et al*, 1998; Stewart and Shamdasani, 1998).

A common criticism of focus groups is that the interviews do not generate hard data and may not be representative of a larger population because of the small numbers and the idiosyncratic nature of the group discussion. Such criticisms could be considered unfair because although there are limitations which need to be acknowledged, all methods of data collection have limitations (Stewart and Shamdasani, 1998).

3.2 Detailed methodology of the study

The respondents, who were all adult home-owners in Hilton, were purposively selected to fit the criteria of the research. A sound sampling frame is more critical in large-scale survey research than it is for focus group research. Because it is generally inappropriate to generalise far beyond the members of focus groups, the sampling frame for focus group research need only be a good approximation of the population of interest. Purposive sampling in which respondents are purposefully selected

because they have certain characteristics is often used rather than random sampling (Stewart and Shamdasani, 1998).

For the purposes of the study, adult Hilton home-owners were considered to be a homogenous economic group. This is because Hilton is a relatively expensive area in which to buy property, compared with the whole Pietermaritzburg region. People who can afford to buy houses in Hilton therefore tend to be reasonably affluent and it was not thought necessary to stratify respondents according to income or area. However, it was considered appropriate to divide groups into male and female respondents as some studies (for example, Davies *et al*, 1997) have found differences in attitude between male and female respondents. The researcher attempted to divide the groups further into men and women at specific lifestages: those with children of school-going age or younger and those whose children were old enough to have left school. This was because it was also believed that there might be different responses from people at different life stages. In both the male and female groups, however, it proved too difficult to arrange times at which all the participants could meet given those parameters. Instead, the groups were divided into those who worked full-time and for whom an evening meeting was convenient, and those who did not work or who worked part-time or flexible hours and for whom an afternoon meeting was convenient. All groups had people whose children were still at school or younger and people whose children had left school. People at different lifestages tended to fall into similar age groups: most of those with children still at school or younger were under 50 years old and most of those with children who had left school were over 50 years old. However, one male respondent in his fifties and one male respondent in his 60s had a child still at school.

In addition, a separate group of competitive recreational cyclists was organised. This was because it is possible that leisure cycling can play an important part in encouraging utility cycling (Ryan, 2000). The participants in this group were all men with school-aged children. There may be older men and women who are competitive recreational cyclists, but the responses to all attempts to get into contact with competitive cyclists who lived in Hilton were from men in this particular category.

All of the respondents were white. This was because Hilton is still predominantly a white residential area, although the racial demographic make-up of the population is beginning to change as people of other race groups buy property in the area. Efforts were made to ensure that respondents came from as wide an area in Hilton as possible and from as widely different occupations as possible. Five focus group interviews were held. Table 2 gives details of the participants in the focus groups.

Table 2 Breakdown of focus group participants

Description	Number of people
Male (A)	6
Female (A)	4
Male (B)	5
Female (B)	5
Male (C)	0
Female (C)	1
Total	21

A = with children of school-going age or younger

B = with children who have left school

C = has no children

Ideally, a focus group should continue to discuss the topic until the data reach saturation point and no new issues or categories emerge. However, because of limited time-spans and funds, it is not always possible to continue until all relevant data have been generated (Schurink *et al*, 1998). For this reason, 10 individual interviews – either face to face or over the telephone - were conducted in order to check as far as possible that there were no obvious gaps in the data collected from the focus groups. These interviews covered similar territory to that in the focus groups interviews, although they did not go into as much detail about personal cycling histories and behaviour, and the respondents did not fill out comparison sheets or draw pictures (Section 3.2.1). The individual interviews were held in order to check whether there

were any major differences in opinion or themes that had not been picked up on in the focus groups. The interviewees were also purposively selected. After 10 interviews, no new themes or issues had emerged that had not been discussed in the focus groups so it was considered unlikely that there were major issues that had not been discussed by any of the respondents.

Following the focus groups, unplanned discussions were undertaken with four of the participants, either face to face or over the telephone. In some cases, respondents said more than they had said during the focus groups. This was either because they had thought of something more, had not got a chance to say something during the group interview, or because they had been more reserved in the group discussion than they were in a one-on-one discussion. Although the discussions were unplanned, the additional information was noted and added to the collected data.

3.2.1 Structure of the focus group interviews

At the beginning of the focus group interviews, the reason for the research – to identify attitudes to utility cycling around Hilton – was explained to the participants. The difference between utility and recreational cycling was explained. The participants were then given paper and pens and asked to draw pictures of themselves utility cycling. They could choose the purpose of the trip, provided that it was not a recreational ride. It was explained that the pictures did not have to be skilfully rendered, but that they should somehow give an indication of how the utility cyclist was feeling and the kind of things that might be influencing him or her during the ride. Participants were then asked to talk the group through their pictures. The reasoning behind this was to break the ice and also to get an indication of how participants viewed the idea of utility cycling. The issues that were raised during discussion of the pictures were further discussed during the interview.

Although focus groups are relatively unstructured compared with typical quantitative research, they are not without structure (Stewart and Shamdasani, 1998). The researcher maintained the focus of the interviews with the help of an interview guide consisting of open-ended questions about the topic. The purpose of open-ended responses is to understand and capture the points of view of other people without

predetermining those points of view through prior selection of questionnaire categories (Patton, 1990). Before designing the interview guide, the broad concepts to be investigated need to be defined and critical questions identified (Schurink *et al*, 1998). This was done through preliminary unstructured interviews with several residents of Hilton and through background reading of other research into attitudes towards cycling. The interview guide for the focus groups covered the following topics:

- Description of respondents' cycling history and behaviour, from childhood to the present;
- Attitudes to cycling;
- Attitudes to children cycling;
- Images of cyclists;
- Attitudes to cars and car-driving;
- Main deterrents to cycling in Hilton;
- Things most likely to encourage them to cycle more;
- How an increase in utility cycling might affect Hilton; and
- Environmental issues.

These themes were not always discussed in the same order as the discussion took different turns with different groups. However, the researcher attempted to make sure that all of the issues were discussed in all of the groups.

To round off the focus group interviews, participants were asked to fill in prepared comparison sheets (Appendix 1 and Appendix 2). The sheets consisted of a number of opposing concepts with a line drawn between them, for example:

easy ----- difficult

The participants were asked to indicate with a cross on the line where they thought (on the first sheet) utility cycling and (on the second sheet) driving a car fell on the spectrum between the concepts. The sheets were the same except that one was for driving a car and the other for utility cycling. This was done in an attempt to show

graphically whether there were any particularly strong attitudes towards cycling as opposed to driving and also to triangulate the responses found in the discussions.

The focus group interviews were tape recorded and transcribed in order to facilitate accurate representation and analysis of the data. When the attitudes to cycling had been deduced from the study, where it was considered appropriate and possible, investigation was undertaken by the researcher to see whether some of the perceptions that emerged could be considered accurate or not. This included making phone-calls to or visiting the Pietermaritzburg Department of Transport, the Hilton Police and bicycle shops around Pietermaritzburg, and undertaking a mini-experiment to investigate times taken on trips by car and by bicycle in Hilton (Section 5.3).

CHAPTER 4

RESULTS

The results of the study are presented in this chapter, beginning with the cycling histories and current cycling behaviour of respondents. Direct and indirect deterrents to cycling, respondents' images of and attitudes towards cycling and cyclists, reasons that respondents would like to cycle, and life stages that may affect cycling behaviour are presented. In order to illustrate the results, quotes from the transcribed interviews are placed in boxes under relevant sections. Copies of drawings done by some of the participants are also included where they illustrate pertinent issues.

4.1 Cycling histories and current cycling habits

The cycling histories of the respondents were found to be strongly similar, particularly during childhood. Learning to ride a bicycle was like a childhood rite of passage. All of the respondents had been given their first bicycles and learned to ride when they were young. The youngest age mentioned at which a participant owned and rode a first bicycle was "three or four"; the oldest "10 or 11". All of the respondents with children had taught their children to ride, except for those whose children were too young yet to ride. However, they planned to teach them to ride when they were old enough.

Nineteen out of 21 of the focus group participants had cycled to school when they were children, either throughout primary and high school, or just during primary school. As soon as they left school, however, bike riding stopped and was replaced by motorised transport. Most of the respondents, when describing their cycling histories, skipped over the years following school as if they were a blank. They did not mention cars unless specifically asked but it was at that stage that cars became the predominant means of transport. (Box 1.)

Box 1

"I practically grew up on a bike ... At one point we used our bikes to get to a certain point and then got the bus to school. And then same story ... I don't know what happens to us. You know then I went to varsity, I didn't take a bike, nobody used bikes, nobody had them ... then about five years ago, six maybe, [my husband] bought me a bike."

Female, 50s, occasional recreational cyclist.

"I think I was born on a bike ... Started on tricycles and scooters and ... from this height to this height [gesturing small to big] ... and I never used a bike I would say for 30 odd years then about 10 years ago I got on a bicycle..."

Male, 60s, occasional recreational cyclist

The unspoken understanding seemed to be that as a form of transport bicycles were for children and cars, or motorbikes followed by cars, were for adults. (Box 2.)

Box 2

"... Once I started working I don't know what happened to my bike. It must have just disappeared out of my life ... I probably thought it was terribly infra dig to ride a bicycle at that stage... when you're 18 or something and of course you're much smarter in your high heels."

Female, 50s, non-cyclist

"I guess when I was big it was no longer fashionable to ride a bicycle. It was fashionable to have a car."

Male, 50s, recreational cyclist

"I got my first car when I was 18 when I went to the army. Then I had my car from army through Tech. But obviously you are not [into] bicycles at that stage. They sort of fell out of [interjection from another participant: "They weren't cool"]... ja, not cool. Ja, so junior school bicycles, high school motorbikes and studying and that, cars."

Male, 30s, competitive recreational cyclist

Cycling emerged again as a recreational pastime from 10 to 30 years after school. All but one of the male respondents now owned a bicycle again, and he expressed a desire to own one again. They had all bought them for purposes of recreation, social contact and fitness, except for one who had won a bicycle in a competition. Two had started riding as a replacement for jogging because of injuries. Six out of 10 female focus group participants now also owned bicycles, all of them bought for the purpose of recreational riding with their husbands (those whose children were grown-up) or their

husbands and children. Two of the four women without bikes had in the last year expressed a desire to buy a bicycle. One did not enjoy cycling and therefore did not want a bicycle, and one said it was unlikely she would buy a bicycle because her family had had two incidents of theft of bicycles. She was a regular walker. However, she expressed enthusiasm for the idea of utility cycling around Hilton.

Figure 10 highlights the current cycling habits of the participants in the focus groups. The total number in the graph is higher than the total number of people in the focus groups because three of the respondents belonged to more than one group: two were both occasional utility and recreational riders and one was a regular utility and recreational rider.

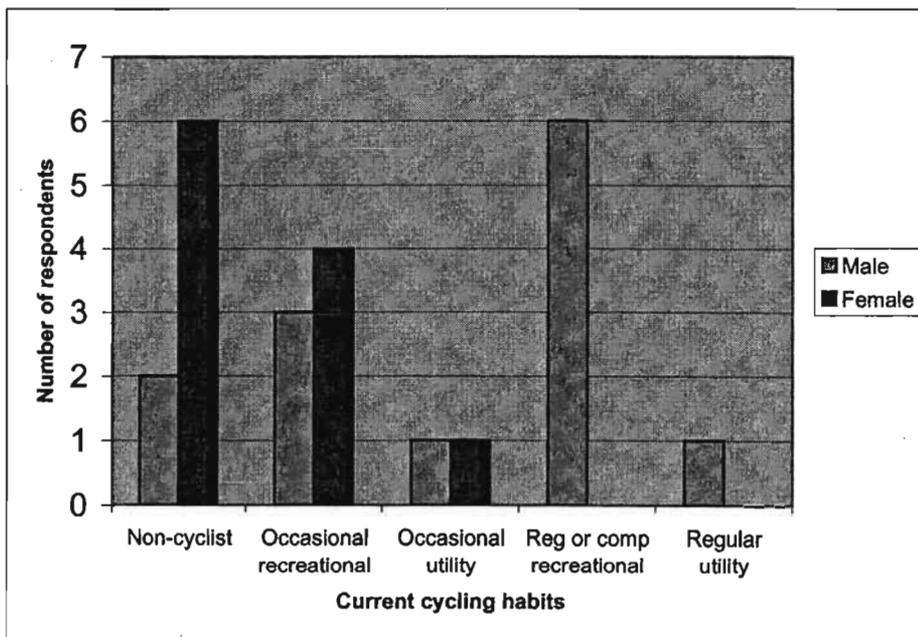


Figure 10 Current cycling habits of focus group participants

Bicycles were regarded by most of the participants as having allowed them freedom, independence and social contact during their childhood which they otherwise would have lacked. (Box 3.)

Box 3

"We used to ride about three times a day. Then we used it for social contact as well, visiting friends. Sporting venues wherever we were playing rugby or cricket ... got there on a bicycle. So you get groups of five or six or seven and it was a very pleasurable experience riding to school in the morning with a whole bunch of chaps, your peers, talking and chatting and kidding each other ..."

Male, 60s, former recreational cyclist

"We used to go swimming ... We used to go at night on our bikes ... And in fact all our friends used to do the same thing and we used to invariably meet and all go and even in the holidays we used to sort of plan excursions on our bikes ... We had a wonderful time on our bicycles ... Without them we could have done nothing. Our social lives would have been totally inhibited and we couldn't have got to school. I mean even when we had plays at school at night my brother used to ride me to school and ride me home."

Female, 50s, non-cyclist

In contrast to the high percentage of respondents who rode to school themselves, out of the nine focus group participants with children currently at school, only one had allowed his son to ride to school, and only when the boy had reached standard four (grade six). Although two respondents mentioned seeing children riding to school (Laddsworth) along residential roads, more remarked that they never saw children riding to school. The main reason cited for not allowing children to ride to school was the danger posed by traffic. (Box 4.)

Box 4

"I wanted [my son] to [ride to school] and even he wanted to at times but we just said this main drag is just [unsafe] ... It was safety reasons."

Male, 50s, occasional recreational cyclist

"My feeling is if [a child] could be careful every time you'd probably be okay but as a schoolboy there's going to be times when he's in a hurry or full of energy or showing off or something."

Male, 60s, regular recreational and utility cyclist

"[Our son] used to use a bike in the Cape ... a bicycle was very much a part of his life and when we came here he said why couldn't he cycle to school ... We just felt the drivers were absolutely and utterly irreverent when it came to anything that wasn't on four wheels."

Female, 40s, occasional cyclist

"Our children stick mainly to residential areas ... To get to the shops you have to cross that busy cross-section. Those cars race through there. It's so dangerous ... The kids both ride and would love to hop on their bikes and go to their friends but until it's more structured, safer, we won't let them."

Female, 30s, regular recreational cyclist

The effect of children not being allowed to cycle meant that they were almost completely dependent on their parents for mobility and that parents had to spend a lot of time fetching and carrying children. Parents reported making up to three return trips to school per day. This was regarded by most of the respondents as having a negative impact on the quality of life of both children and parents. (Box 5.)

Box 5

"My son begs me now to get him up at half past six and drop him off on my way because he's so keen to get to school but I can't because school's not open. But if he had a bicycle he'd get on his bike and he could ride to school because he's got all that time in the morning. [When we were children] we used to get on our bikes, get to school early. It was magic. I mean you had that freedom you know to ride as you pleased."

Male, 30s, competitive recreational cyclist

4.2 Deterrents to utility cycling in Hilton

Deterrents to cycling that emerged during the study can be divided into direct deterrents, which were mentioned by the respondents, and indirect deterrents which were not explicitly mentioned by most of the respondents but could be deduced from their responses.

Direct deterrents:

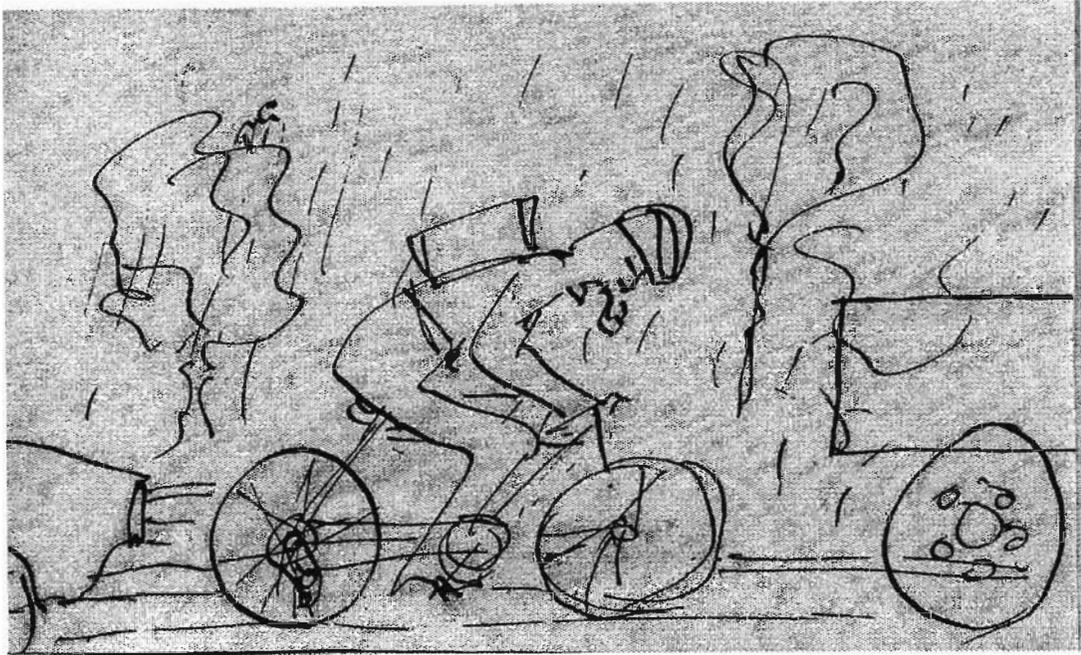
- Traffic and perceptions of South African drivers;
- Stranger danger;
- Hills, dogs, weather;
- Perceived difficulty of carrying goods on bicycles; and
- Perceived pace of modern life.

Indirect deterrents:

- A culture of driving; and
- Inertia

4.2.1 Direct deterrents

4.2.1.1 Traffic



"...It's nice to be out but it is a bit of a scary thing on the main drag because you've got to drive in the road, it's narrow already and there are trucks and cars and they don't have much consideration for people."

Male, 50s, occasional recreational cyclist

Figure 11 Participant drawing and quote illustrating fear of traffic as a deterrent to cycling.

The most commonly mentioned direct deterrent was traffic. There was a widely-held perception that the volume and speed of traffic in Hilton was increasing and that this made cycling more dangerous. Added to that was a perception that South African drivers were aggressive, reckless, incompetent and either unaware of cyclists or openly hostile towards them. The image of riding on the side of the road and being passed by a fast-moving vehicle which came too close for comfort was prevalent. This had been experienced by several of the participants. One mentioned having been blown off her bicycle when a vehicle passed close to her. Images of dangerous drivers ranged from housewives to young men in 4x4s and drivers of minibus taxis. (Box 6.)

Box 6

"I've had too many narrow squeaks in the Hilton area ... You're out on the road there, between Hilton College and here, you're doing a training ride, the chances are you will have one or two instances where you think 'Gee whiz that guy came close'."

Male, 60s, former recreational cyclist

"Traffic, buses, minibuses, taxis, that just have no concept of what a cyclist's rights to the road are."

Male, 50s, recreational cyclist

"[Drivers] don't give cyclists much preference. It's as if they're not there because they're only cyclists. They sort of pull out anyway."

Male, 30s, competitive recreational cyclist

"We have a very un-cycle-aware and undisciplined driving public. They don't know the rules, they don't care about the rules ..."

Female, 60s, occasional recreational cyclist

"(In our days when we used to ride to school ... every now and then a car would come tootling along at low speed you know. Now it's just whewww... .. it has increased a lot. People drive fast now. Everyone's in a hurry. You don't think 'I'm in Hilton now, I must suddenly crawl along'."

Male, 30s, competitive recreational cyclist

The majority of respondents thought that dedicated cycle tracks around Hilton would make cycling safer from traffic and therefore encourage them and others to cycle more. The tracks would have to be separated from the road rather than just painted on to the existing roads, however. The respondents did not believe that a dedicated lane on the existing roads would be respected by drivers enough for cyclists to be safe from vehicles. (Box 7.)

Box 7

"External factors that would encourage would be a cycle path... Going to the gym we mostly go together and [my wife] is just too scared of this main drag. I'm not too scared of it ... but if there was a proper cycle path then [my wife] would go and then I would never go to the gym not on my bicycle. I mean you drive to the gym and the first thing you do is get on the bicycle. It's ridiculous."

Male, 50s, occasional recreational cyclist

"I mean you hear ... the guys on East Coast Radio constantly pleading that there's been an accident, please stay out of the emergency lane, and people don't so you know the fact that you've put down an extra lane of some sort doesn't mean that people aren't going to use it for overtaking and whatever."

Male, 50s, regular recreational cyclist

"I think the bollards are a good idea because half the people around here travel as if they're farming. They're looking out the window here and then half in the road ... if you've got something it's a hell of a lot safer and you're not worried about Mrs Jones coming down the road and wiping you out from behind."

Male, 30s, non-cyclist

Utility cycling was regarded as something that could only be done safely in countries that were considered by the respondents to be more sophisticated than South Africa. These countries were regarded as being less lawless and having more educated drivers who were considerate towards cyclists. (Box 8.)

Box 8

"I just don't think we've got to that level. South African drivers aren't ready for it."

Female, 30s, non-cyclist

"They're all sophisticated there [in Melbourne]. They know the rules, all the traffic rules. I think Australian jails are full of people who've broken traffic rules. We're not so sophisticated ..."

Male, 60s, regular recreational and utility cyclist

"In Denmark if an accident happens it's your fault [the car driver's]. Cars have to give way to bikes. Here, if you hit a cyclist it's the cyclist who gets blamed."

Female, 30s, occasional utility cyclist

"People in other places ... there are proper cycle paths, drivers are aware of it, and it's general security. People are not scared that they're going to get raped, mugged. In Venice, for example, on the mainland [people cycle] late at night."

Female, 50s, occasional recreational cyclist

Most of the participants said that when they were driving they were aware of and considerate towards cyclists, tending to give them “a wide berth”. Some, however, felt that cyclists’ rights to the road are subordinate to drivers’. (Box 9.)

Box 9

“I’m very considerate – partly because I don’t want the trouble of hitting them, but also because I sympathise with them.”

Male, 60s, regular recreational and utility cyclist

“I give them a wide berth because I have been blown off my bike before.”

Female, 40s, occasional recreational cyclist

“If they’re in the road then I hoot at them. ‘Get off the road! You must be on the left of the road.’ You can’t have a little cyclist in the middle of the road.”

Female, 30s, occasional recreational cyclist

“Cyclists tend to think they own the road.”

Male, 30s, competitive recreational cyclist

4.2.1.2 Stranger danger

“Stranger danger” was the next most commonly-cited reason for not cycling and for not allowing children to cycle unsupervised. Several of the respondents reported knowing of children having had their bicycles “hijacked” while riding in Hilton. The fear of targeting, rape or molestation of daughters while riding was also prevalent.

“Stranger danger” was not restricted to children; men also considered it a deterrent to women, and to a lesser extent themselves, cycling. One respondent mentioned a male cyclist who had been attacked during a race, although this had not taken place in Hilton. Most of the respondents had heard of cyclists being attacked in the forests surrounding Hilton. There was a perception among all of the respondents that Hilton was less safe than it used to be because of an increase in dangerous strangers. A cyclist was perceived to be more exposed to danger from strangers than a person driving a car. However, it was thought that there would be safety in numbers: the more people there were cycling around Hilton, the safer cycling would become. (Box 10.)

Box 10

"There are also crummy people. An increase in unpleasant people."

Female, 60s, occasional recreational cyclist

"I'm hesitant to let the kids ride because we have friends whose kids were hijacked. They had their bikes stolen at knifepoint near the Spar on a Sunday afternoon. It makes one feel awkward letting the children ride."

Female, 40s, non-cyclist

"I would like to allow [my son to ride to school] ... I've thought about it ... and the bottom line is no. I don't think it would be safe. I think he would be mugged on St Michael's Road, get run over in that [tape unclear] Road."

Male, 30s, competitive recreational cyclist

"Girls are a big no no. Even our wives I mean ... they are more of a target."

Male, 30s, competitive recreational cyclist

"It's like there's this big bogey population out there."

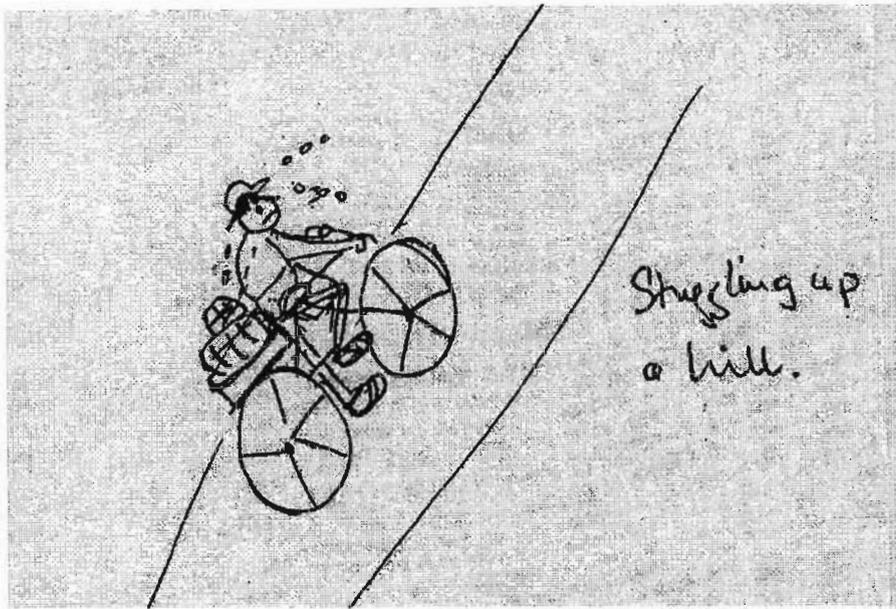
Female, 60s, occasional recreational cyclist

"I wouldn't ride on a Sunday afternoon ... because of all drunk people wandering around [but] if I knew that there were going to be lots of other people, lots of cyclists, then it would be fine."

Female, 30s, regular recreational cyclist

4.2.1.3 Hills, weather, dogs, theft, perceived difficulty of carrying goods

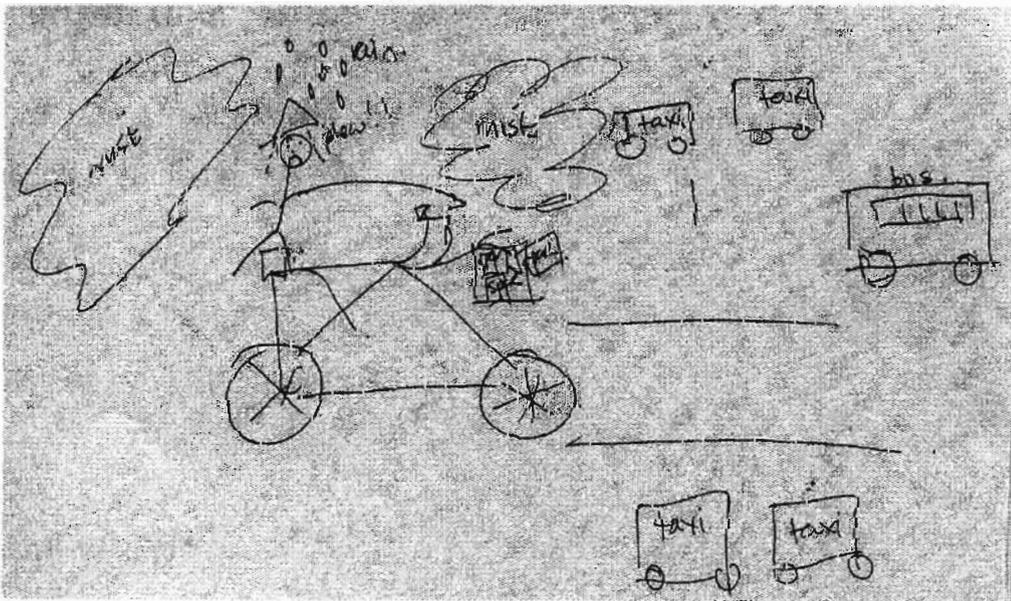
Other deterrents mentioned, although they received less attention than the danger from vehicles and strangers, were weather, hills, dogs, theft of bicycles (four respondents had had bicycles stolen) and the perceived difficulty of carrying goods on bicycles. Although one participant owned a bicycle with a carrier, the image of carriers on bicycles was not prevalent. It was thought that it might be difficult to get bicycle carriers in South Africa. Also, some participants did bigger shops less regularly which meant they would have had large loads to carry. (Box 11.)



"I'm just struggling up a hill, about to fall off."

Female, 60s, occasional recreational cyclist

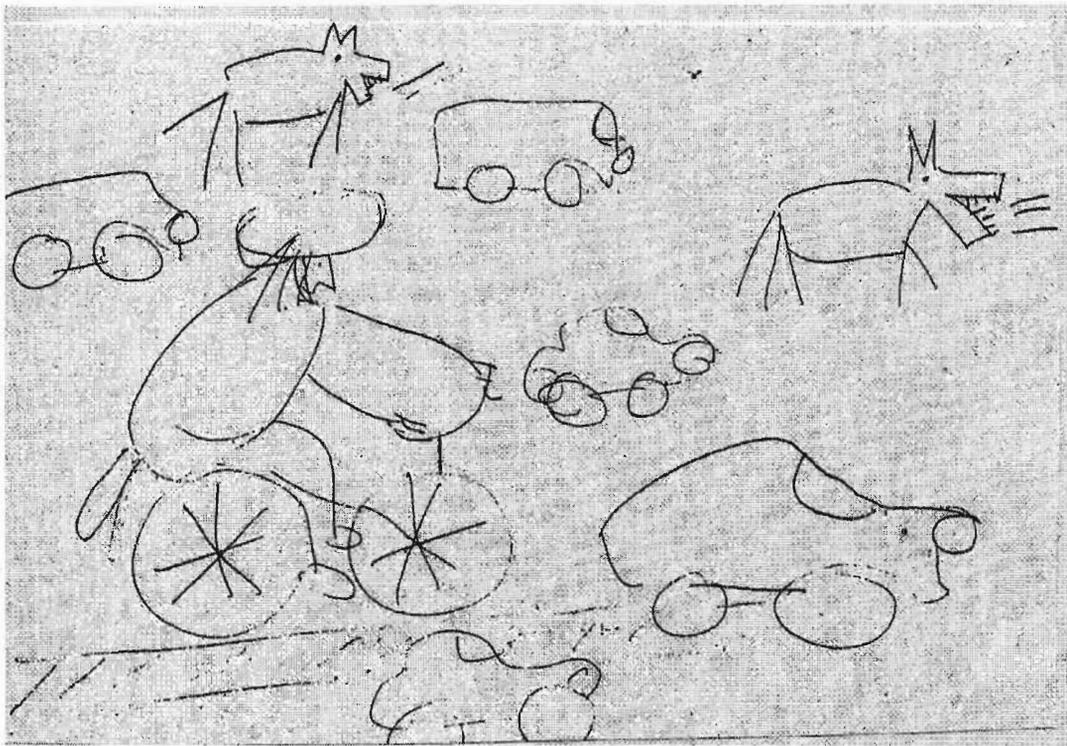
Figure 12 Participant drawing and quote illustrating hills as a deterrent to cycling.



"I've got a huge amount of hazards in this thing. Taxis, buses, mist and rain."

Female, 30s, occasional recreational cyclist

Figure 13 Participant drawing and quote illustrating traffic and weather as deterrents to cycling.



"I visualise myself falling off ... being mauled by a dog."

Female, 50s, occasional recreational cyclist

Figure 14 Participant drawing and quote illustrating dogs as deterrents to cycling.

Box 11

"The off-putting thing would be riding in the mist because you've got no protection ... In the mist it's quite unsafe I think because you're not visible."

Female, 50s, non-cyclist

"You think Hilton's flat, but it's not."

Female, 30s, non-cyclist

"There's a very savage little sausage dog on this Flamingo Drive."

Female, 40s, non-cyclist

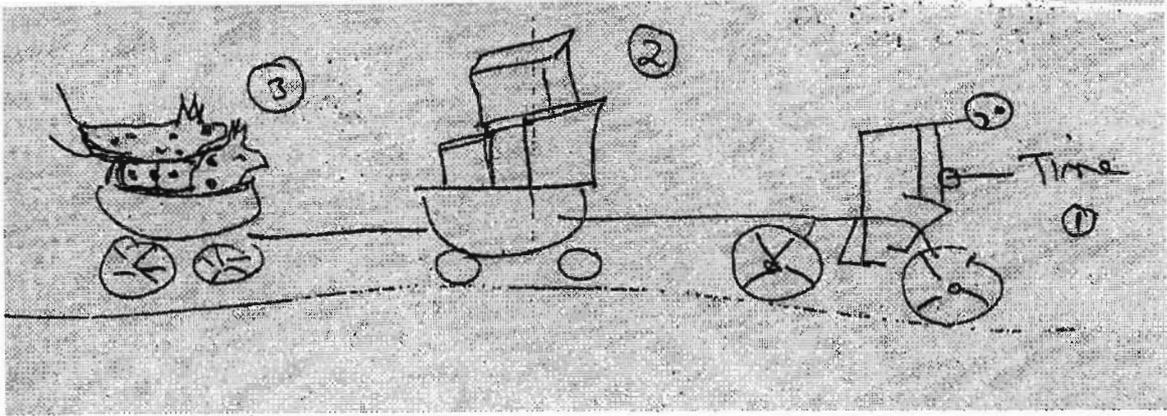
"I walk everywhere. At least my two feet can't get stolen... I've had two [incidents of theft of bicycles] in the last three years. Just people whipping into the house and taking them."

Female, 40s, non-cyclist

"I have sometimes [ridden to the shops]. But then I forgot that I was on my bicycle and I bought a 10kg thing of HTH so I had to wiggle home with it on the handlebars. You can't get those baskets to put on bikes."

Male, 40s, occasional utility cyclist

4.2.1.4 Perceived pace of life



"If I had to cycle to the shops I would be so stressed out about time because there just isn't time. Two, I only shop like once a week so I'd have to have a trailer to put all my groceries in. Three, I'd have to have another trailer to put the dogs in because I always take the dogs. That's why the mouth goes down."

Female, 50s, non-cyclist

Figure 15 Participant drawing and quote illustrating perceived lack of time as a deterrent to cycling.

There was a general feeling that the pace of life had increased and that this was associated with an increase in the use of cars. For some of the respondents this was felt to be a good thing; they felt that utility cycling would slow their lifestyles down. Others felt that it was a bad thing and that a return to slower lifestyles, which included utility cycling, would be a good thing. Others felt that the perception that utility cycling for short trips was a slow mode of transport was unfounded. (See Box 12.)

Box 12

"I'd much rather do something else with my time. I've got many hobbies and interests and so I would really not venture in using the bicycle to get to the shops when I can do it in about a tenth of the time using my motorcar... If I lived at home all day ... maybe then I'd have time and I'd be able to get on my bike and go but not the lifestyle I lead. It would be a hell of a waste of time."

Female, 50s, non-cyclist

"It's not a waste of time. Sometimes you spend more time if you don't have parking looking for parking, worrying about whether your car is getting carried away bit by bit... I really don't think it's slowing down. It's rearranging. You can't tell me that the whole of Europe as an example – they are not leading slow lives."

Female, 50s, occasional recreational cyclist

"I would love to see it (a culture of utility cycling in Hilton) happen. I really believe in the old-fashioned way of doing things. Do things a bit slower, enjoy it a bit more. People who do things slower are a lot more fun to be around. People are not so tense. You know how lots of people are saying, 'The world is sick, let's go back to the old-fashioned ways'."

Female, 30s, occasional utility cyclist

4.2.2 Indirect deterrents

4.2.2.1 Car culture

As was mentioned in the section on cycling histories, cars became the dominant means of transport once respondents left school. This was taken for granted to such an extent that the acquisition of cars was not even mentioned by most participants unless they were specifically asked. From then on, most trips were done by car. This was the first choice of transport mode and was seldom, if ever, questioned by most of the participants. In contrast, a decision to ride a bicycle would have been a far more conscious and less habitual one. (Box 13.)

Box 13

"That's where we're so stupid in this country. Doing your supermarket little shop, it's 2ks away and you get in your car and drive there. You know that silly movie where that woman gets into her car and reverses down the road to the postbox and sticks her letter into the thing and she goes back up - it couldn't be more than 20m. I mean that's typical ... we won't even walk to the shops. 'I'm going to the shops quickly. Do you want anything?' 'Ja,' and you jump in your car and you go. You don't walk there. You don't even think of an option. I don't know why."

Male, 30s, non-cyclist

All of the respondents had at least two cars in their household. One respondent had had only one car in the household for 18 months, but found it eventually to be too inconvenient - he had "become a taxi". Cars were viewed as an unquestioned necessity in present-day life for South Africans of their socio-economic sphere. Public transport was considered unavailable to white people in Hilton and in most of South Africa, although there was awareness that minibus taxis were being used by white people in Cape Town. The majority of the participants responded positively to the idea of public transport geared towards them between Hilton and Pietermaritzburg. Most of them would not have used it as a replacement for their cars but would possibly have used their cars less because of it. Most respondents thought that cars were status symbols, and although few admitted to regarding them as such themselves, they did feel that the car they drove affected the way they felt and how they were viewed by other people. (Box 14.)

Box 14

*"All of us would feel that our image was taking a knock if we chugged along in an old banger ... You wouldn't like to be an old crock struggling up the Old Howick Road with fifty cars behind you. There's nothing more embarrassing than that."
Female, 40s, non-cyclist*

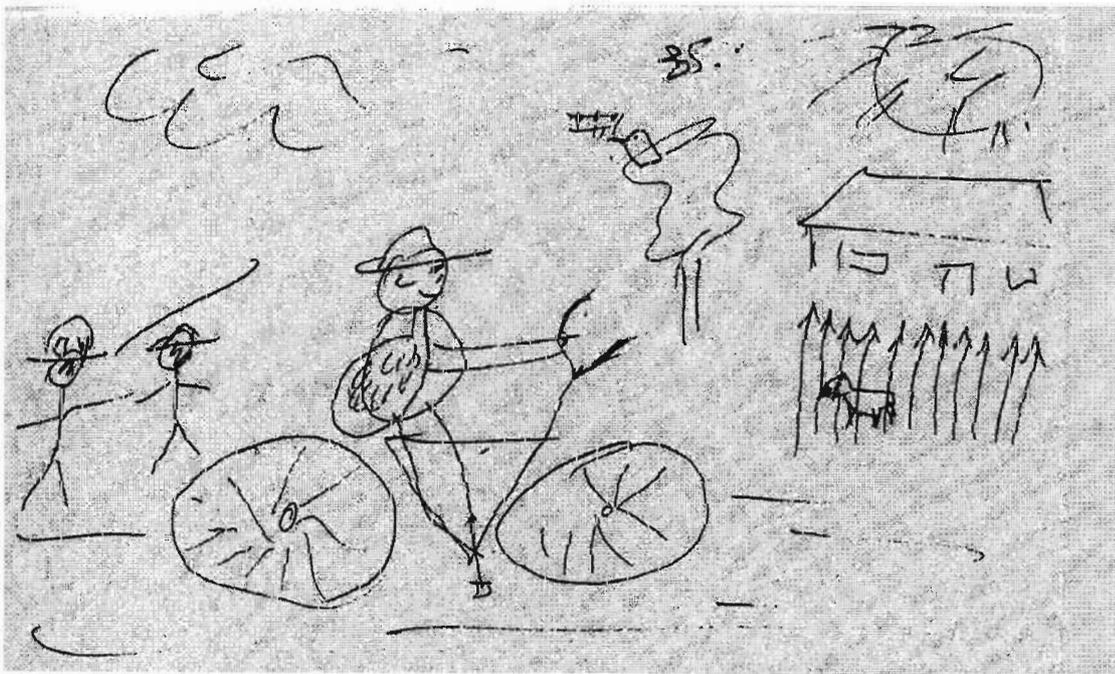
*"It's Americanised. That's the trouble. That's what America's done to us. Got a system that it's cool to have two cars, to have two garages."
Male, 60s, former recreational cyclist*

However, it was not generally felt by the respondents that the status conferred by the particular car they owned would be changed in any way if they rode around Hilton instead of driving the car. For the competitive cyclists, status seemed to be associated more with the bicycles that they rode than the cars they drove.

Cars and bicycles both had positive and negative associations. On the negative side, cars were regarded as being expensive, troublesome money-guzzlers. On the positive side, cars were regarded as being extremely useful, providing a safe, private, familiar environment and bestowing independence. They also satisfied an enjoyment and appreciation of speed and engineering. It was generally acknowledged that utility cycling around Hilton would not negate this appreciation; there were other opportunities on longer car trips when this would be enjoyed. Bicycles also satisfied

this enjoyment and appreciation for the competitive cyclists and for some of the recreational cyclists.

On the negative side, cycling was seen to be more effort, less comfortable and more time-consuming than driving a car. On the positive side, cycling was thought to allow for greater engagement with the pleasant Hilton environment, to be quieter, healthier and more fun than driving.



"The sun's shining. I'm just trying to show it's out in the open... There's a bird singing ...I think you hear a lot of birds when you're travelling around."

Male, 60s, regular utility and recreational cyclist

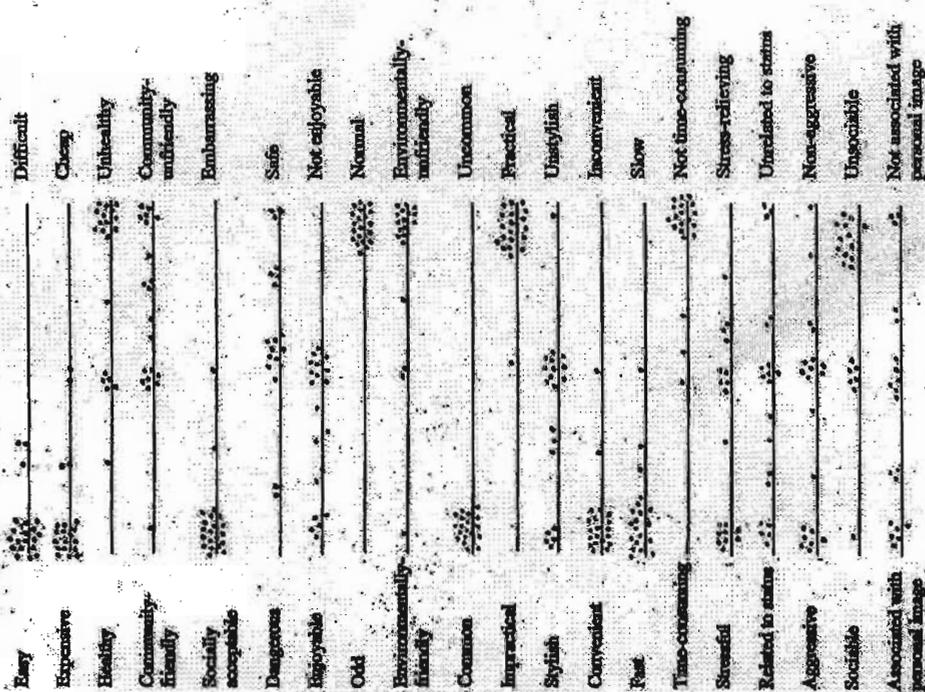
Figure 16 Participant drawing and quote illustrating enjoyment of surroundings while cycling.

Focus group participants were asked to fill in comparison sheets on which they indicated with a cross on a line where a) utility cycling and b) driving a car fell on the spectrum between a number of opposing concepts. The most significant responses - given by the majority of participants - are shown in Figure 17. In Figure 18 all the responses have been collated on to one sheet, with a single dot representing a single response. Box 15 gives quotes from respondents that are negative about cars and positive about bikes. Box 16 shows quotes that are positive about cars and negative about bikes.

<i>Driving a car =</i>	<i>Utility cycling =</i>
<i>convenient</i>	<i>quite inconvenient</i>
<i>practical</i>	<i>not very practical</i>
<i>fast</i>	<i>slow</i>
<i>not time-consuming</i>	<i>time-consuming</i>
<i>expensive</i>	<i>cheap</i>
<i>unhealthy</i>	<i>healthy</i>
<i>community-unfriendly</i>	<i>community-friendly</i>
<i>unsociable</i>	<i>sociable</i>
<i>aggressive</i>	<i>non-aggressive</i>
<i>environmentally-unfriendly</i>	<i>environmentally-friendly</i>
<i>quite safe</i>	<i>quite dangerous</i>

Figure 17 Comparative attitudes about cars and bicycles

Please indicate with a cross on the line where you think utility cycling falls in the spectrum between the following concepts:



Please indicate with a cross on the line where you think utility cycling falls in the spectrum between the following concepts:



Figure 18 Collation of responses on comparison sheets

Box 15

"My car has given me endless trouble ... The cost is getting worse and worse and worse... You don't get your value for money. You get repairs done and they don't do the job and you're paying through the nose."

"I don't like cars – they break down, they need to have petrol put in all the time."

"I find (driving) embarrassing sometimes. You're embarrassed when you drive past someone and somebody's walking ... if you've got a woman standing waiting for a taxi or something at the side of the road and here am I just zooming up the hill in my empty bakkie..."

"Driving a car I find dangerous because for one thing I'm aware that I could run someone over."

.....
"When you're in your car, you own the space inside it. But when you're on a bicycle, you own all the space around you. When I wake up early in the morning and go riding, I feel like I own the whole area."

"(Driving a car) is so boring. It's an everyday sort of ... thing that you have to do."

"Bikes would be environmentally better ... Bikes are quiet, active, it's quite fun riding a bike whereas a car is nothing. A car trip is just a non-thing."

Box 16

"How do you get sick relatives to hospital? ... The Chinese or the Indians ... aspire to a car when you can get sick people to hospital or get your children to school when they walk 10km to school every day."

"A car is your private space. My car by the end of the week looks just like my office ... This is the desk and there's the eating place and ... it's like you're carrying a little arsenal. There's the storeroom in the back. You've got some munchies in the front. You can do the crossword."

"There's nothing better than a long stretch of flat road and you put your foot down and you just change into gear and you just go. There's something really exhilarating about that."

"I love my cars ... as pieces of engineering. I always have at least five or so."

"Sometimes if you're driving past say a black woman at a bus stop ... you can see why she must think it must be so nice to have a car. Because you're safe and you're independent and you're free. Mostly you're safe. You can get in somewhere where no one else can get in and you can get away if you need to which you can't do if you're waiting for a bus."

"My elderly mother has just given up driving for life and it's the saddest time in her life and in mine and I'm just dreading getting to the age where I give up driving. It's the independence it gives you as a woman on your own to just get in your car and just go for days if you want to. It gives you that freedom."

.....
"The only thing that would encourage me (to ride) is a canoe seat on a bicycle. Padded."

"If I've got to go to the shops quickly I'd rather go in my car. It's easier."

"(To ride) you have to get dressed and put your helmet on. Different shoes."

"(Cycling) takes too long."

4.2.2.2 Inertia

Even if the perceived obstacles to cycling were real and relevant, they were not necessarily enough to prevent people who really wanted to cycle from cycling. (This would not apply to children; traffic and safety concerns for children are considered strong enough to prevent parents from allowing their children to ride unsupervised.) Regular utility cyclists reported that the obstacles were surmountable, not as bad as had been stated by non-utility cyclists and became less of an issue the more they rode. Even though respondents mentioned deterrents to cycling, many of them had still gone out and bought bicycles, with every intention of cycling. However, many of them did not use them. This would suggest that inertia plays a role in why some people who have a positive attitude towards both recreational and utility cycling still do not do cycle. The spirit was often willing but the flesh was weak. (Box 17.)

Box 17

"We both bought bikes. I got on mine three times. You know these visions of babies on the back, and not once. I've been on it twice I think and I've had it for the last six years."

Female, 30s, non-cyclist

"One thing we often said we should do - going to the gym, cycling, especially in summer. It's ideal because you get your warm-up and your exercise going there and coming back and you can do your work-out ... We had every intention of doing it ..."

Female, 50s, occasional recreational cyclist

"If you think how many people have got bicycles ... almost everyone you know has got a bicycle. But when do they ride? You ask them why they don't ride and it's full of every reason ... Everyone gets all enthusiastic and they go and buy bicycles for the whole family. They ride them every day for two weeks. Then never again."

Male, 30s, competitive recreational cyclist

"They get on their bicycles and 'Hey, this hill's a lot easier in a car'."

Male, 30s, competitive recreational cyclist

"It's first of all laziness. Only 10% of the population would be prepared to cycle."

Male, 60s, recreational cyclist

"They were all full of enthusiasm before the mountainbike race [last year]. 'Yes we'll all do it', but when it came to the crunch they all just stood around with their lipstick on."

Female, 40s, occasional recreational cyclist

The inertia might in some cases be overcome by making cycling more convenient. Sometimes very small obstacles, like the fact that the bicycle is stored behind the car in the garage, that it needs to be chained or not knowing where the cycle racks at the shops are, were given as off-putting factors. One of the female non-cyclists said that she decided not to buy a bicycle because she had no one to ride with. She and another respondent discussed riding together. For some of the female respondents who had not ridden for a long time, even though they expressed a desire to ride and had bought bicycles, the idea of getting back on a bicycle was quite intimidating because they felt unconfident about their skills. For the competitive recreational cyclists, the structure of their bicycles was an off-putting factor. They would have had to change into their proper cycling shoes which clip into the pedals. This would then have made walking through shops difficult. (Box 18.)

Box 18

*"I would love to [do utility cycling] but in this country at this time it's simply not practical. Even something simple like recycling. It's a real sweat. You have to work hard at it. It should be an absolutely natural way of life whereas it's a sweat and it's a bind and it actually costs you to recycle. It's a crazy situation. And cycling similarly. If it were remotely practical I'd jump at the chance."
Male, 50s, regular recreational cyclist*

*"I don't want to get my bike out of the workshop. There's nowhere at the shops to put the bike. Mostly I'm too lazy."
Female, 60s, occasional recreational cyclist*

*"I'm not a very experienced cyclist ... I hope I'm looking very cautious and stressed and hanging on for dear life because that is what I do."
Female, 50s, occasional recreational cyclist*

4.3 Image of cyclists

Although there was a high level of awareness of utility cyclists in some European countries, for example Holland, Norway, Denmark, Italy, Switzerland and France, images of utility cyclists in South Africa were not strong, particularly regarding the respondents' own socio-economic sphere. There was little awareness of utility cycling in South Africa. The predominant image held of utility cyclists in Hilton was of working-class black male riders. (Box 19.)

Box 19

*"And the postman ... He's a wonderful example of a very useful thing."
Male, 60s, regular recreational and utility cyclist*

*"I see that wonderful African fellow with no teeth in the front and the basket ... I can't remember his name. He works at the Town Board."
Female, 60s, non-cyclist*

*"On that Sweetwaters Road every single day I see people cycling to work ... youngish guys, or sometimes there's a few old kehlas [old men] and you would imagine that they are gardeners and maybe work in the village as caretakers."
Female, 40s, occasional recreational cyclist*

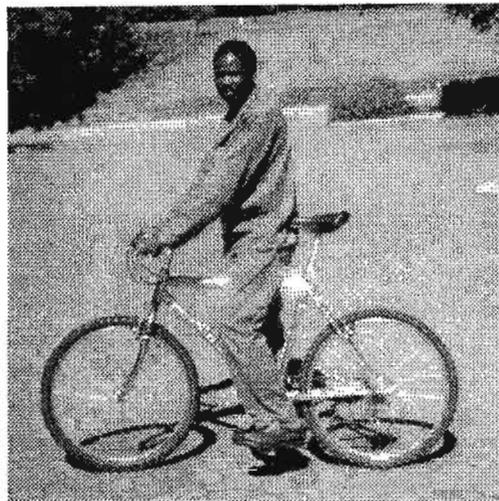


Figure 19 Predominant image of a typical utility cyclist in Hilton

There was only one white person mentioned as a utility cyclist and he seemed to be regarded as slightly eccentric. (Box 20.)

Box 20

*"[I see] that guy with the long grey hair ... It looks like biltong."
Female, 40s, occasional recreational cyclist*

*"I saw some old man with wispy white hair toddling around on his bicycle."
Female, 30s, non-cyclist*

The predominant image of people on bicycles in the Hilton area was of recreational cyclists. They were regarded as fit, healthy, trendy and wealthy. (Box 21.)

Box 21

"The only [ones] you might see are serious road cyclists, the ones who are training you know with their proper kit on. You see a lot of cyclists around Hilton."

Female, 30s, occasional recreational cyclist

"I haven't actually seen anyone riding say to the local Spar with a backpack on or something and going into the Spar and coming out with his Coke and his chips and his groceries and whatever in his backpack, but you always see the guys with their helmets on their mountainbikes and their fancy cycling kit and whatever zooting down the road. And whether it's for image - 'Hey look at me! Look at me!' - or the guys are actually quite seriously into it or not ... I mean you see a lot more guys with bicycles on the back of the cars when they're going off on holidays. You don't tow a trailer behind you, nowadays you've got the bicycle rack with the bicycles racked on. I think some guys have them permanently bolted on there just for the image sake of it."

Male, 30s, non-cyclist

"Cycling is a yuppie sport. We have friends who started cycling a few months ago and suddenly now he's got to have a bike worth R40 000."

Female, 30s, occasional utility cyclist



Figure 20 Predominant image of a typical cyclist in Hilton

The main emotions expressed regarding recreational cyclists were admiration and envy. Serious recreational cyclists, because of the cycling outfits and helmets worn by many of them, were considered to be a slightly exclusive group which may have inspired some negative feelings toward them. (Box 22.)

Box 22

"I envy them."

Female, 50s, occasional recreational cyclist

"I wish I was one of them. I'm just too lazy."

Female, 60s, occasional recreational cyclist

"Not the ones with hard hats; ones with just ordinary caps ... I hate these Bruce Fordyce types speeding out ... you know with that sort of speed-lined cap. I'd hate that type but if I saw people my age riding from the Spar with all her provisions then I'd really warm to her. But these fanatical get-fit jockey types, if they were speeding around I'd be quite frightened ... They're just as dangerous those types if they roar past you."

Female, 40s, non-cyclist

Even though the only image of current utility cyclists in Hilton was of black workers and a slightly eccentric white person, when the respondents were asked what they would think of people in their own socio-economic sphere (friends or fellow Hilton home-owners) who rode for utility purposes, the response was similar to the attitudes which they held towards recreational cyclists – admiration, respect and slight envy. Utility cycling by people in their own socio-economic sphere was regarded in the same light as recreational cycling – healthy, disciplined and trendy. The majority of respondents felt that utility cycling would have no negative effect on their personal image and might enhance their status, although one participant said that her son had “plummeted” in the estimation of his classmates after she once cycled to his school. She believed this was because the classmates assumed that she did not own a car. (Box 23.)

Box 23

"I'd be so chuffed with myself ... Honestly, to me it is hell of a cool. If I rocked up at the gym on my bicycle rather than in my car I'd feel totally good about it."

Female, 50s, occasional recreational cyclist

"If I looked very smart on my bicycle I would feel very down-this [looking down nose] to all the 4x4s."

Female, 40s, non-cyclist

"I would feel very superior, very superior."

Female, 50s, occasional recreational cyclist

"[I wouldn't] feel embarrassed. Not at all. I'd be proud of what I was doing."

Female, 60s, occasional recreational cyclist

"I would say especially for black guys to be a messenger on a fat-takkied bicycle is really old-fashioned and you're out of the bad ages, I suspect. [But] I don't think [utility cycling would be infra dig for people who live in Hilton]. I think it would be different here."

Male, 60s, regular recreational and utility cyclist

"At the moment one's impression of anyone cycling to the shops would be one of health and recreation."

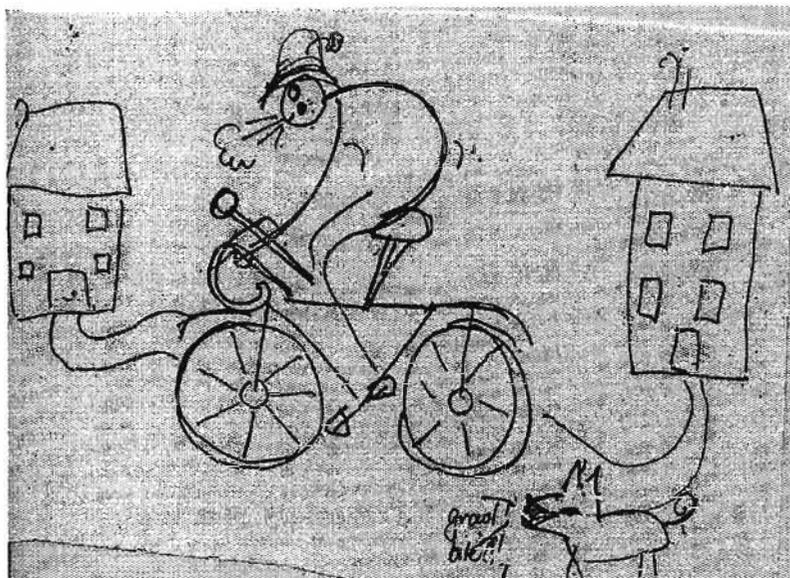
Female, 50s, non-cyclist

"You don't often see people doing it but if I did see someone doing it I [wouldn't say] 'You're really a bit whacko; why are you fetching groceries on your bicycle?'"

Male, 30s, non-cyclist

4.4 General attitudes to cycling and why people would like to cycle more

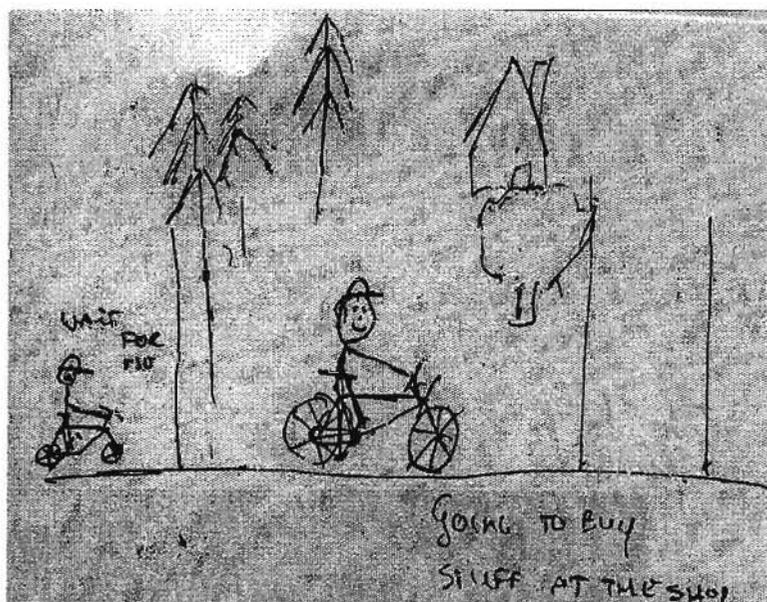
General attitudes to cycling were positive. Cycling was considered by the majority of respondents to be good for health and fitness, a good shared family activity, much cheaper than driving and good for the environment. Fitness was the most popular reason given for people wanting to cycle more, followed by the cost of driving. Although aware of environmental issues, few participants regarded the environmental benefits of themselves riding as enough to influence their behaviour. (Box 24.)



"I'm getting from A to B so I feel that I'm doing my part I'm not using the car because I'm exercising ... and pollution and all that but mainly for my own benefit."

Female, 40s, occasional recreational cyclist

Figure 21 Participant drawing and quote illustrating personal fitness benefits as a reason to cycle.



"I'm going with one of the little fellows ... to buy newspapers and whatever it is. And there's trees. It's a very nice day ... Feeling happy."

Male, 30s, competitive recreational cyclist

Figure 22 Participant drawing and quote illustrating utility cycling as a shared family activity.

Box 24

"It would be wonderful from an exercise point of view. Definitely healthier although you would be breathing in fumes."

Female, 30s, regular recreational cyclist

"Money and health. Each time you drive to the shops it's at least four rand. Over a year that adds up to a lot."

Male, 60s, regular recreational and utility cyclist

"The moral issue is should we not be forsaking the old car and getting on to bikes and our own two feet because the environment is taking a hammering. It is the tragedy of the commons all over again - what benefit is it to me, what do I get out of it if I go on a bike? I'd rather take advantage of the fact that there's a car. I can afford the petrol. To hell with the environment - I'll use it."

Male, 60s, former recreational cyclist

Another reason that people wanted to cycle was for increased social interaction and sense of community. In the same way that being on a bicycle seemed to mean being more exposed to danger from strangers, it also meant being less isolated from other non-drivers and from the community. There was a widespread perception that something was wrong with current lifestyles, which were felt to be increasingly isolated and stressful. Hilton was not felt to be safe from this trend, although the respondents felt that to an extent Hilton is still a small "villagey" community. They liked this about Hilton.

Participants all said they thought that if more people cycled and fewer drove around Hilton the effect on the community would be positive. Most of the respondents did not know all the people who lived in their road and many had little interaction with their neighbours. They thought that driving in cars contributed to a sense of social alienation in their neighbourhoods. Cycling, in contrast, was considered to be much more sociable. As a cyclist, one was able and "allowed" to greet strangers, which would never happen if one or both parties were in cars. Cycling also increased the chances of bumping into acquaintances. It was also considered to be a communication bridge between mainly white car drivers in Hilton and mainly black pedestrians. A higher level of cycling was also considered to be a means of improving security in the area by increasing the number of "friendly eyes" on the street. (Box 25.) Figure 23 illustrates the potential for increased communication with other road-users and members of the community when on a bicycle instead of enclosed in a car.



Figure 23 Interaction between a cyclist and other road-users

Box 25

"I've met people cycling and even if I don't know them if you're on a bicycle you wave hi and you might stop and have a chat ... You don't wave to people that pass you in a car."

Male, 50s, regular recreational cyclist

"When people are in their cars they just zoom past. No waves or anything. Ja, it's just much nicer to have that sort of head over the fence kind of thing which you would have if people were riding ... You can live next door to someone without ever seeing them. I still don't know what [my next door neighbour] looks like."

Female, 30s, regular recreational cyclist

"We've got the problem here which ... is we've got blacks who a lot of them haven't got anything to do except loll around so you instinctively suspect that they could be up to no good and a lot of people don't ride and I think that's got to be one of the reasons. And maybe that would be a good thing too because you just get a little bit more contact with them, even if it's only to say sawubona ... It's still a tiny step in progress so I think it would be a hell of a good thing socially ... Better than driving through a puddle and splashing the guy standing on the pavement."

Male, 60s, regular recreational and utility cyclist

"One of the things about a car is that you don't interact with your environment on your way ... I think if there were lots of people cycling around ... it would be much more social. You would meet people that you wouldn't normally meet. And the more people there were then the safer it would be. There would be more people around that weren't closed in a car that thought 'Oh well that looked funny' but didn't hear anything or see anything."

Female, 40s, occasional recreational cyclist

4.5 Life stage

Life stage and lifestyle had an influence on attitudes to cycling and how likely the respondents were to cycle. Those with pre-school children stated that it would be difficult and inconvenient to do utility cycling, even though some had bought child seats for their bicycles and planned to ride with the children on their bikes. Cycling was seen as something that could be done as a family activity when children were old enough to ride competently themselves. Participants who were working full-time considered utility cycling to be difficult during the week because of time pressure. They tended to do shopping, for example, on the way home from work. They also often got home in the dark, particularly during winter. Time issues were not so pressing for people who were semi-retired, retired, worked half day or did not have jobs. Cycling – predominantly but not only for recreation and fitness – had been considered or undertaken by the majority of “empty nesters” with grown-up children.

The competitive recreational cyclists were not found to be significantly more likely to take up utility cycling than the rest of the respondents.

4.6 Contradictions

Although the responses of the participants in the study were recorded as accurately as possible, it must be noted that some of the information given may not have been completely accurate. For example, some of the responses from participants were contradictory. In one case, a respondent mentioned on the phone before the focus group interview that she would not let girls ride on their own “because of the rape number” which would be less of a problem with boys, but when asked during the group whether cycling was different for sons and daughters, she answered that it was not. It may have been that in some cases the respondents were reluctant to state what they thought would be an unpopular or “unacceptable” answer during the groups, but felt freer to state it in private to the researcher.

CHAPTER 5

DISCUSSION

This chapter begins with the suggestion that the potential to encourage an increase in utility cycling in Hilton does exist. Steps to turn that potential into action are proposed. Types of potential utility cyclists, graded from strong potential to weak potential, are identified from among the study respondents, and implications of the study in the wider South African context are discussed.

5.1 The potential for increasing utility cycling in Hilton

The results of this study indicate that there is the potential to encourage an increase in utility cycling in and around Hilton, both by adults and by children. Although cycling will not replace all car trips in the short and medium term, there is the potential for certain kinds of trips – for example, to the gym, to the shops for small purchases, to the library and in the case of children, to school – to be made by bicycle instead of by car. There are a number of reasons for reaching this conclusion:

- General attitudes to utility cycling are positive. It is perceived as a healthy, stress-relieving, community-friendly, environmentally-friendly, family-friendly, cost-saving activity. This reflects the findings of Davies *et al* (1997) that general attitudes to cycling were positive: it was thought of as healthy, a way to relieve stress, and a good family activity.
- The predominant image of cyclists in Hilton is that they are trendy, fit, healthy and wealthy. They can therefore be considered a group that many people would aspire towards. This image extends across both recreational and utility cyclists, provided that they are considered to be of the same socio-economic sphere as the respondents themselves. Although the bicycle is viewed as less safe and less convenient than the car, it does not suffer from a perception of inferiority of status or sexual potency, as was found to be the case with Davies *et al's* (1997) study. In contrast, cycling was viewed as a status-enhancing activity. This seemed to be because cycling was not seen as an alternative but an additional means of transport to driving. It was not seen to imply that the

cyclist could not afford a car, but rather that the cyclist's vehicle – quite possibly an expensive and high-status 4x4 – was parked at home.

- Geographically, Hilton is conducive to cycling. Climate and hills are not widely regarded to be prohibitive factors.
- There is a high level of bicycle ownership in Hilton.
- Riding a bicycle is part of the culture of Hilton residents, even though it becomes secondary to driving a car in adulthood.
- There is a sense that children have less freedom and independence than used to be the case, because they tend not to ride bicycles by themselves around the village and to school. This is considered a regrettable change in lifestyle.
- Hilton is seen to be changing more than residents would like; the “villagey” feel is threatened by development and increasing traffic. An increase in utility cycling is seen as a potential antidote to these changes.
- Utility cycling within and around Hilton is not seen as confronting or replacing the car, which is regarded as an integral part of the lives of residents.

5.2 Turning potential into action

Just because the potential for an increase in utility cycling exists does not mean that it will materialise, however. This is because of the direct and indirect deterrents that emerged during the study. The relative importance of these deterrents will now be discussed, as well as the accuracy of the residents' perceptions. Davies *et al* (1997) found that people's attitudes to cycling often involved rationalisations and misperceptions which needed to be recognised and distinguished from more objective reasons for not cycling in order to help design appropriate measures to encourage cycling. This was also found to be the case with the Hilton study. While some of the perceptions of utility cycling held by the respondents were probably quite accurate, some also could be considered inaccurate or excessive.

5.2.1 Direct deterrents

The main direct deterrents to utility cycling that emerged during the Hilton study were time, traffic, stranger danger, hills, weather and perceived difficulty of carrying goods on a bicycle. Of these, traffic and stranger danger can be considered the most serious.

5.2.1.1 Traffic

Perceptions about traffic and stranger danger, the deterrents to utility cycling most frequently cited, were the most serious direct deterrents to cycling in Hilton and not easy to draw conclusions about. Even if the actual risk of accident or attack is very small, many people will simply not be prepared to take it, particularly if it involves their children, and it is clearly not the researcher's right to decide whether they are "right" or "wrong" in this case. Certainly, the perception of danger from traffic is strong enough to warrant being taken seriously in any attempt to increase utility cycling in Hilton.

Even so, in the case of traffic, accident information from the KwaZulu-Natal Department of Transport shows that between 1 January 1999 and 1 December 2001, there were five reported accidents involving at least one bicycle in Hilton. In those, no cyclists were killed or seriously injured. Three were slightly injured. (1999 statistics refer only to accidents that occurred on national, provincial and district roads; it was only from 2000 that the Department of Transport began capturing accidents that occurred on local authority roads as well. Accidents that might have occurred on district roads in Hilton were therefore not available for 1999.) In the same time period, there were 349 reported accidents involving vehicles in the area (Steve de Swart, KwaZulu-Natal Department of Transport, Transportation Engineering Sub-directorate, personal communication).

Because it is not known what percentage of trips in Hilton are taken by bicycle, it is not possible to calculate the risk of cycling as opposed to driving. However, three slight reported injuries to cyclists in nearly three years would suggest that the danger from traffic is not extreme. This suggestion is reinforced by comments from two regular utility cyclists (one a participant in the focus groups, the other not; Box 26). It

seems that with practice, fears of the danger from traffic to utility cyclists riding within Hilton tend to diminish.

Box 26

It's certainly much easier than people think ... From here to the shops there is no dangerous traffic. Cars aren't going fast. On that Hilton College road I don't like the traffic but on this road [Hilton Avenue] it's absolutely fine ... I don't feel unsafe at all ... I wouldn't want to go to Cowan House and I can see why people worry going to Hilton College but within Hilton it's fine ... And you never see a taxi going through Hilton. There's one bus, one Putco bus, that I don't like that occasionally rattles past. Taxis stop at the bus stop ... They haven't had time to build up speed ... People do worry about traffic and all that and I think that's fine for children, I think that that's a reasonable worry, but I don't think it's a reason for adults not to ride around just in Hilton during the day, especially over a weekend."

Female, 30s, regular utility cyclist

"I don't feel unsafe. Maybe it's irrational but I don't think that cars are going to ram into cyclists ... Maybe people who don't ride well are a bit scared that they're going to wobble into the traffic but I don't feel like that."

Male, 60s, regular recreational and utility cyclist

5.2.1.2 Stranger danger

The perception of being exposed to danger from strangers was another strong direct deterrent to cycling. This applied to adults and to their children. The study showed that parents in Hilton as in much of the world have an increasing tendency to restrict their children's independent movement because of a growing anxiety. "Increasingly, the outside world is seen as a place where children are likely to be injured by a motor vehicle or harmed by a bully or stranger" (Hillman, 1999, 2). There were four cases of robbery of bicycles from cyclists reported to the Hilton Police between January 2000 and January 2002. Three were not actually within the municipal boundaries of Hilton but in the surrounding area. The one that was actually in Hilton involved a child having his bicycle stolen near the Old Shopping Centre. (Inspector Louise Lancaster, Hilton Police Station, personal communication) This would suggest that there is reason for cyclists to worry about danger from strangers, although the worry might be excessive, given that only one cyclist, who was a child on his own, has had a bicycle stolen within Hilton in the last two years. However, whether the anxiety accurately reflects the situation or not, given the perceived and actual high levels of violent

crime in South Africa, this perception must be taken seriously. It would be difficult for one small area to deal with the effects of a nationwide issue. Even if Hilton were somehow able to reduce “stranger danger” within its own boundaries, residents would still be exposed to media coverage of crime and violence from around the country and this would probably affect their perceptions of the safety of cycling within Hilton. There is a perception that there is safety in numbers, so successful attempts to encourage utility cycling might at the same time reduce the fear of stranger danger.

5.2.1.3 Time

Time was perceived by some of the respondents to be a deterrent to utility cycling in Hilton. A car trip was considered on the whole to be much quicker, except by the regular utility cyclists. This attitude echoes Davies *et al*'s finding that “frequent cyclists thought that cycling was a fast means of travel whilst infrequent and non-cyclists thought that it required time and preparation” (1997, 6).

In order to test out this perception, the researcher undertook a mini-experiment to see how much time a Sunday morning shop consisting of a loaf of bread, a newspaper, a litre of Coke and some fruit took on a bicycle compared with by car. At the same time and from the same house, the researcher and one of the respondents “made the decision” to go to the shops and then timed how long it took both of them to get ready, get to the shops, make the purchases and get home. The distance between the house and the shops was one kilometre, of which about half was uphill/downhill. Given the size and topography of Hilton, this could be considered an average trip to the shops.

The researcher, as the cyclist, changed into cycling-friendly clothes and shoes and wore a cycling helmet. The driver changed into “smarter” clothes which included different shoes and jeans. The cyclist got out of the driveway more quickly because it was not necessary to open and close the gate more than enough to get the bicycle out. The car overtook the bicycle about halfway to the shops but they arrived in front of the shops at the same time because the bicycle did not have to go around to the “one way” entrance to the shops. Once the shopping had been bought, the time it took to chain and unchain the bicycle was negated by the time it took to load the shopping

bag into the car. On the return trip the cyclist took off faster than the driver, who had to reverse out of the parking place. The driver overtook the cyclist once again about halfway home and reached the driveway before the cyclist. The cyclist overtook the driver as the driver was opening the gate to get the car in. The trip from “making the decision” to parking the car/ bicycle back at home took 25 minutes.

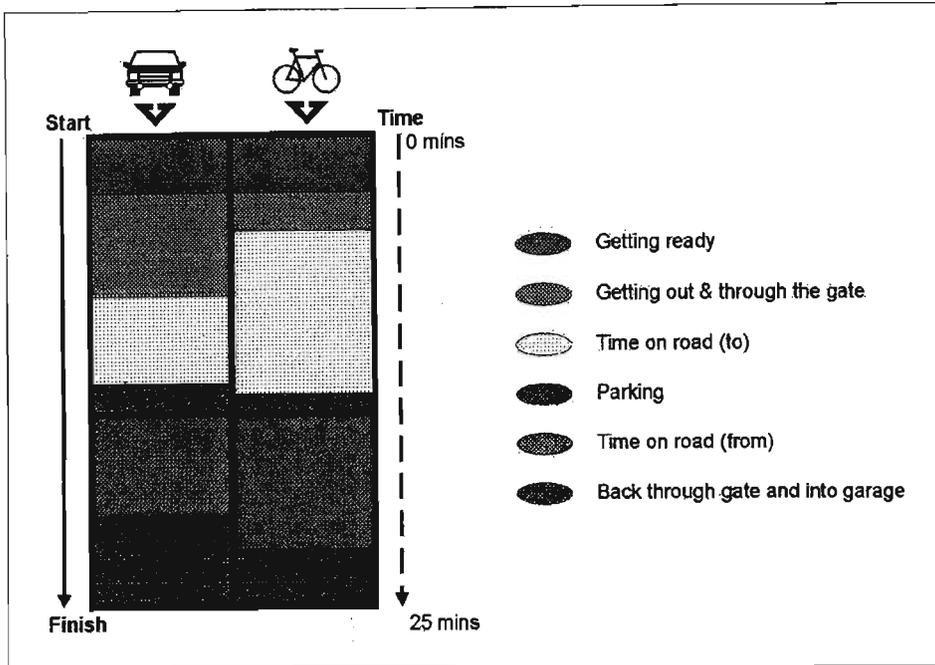


Figure 24 Graphic representation of the proportion of time spent by the cyclist and the car driver on components of the total trip to the shops.

This mini-experiment cannot be regarded as conclusive for a number of reasons. It was a once-off experiment so different results would probably have been achieved under different weather and traffic conditions. The participants were aware that they were taking part in an experiment which might have biased their behaviour and the speed at which they travelled. Some properties have electric gates which might be quicker to get through in a car. Some drivers might not close the gate or might have someone to do it for them. The cyclist was an experienced utility cyclist whose bicycle and cycling gear were relatively easily available. If the driver and cyclist had gone to the Quarry Shopping Centre rather than the Old Shopping Centre which was nearer, the driver's superior speed on the road would have had a greater effect. However, it is still interesting to note how little difference there was in the times taken

by car and by bicycle. The perception that it is much quicker to drive to the shops for small purchases can therefore be considered inaccurate in many cases. However, the perception still exists, and would have to be confronted in efforts to encourage utility cycling. It may be that greater success would initially be achieved among people who had less time pressure than those that considered themselves to be time-stressed.

5.2.1.4 Carrying

The worry about not being able to carry goods home is not something that would pose an insurmountable obstacle to all utility cycling. For trips in which a lot of shopping is done, or big items bought - for example, pockets of potatoes or packets of dog food - utility cycling can be considered impractical, but for many of the trips that are undertaken by car to the shops for a few small items, it would not be difficult to carry the goods back in a small backpack or on a bike carrier. The perception that bicycle baskets are unavailable is incorrect, although they are not available at all bicycle shops. One of three bicycle shops in Pietermaritzburg phoned by the researcher did stock them. One did not and one said they were currently unavailable. It is possible, however, that attaching a basket to a bicycle would negate the trendy image which is associated with cycling. As one of the study respondents said, "*Baskets aren't cool.*" This potential concern could be overcome by the use of small backpacks instead. Figure 25 shows a cyclist with a small backpack being used to carry purchases.

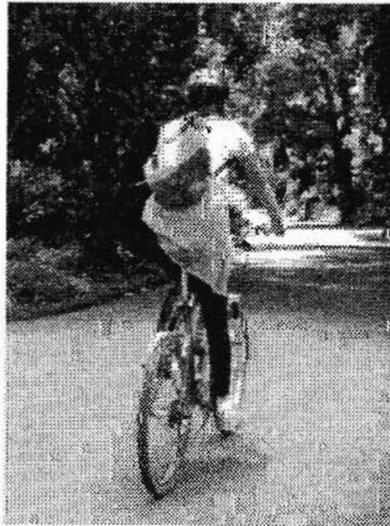


Figure 25 A utility cyclist with a small backpack for carrying goods

5.2.1.5 Hills, weather, dogs

Hills, weather and dogs were mentioned as deterrents by some of the respondents but were not given a lot of attention. This was probably an accurate reflection of their importance. There are hills in Hilton, but the area is not prohibitively hilly. For example, on Groenekloof Road which is one of the longest and steepest hills a cyclist would encounter within Hilton, the uphill sections are approximately 400 metres and 700 metres each. On a return trip, each section would only have to be traversed uphill once. And, as one of the competitive recreational cyclists remarked, "*The fitter you get, the less hills there are.*"

Hilton does often have mist and rain during spring and summer, but much of the year this is not evident, and there are relatively few days during which it is so wet and misty that cycling becomes impractical. Also, as one of the male occasional recreational cyclists pointed out, inclement weather does not necessarily prohibit cycling: "*The Netherlands is the worst for weather and yet when it looks like this [a drizzly evening] there they go, fancy clothes. Wet weather doesn't bother them. They ride their bikes.*"

Dogs were mentioned as a possible deterrent and some of the respondents had occasionally come across a dog while cycling, but most dogs in Hilton are behind walls and gates so they do not form a serious deterrent to utility cycling.

5.2.2 Indirect deterrents: car culture and inertia

Even if the serious direct deterrents to cycling did not exist, or had been satisfactorily addressed, this would probably not automatically lead to widespread transport behaviour change. The indirect deterrents to utility cycling could be more powerful than the direct deterrents. Davies *et al* (1997) found that most studies that seek to promote cycling pre-suppose a suppressed demand for cycling and therefore concentrate on removing "negatives" like risk, but they don't address the socio-psychological process of behaviour change. A change to utility cycling from travelling by car is a significant behaviour change for most Hilton residents, so any initiative aimed at increasing utility cycling in Hilton would have to focus on helping

people to change an ingrained habit. Life without a car had seldom, if ever, been contemplated by most of the respondents. The car was the first – and in most cases, the only – mode of transport considered for trips in and around Hilton. Car driving was such an ingrained habit that it was not even recognised by most respondents as a choice that was being made between driving and other means of transport such as walking or cycling. In contrast, choosing to cycle would initially involve a lot of thought and preparation for most of the respondents.

However, even when people have decided that there is good reason to cycle instead of drive, inertia can still prevent them from acting on their decision. Overcoming this inertia would be one of the major thrusts of any campaign to encourage utility cycling.

5.3 Suggestions for a campaign to encourage utility cycling in Hilton

A three-pronged approach is suggested for a campaign to encourage utility cycling in Hilton. Although it would be best if all three elements of the proposed campaign were implemented at the same time, this does not mean that any one of them should not be implemented on its own. The elements to be focused on would be:

- Physical infrastructure
- Safe routes to school
- Behaviour

5.3.1 Physical infrastructure

According to Davies *et al* (1997) widespread change of car-driving habits probably requires more than a concentration on changing driver behaviour. Given that driving a car was perceived by most respondents in the Hilton study to be “convenient”, “quick” and “practical” - values held dear in the modern world - and utility cycling to be “inconvenient” and “time-consuming”, it is easy to see why car driving was considered by all the respondents to be “common” and utility cycling “uncommon”. Richard Smithers, transport planner for the City of Yarra, Australia, (personal communication, Sept 17, 2001) said that the greatest levels of utility cycling occur in

places where cycling stacks up well as a competitive mode of transport against other choices. That means that for any given trip, the alternatives have to be seen as worse and cycling better. A high level of cycling is unlikely to be seen if the motor vehicle network offers a high level of service, land uses are a long way apart and there is not much of a network of bicycle lanes or paths. Within Hilton, land uses are not too far apart, but the network of wide, reasonably straight roads is geared completely toward cars and there are no bicycles lanes or paths. Although there are pavements along some sections of roads, these are used by pedestrians. As a competitive mode of transport, Hilton's infrastructure gives cars a definite head start. Separate cycle paths, as distinct from dedicated lanes on roads, were considered important by most of the respondents, particularly because they would remove the perceived danger from traffic, and it does seem likely that this would increase utility cycling in Hilton to an extent. Cycle paths would probably only have to be along the main roads (Hilton Avenue and the 103) where traffic levels are highest.

Mathew (1995) writes that in attempts to encourage utility cycling, cycle routes and networks are important but must be accompanied by priority for cycling supported by traffic calming, parking controls, allocation of road space to cycling and significantly increased investment in cycling. This does seem to be important in the case of Hilton. Traffic calming measures would create the impression that the roads belong not just to cars but to cyclists and pedestrians too. Cyclists should have priority parking and racks right next to the entrances to the main shops. This would serve not only as a convenience and a reminder but as a legitimisation of cycling as a transport option.

5.3.2 Safe routes to school

The ferrying of children to and from school in cars is both the result and the cause of increased traffic within Hilton. Because parents feel that there is too much traffic for it to be safe to allow their children to ride, they drive them to school, thereby adding to the problem of traffic. Although it is assumed that many children are ferried to school by parents on their way to work, meaning that a separate car trip is not being undertaken, it is also assumed (and supported by respondents of the study) that many trips are undertaken specifically to fetch and carry children. An increase in the number of children riding themselves to and from school would therefore decrease the

incidence of traffic in Hilton. It could also be considered to be good for the children themselves, from the point of view of exercise, independence and familiarity with their geographical surroundings. Parents would be freed from a portion of their "chauffeur" duties. However, it is particularly important that the issue of safety from traffic and strangers is effectively dealt with in the case of child cyclists.

It is not within the scope of this study to go into depth about how to implement safe routes to school programmes within Hilton. This is suggested as an area of further study.

5.3.3 Behaviour

Although improvements in the physical infrastructure for bicycles would be an important part of a strategy to encourage utility cycling, on their own they are unlikely to effect widespread changes, mainly because of the indirect deterrents discussed. A focus would be needed on breaking the car-driving habit of most Hilton residents and helping them overcome the inertia which might be holding them back from cycling.

The results of the Hilton study would suggest that a campaign to increase utility cycling should focus on the following benefits of cycling:

- Health and fitness;
- Benefits to the community of Hilton;
- Cycling as a fun, family activity;
- Low cost of cycling; and
- Environmental benefits of cycling.

Of these benefits, health and fitness should be stressed the most. In contrast to Davies *et al's* (1997) finding that avoiding stress and congestion had become more important reasons for cycling than getting physical exercise and saving money, health and fitness were the main reasons given by respondents of the Hilton study for wanting to cycle more. This may have been because levels of traffic congestion are generally higher in the UK than in Hilton. There was a sense that lifestyles are too sedentary;

most respondents would have liked to be fitter. Utility cycling should be stressed as a way to get fit while doing something else – going to the shops, for example. The health and fitness aspect of utility cycling could be used in the case of children as well. Although freedom of mobility and independence were the main reasons given by respondents of this study for wishing that their children could ride more on their own, the lack of exercise taken by children is becoming a concern in some countries and a reason for parents to want their children to ride more (Smithers, personal communication). It could be that this becomes an increasing concern in South Africa.

Although the healthy and trendy image of cycling that was found in the study should be capitalised upon, it would have to be carefully presented in order not to intimidate or exclude people. There was a perception among some of the respondents that recreational cyclists form part of a “clique” and that certain “keys” to membership apply. These keys include being fit (already), wearing special cycling kit and wearing helmets. A campaign to encourage utility cycling should be strongly inclusive of all residents. Davies *et al* also found that sporting images of cyclists and cycling often discouraged people from cycling because they suggested that cycling is particularly energetic and involves unusual and complex equipment. For a campaign to have widespread success in Hilton efforts should be made to ensure that it is seen as an activity accessible to and acceptable for people of any age, any level of fitness and wearing any type of clothes.

The idea that Hilton is a “village” is important to residents, but they are aware that the “village feel” is under threat from development and growth. The idea that by cycling they could be doing something against the forces which are changing their area could motivate some people to take up utility cycling. It would give residents a sense that they were doing something for Hilton to help it remain a special place.

Utility cycling over weekends could be undertaken by families to combine chores and fun. The idea of riding with children to the shops was mentioned by several of the male respondents during the study; cycling was seen as a good way of spending time with children whom they did not all see a lot of during the week if they were working long hours.

Although they would be positively received, the cost and environmental benefits of cycling should not form the main thrust of a campaign to encourage utility cycling. Although driving a car was considered to be expensive by most participants, only the one respondent had actually changed his behaviour as a result. Also, driving around Hilton itself was regarded as a small additional cost to the total cost of maintaining a car. From an environmental point of view, the perception that traffic is increasing in Hilton and that this is a bad thing has not led any of the respondents to use their cars less. Neither has awareness of environmental degradation led to any behavioural changes more significant than recycling household waste, and that was done by a minority of respondents. Even the most environmentally-literate of the respondents did not report making significant changes to their lifestyles for environmental reasons.

5.4 From attitude to behaviour

Stressing the benefits of cycling would form an important part of a campaign to encourage utility cycling, but would be unlikely on its own to effect significant change. A positive attitude towards cycling – enough to make respondents go out and buy bicycles – did not translate into regular riding for many of the participants (although this does not apply to most of the male recreational riders). According to Davies *et al* (1997), behaviour change is a staged process and assisting it is most effective if based on an understanding of the balance of forces for and against change and the position of an individual contemplating change. Understanding the factors that might be holding people back from cycling, even once they had decided it was a good idea, would be an important part of a strategy to encourage utility cycling. These factors might include not wanting to ride alone, not knowing where to leave the bicycle at the shops, being frightened to take the first step, feeling unfit, being an unconfident cyclist. Often the first steps are the hardest, so people who wanted to cycle should be helped to get over these initial hurdles.

Davies *et al* found that although the image of cycling was becoming more “normal”, there was still a lack of images of cyclists as ordinary people undertaking routine journeys. The same lack of images of utility cyclists from within the socio-economic group of the respondents was found in the Hilton study. In order to overcome this, a

core group of committed utility cyclists should organise to ride regularly to places that are highly visible to residents. The group or groups should take care to appear like average residents – they should not dress or ride as if they were serious cyclists.

The core group should agree to undertake this activity on an ongoing basis, so that by the time other potential cyclists had overcome the initial difficulty of beginning a new behaviour, they did not feel stranded or alone because the others had stopped. On a certain day, either every week or every month – possibly a Saturday or Sunday – well-publicised “ride to the shops” days should be organised. These should be supported by the core group to make sure that they were not seen to be failures or unsupported. Emphasis should be placed on the inclusivity of the activity, and there should not be any confrontation with cars or with pedestrians. Regular recreational rides around Hilton should be organised in order to get people to take the first step of riding. These should be completely non-competitive. The idea is to get people used to riding around Hilton so that it becomes familiar and easier with practice.

5.5 Potential utility cyclists

Degrees of potential utility cyclists can be identified from the respondents of the Hilton study. These would range from “strong potential” to “weak potential”. Strong potential cyclists would tend to fit into the “innovators”, “early adopters” and “early majority” categories mentioned by Davies *et al* (1997). Weak potential cyclists would be more likely to fit into the “late majority” and/ or “laggards” categories. Strategies should be aimed firstly at the strong potential cyclists.

Strong potential utility cyclists would fall into some of the following categories:

- Have tried or considered utility cycling.
- Recognise a need or at least a reason for a change to the car-centred transport status quo in Hilton, or to their own transport behaviour.
- Believe that individual behaviour makes a difference.
- Have a positive image of cycling and cyclists.
- Be prepared to behave in ways that are not yet considered the social norm.
- Have or perceive themselves to have time to cycle.

Weak potential utility cyclists would fall into some of the following categories:

- Have never tried or considered utility cycling.
- Do not perceive a need or reason for a change in car-centred transport patterns in Hilton or their own transport behaviour.
- Believe that individual behaviour is irrelevant to larger issues.
- Have a negative image of cyclists and/or cycling.
- Be unwilling to try something until it becomes the social norm.
- Do not have or perceive themselves not to have time to cycle.

These categories are not mutually incompatible or complete. There may, for example, be people who perceive a need for change but do not like cycling, or who are prepared to behave in ways that are not the social norm, but consider cycling too much of an effort. Also, knowledge and attitudes do not necessarily translate into behaviour. Someone could fit into all of the strong potential utility cyclist categories and yet still not reduce his or her car trips or increase his or her trips by bicycle. However, carefully targetted campaigns and interventions aimed at increasing utility cycling could be considered more likely to succeed among strong potential than weak potential utility cyclists.

The following examples of respondents are ranked from the strongest potential utility cyclist (1) to the weakest potential utility cyclist (5).

Box 27

1. Male, 50s, works in Hilton, regular recreational cyclist. Has tried utility cycling.

Comparisons showed he considered cycling to be enjoyable, healthy, environmentally-friendly, sociable, although on the negative side it was also rated as difficult, impractical, inconvenient, slow.

Car driving was rated as unhealthy, environmentally-unfriendly, community-unfriendly, dangerous, stressful, aggressive, unsociable.

"My place of work is in Hilton and first prize for me would be to ride to work because then you'd combine a bit of exercise with saving a bit of petrol. But I've done it a couple of times but it's just a nightmare."

"So there are ways if one looks at sustainability and reduction of consumption there's a lot that we as individuals can contribute."

Box 28

2. Male, 60s, occasional recreational and utility cyclist. Used to be regular utility cyclist.

Comparisons showed that he felt utility cycling to be cheap, healthy, community and environmentally-friendly and stress-relieving, although also not enjoyable, dangerous and impractical.

He found car-driving to be quite dangerous, environmentally-unfriendly, stressful, aggressive as well as associated with personal image and stylish.

"I've lived in a village where we didn't have to use a car ... (Down there) I used my bike a lot simply for speed. If you get in your car in the garage and then you're reversing out and you go around the block to the grocery shop or something like that it's quicker on the bike. The bike was just hanging there in the back of the kitchen and off you go so convenience had a lot to do with it. Much much quicker."

"I plead for a simple lifestyle. I wish I would grab the ... I don't have the guts to do it myself ... I would be seen to be such a crank. But I know that it can be done."

"I don't for a minute suggest that you would return to a spartan sort of lifestyle because if you took it to its nth degree you could be seen to be eccentric ... but sustainability to the extent that you reduce the unnecessary in favour of the absolute essential ... I reckon you could cut out a lot of profligate waste ... What is necessary for my household? Do you really need two cars? Let's bring the bike into use. Let's walk where we can."

Box 29

3. Female, 30s, non-cyclist. Husband occasionally does utility cycling.

Comparisons showed she regarded utility cycling as quite easy, cheap, healthy, community-friendly, enjoyable, environmentally-friendly but quite impractical. Car driving was regarded as expensive, unhealthy, quite community-unfriendly, quite environmentally-unfriendly, quite enjoyable.

"I would like to cycle. But also, I don't have the time. But I think when the kids are older ... a Sunday morning cycle would be quite nice. Get the bread and milk and rolls and that kind of thing. I don't think I would do it on a daily basis."

"I think it's all the good intentions but I just see all the horrors that lurk there."

"(If my girls were older) ... they wouldn't want to ride. I think they'd think it was infra dig. They'd think it was unstylish."

"I'm not an avid greenie but I try to do the right thing."

Box 30

4. Male, 50s, currently a non-cyclist, although has ridden recreationally before. Has not done utility cycling since schooldays.

Comparisons showed that he felt that utility cycling was difficult, not particularly enjoyable, impractical, time-consuming, inconvenient, not particularly sociable, not particularly stress-relieving, not particularly cheap, not particularly community-friendly.

Driving a car was rated as easy, not particularly expensive, not particularly unhealthy, enjoyable, not particularly environmentally-unfriendly, practical, fast, convenient, quite stress-relieving.

"I really wouldn't do it [utility cycling]. I seldom make it to the shops anyway because usually [tape unclear] ... it's not a pleasurable ride."

"Unless the huge things are addressed then it's really a [tape unclear] ... as individuals I mean unless the huge vehicles are stopped I don't think what we do around Hilton makes much difference. Make the bigger decisions first."

"I think you need a huge disincentive to use cars ... You'd have to physically block cars from that area ... because frankly there's just no contest."

5. Female, 50s, non-cyclist. Has not ridden for utility purposes since schooldays.

Comparisons showed that she felt utility cycling would be difficult, not particularly healthy, not particularly enjoyable, impractical, inconvenient, slow, stressful, time-consuming. There were no negatives (except for cost) associated with driving a car, which she felt was quite healthy, neither environmentally-friendly or unfriendly, not aggressive, not community-unfriendly, fast, convenient and practical.

"I've got a million other things I actually would rather do."

"I'd just think what a waste of time."

"I have no desire to slow down."

"My car is one of my best friends because it does so much for me and it enables me to do so much that I want to do and also so much for others."

"But then do we not need to look at emissions from like the brick factory?"

5.6 Suggestions for further study

There are several areas related to this study that warrant further research. These include research to determine whether the findings of this study can be generalised to the whole of Hilton and research on attitudes to utility cycling of a broader section of the Hilton population, including children, teenagers and people who live or work in Hilton, although they are not home-owners.

Although it is hoped that the results of the Hilton study will form a useful part of cycling literature in South Africa, they cannot simply be transferred to other areas and assumed to be relevant. South Africa is a country with widely divergent cultures, belief systems, needs and habits, all of which could affect people's attitudes towards utility cycling. These need to be investigated and understood before strategies to encourage utility cycling are developed and implemented.

Further research into safe cycling routes to schools, in Hilton and in other areas, could also be undertaken.

5.7 The big picture

The successful encouragement of an increase in utility cycling would result in environmental and social benefits for Hilton itself but through example could also have wider positive spin-offs in the rest of the country. A South African area in which the transport "haves" begin to wean themselves off excessive use of private cars would fit in with Whitelegg's belief that a strategy to reduce overall car ownership and distances travelled by cars must at the same time attempt to reduce consumption and deal with the deficit experienced by disadvantaged groups. "Disparities ... fuel the desire and determination which lead to car ownership ... (T)he removal of global and local inequalities is one of the few ways to stem the process of trading up to whatever level of consumption is characteristic of the developed world" (Whitelegg, 1993, 6).

Cycling is not just a way of reducing potential and current car travel, though. It is also an effective means of getting around which could improve the transport concerns of millions of South Africans who do not currently and are unlikely in the future to have the luxury of choosing whether or not to drive a car.

With one foot in the developed and the developing world, South Africa has the choice to learn from the transport mistakes, such as over-reliance on the private car and under-reliance on non-motorised forms of transport, that have been made in much of the rest of the world. Individually, in our communities and politically, South Africans have shown themselves capable of choosing new and better ways of doing things. We can still choose to by-pass the route to excessive reliance on car-centred transport and encourage instead means of transport that are gentler and less destructive on people and the planet.

References

- Davies, D.G., Halliday, M.E., Mayes, M. and Pocock, R.L. (1997) *Attitudes to cycling: a qualitative study and conceptual framework*. Transport Research Laboratory, Berkshire.
- De Saint-Laurent, B. (1998) Overview of Urban Transport in South Africa. Paper presented at the 8th CODATU Conference. Cape Town, September 1998.
- Devas, N. and Rakodi, C. (1993) Planning and Managing Urban Development. In: Devas, N. and Rakodi, C. (eds) *Managing Fast Growing Cities. New Approaches to urban planning and management in the developing world*. New York, Longman Scientific and Technical.
- De Waal, L. (2001) A Case for Improved Bicycle Facilities. Paper presented at SA Transport Conference. Pretoria, July 2001.
- De Waal, L. (2000) The Bicycle in Southern Africa. Paper presented at *Velo Mondial*. Amsterdam, June 2000.
- De Waal, L. (1996) Bicycle Facility Planning in South Africa. Paper presented at *Velo Australis*. Perth, 1996.
- Eisenberg, E. (1998) *The Ecology of Eden: humans, nature and human nature*. London, Picador.
- Freund, P. and Martin, G. (1993) *The Ecology of the Automobile*. Montreal, Black Rose Books.
- Globe. (2001) *Climate Change*. Globe, February.
- Hillman, M. (1999) The Impact of Transport Policy on Children's Development. Paper presented at *Canterbury Safe Routes to Schools Project* seminar. Canterbury Christ Church University College, May 1999.
- Illich, I. (1974) *Energy and Equity*. London, Calder and Boyars.
- Kluger, J. and Lemonick, M.D. (2001) A Climate of Despair. *TIME*, April 23 2001, 48 – 49.
- Lemonick, M.D. (2000) How to Prevent a Meltdown. *TIME*, Special Edition, April-May 2000, 61 – 63.
- Levinson, M. (1998) All Jammed Up. *The Economist*, September 5 1998, 3 - 18.
- Mathew, D. (1995) *More Bikes – Policy into Best Practice*. Cyclists' Touring Club, Godalming.

Mkandawire, T. and Soludo, C. (1999) *Our continent, our future. African perspectives on structural adjustment*. Africa World Press, Trenton.

Oettle, A. (1980) *A Planning Policy for the Provision of Cycling Systems. Case study: Sandton Municipal Area*. Unpublished dissertation, University of the Witwatersrand.

O'Meara Sheehan, M. (2001a) *City Limits: putting the brakes on sprawl*. Worldwatch paper 156, June 2001.

O'Meara Sheehan, M. (2001) Making Better Transportation Choices. In: Brown, L., Flavin, C. and French, H. (eds) *State of the World 2001*. WW Norton and Company, New York. Chapter 6.

O'Meara Sheehan, M. (1999) *Reinventing Cities for People and the Planet*. Worldwatch Paper 147, June 1999.

Patton, M.Q. (1990) *Qualitative Evaluation and Research Methods*. Newbury Park, SAGE Publications.

Ponting, C. (1991) *A Green History of the World*. London, Penguin Books.

Power, T.M. and Rauber, P. (1995) The Price of Everything. In: Pierce, C. and VanDeVeer, D. (eds) *People, Penguins and Plastic trees*. 2nd edition. Belmont, Wadsworth, 412- 419.

Ryan, P. (2000) Prioritising Cycle Route Development in Urban Areas. Paper presented at *Making Cycling Viable*. New Zealand Cycling Symposium 2000.

Schafer, R.B. and Tait, J.L. (1981) *A Guide for Understanding Attitudes and Attitude Change*. North Central Regional Extension Publication 138.

Schurink, W.J., Schurink, E.M. and Poggenpoel, M. (1998) Focus Group Interviewing and audio-visual methodology in qualitative research. In: De Vos, A.S. (ed) *Research at Grass Roots: a primer for the caring professions*. Pretoria, J.L. Van Schaik. Chapter 21.

South African Press Association. (2001) Motorists fume as Paris City Hall declares war on cars. *The Natal Witness*, 29 August 2001, 4.

Stewart, D.W. and Shamdasani, P.N. (1998) Focus Group Research: Exploration and Discovery. In: Bickman, L. and Rog, D.J. (eds) (1998) *Handbook of Applied Social Research Methods*. Thousand Oaks, SAGE Publications. Chapter 17.

Tembele, R. (2000) Productive and liveable cities. Guidelines for pedestrian and bicycle traffic in African cities. Paper presented at *Velo Mondial*. Amsterdam, June 2000.

Turner, J., Grieco, M. and Kwakye, E.A. (1995) Subverting sustainability? Infrastructural and cultural barriers to cycle use in Accra. Paper presented at 7th World Conference on Transport Research. Sydney, July 1995.

Whitelegg, J. (1995) The Pollution of Time. In: Wakeford, W. and Walters, M. (eds) *Science for the Earth: Can Science Make the Earth a Better Place?* Wiley, West Sussex. Chapter 6.

Whitelegg, J. (1993) *Transport for a Sustainable Future: the case for Europe*. London, Belhaven Press.

Zuckermann, W. (1993) *End of the Road: From world car crisis to sustainable transportation*. Post Mills, Chelsea Green Publishing Company.

Online references

Arnold, S. and Settle, D. (2001) Driving as Addiction: Hooked on Cars. In: *Carbusters*. Issue no. 7. <http://www.carbusters.ecn.cz/resource/index.htm>

Carbusters (2001) *Statistics*. <http://www.carbusters.ecn.cz/freesources/WCFDStats.htm>

Cubberley, D. (2001) *Enlarging the Circle*. Discussion paper on Greater Victoria Cycling Coalition website. <http://www.gvcc.bc.ca/commuting/enlargingthecircle.htm>

Department of Transport (2001) *Arrive Alive Campaign*. <http://www.transport.gov.za/projects/arrive/>

Department of Transport (2001a) *White Paper on Transport*. www.polity.org.za/govdocs/white_papers/transwhite/html

Department of Transport (2001b) *Shova Lula*. www.transport.gov.za/projects/shova_lula

Department of Transport (1998) *Moving South Africa: a transport strategy for 2020*. <http://www.transport.gov.za/projects/msa/msa.htm>

Energy Information Administration (2001) Transportation Energy Use. In: *International Energy Outlook 2001*. March 28, 2001. <http://www.eia.doe.gov/oiaf/ieo>

Environmental Protection Agency (2001) *Product Stewardship*. <http://www.epa.gov/epr/products/vindust.html>

Gruehl Kipke, B. (1991) *Bicycle Usage in Two Cities of Africa*. http://www.mobility-consultant.com/brm/afri/kipke/af_kip21.htm

Marland, G., Boden, T.A. and Andres R.J. (2001) *Global, regional, and national CO2 emissions. Trends: A Compendium of Data on Global Change*. Carbon Dioxide Information Analysis Center, Oak Ridge National Laboratory, U.S. Department of Energy. http://cdiac.esd.ornl.gov/trends/emis/tre_afr.htm

White, P. (no date) A Brief History of Cycling in South Africa. http://www.recycle.org/Afribike/SA_Rides_Again/sa_rides_again.html

World Health Organisation (no date) *Transport, Environment and Health*. <http://www.who.dk/healthy-cities/transpor.htm>

Appendix 1 Comparison sheet: utility cycling

Please indicate with a cross on the line where you think utility cycling falls in the spectrum between the following concepts:

Easy	_____	Difficult
Expensive	_____	Cheap
Healthy	_____	Unhealthy
Community-friendly	_____	Community-unfriendly
Socially acceptable	_____	Embarrassing
Dangerous	_____	Safe
Enjoyable	_____	Not enjoyable
Odd	_____	Normal
Environmentally-friendly	_____	Environmentally-unfriendly
Common	_____	Uncommon
Impractical	_____	Practical
Stylish	_____	Unstylish
Convenient	_____	Inconvenient
Fast	_____	Slow
Time-consuming	_____	Not time-consuming
Stressful	_____	Stress-relieving
Related to status	_____	Unrelated to status
Aggressive	_____	Non-aggressive
Sociable	_____	Unsociable
Associated with personal image	_____	Not associated with personal image

Appendix 2 Comparison sheet: driving a car

Please indicate with a cross on the line where you think driving a car falls in the spectrum between the following concepts:

Easy	_____	Difficult
Expensive	_____	Cheap
Healthy	_____	Unhealthy
Community-friendly	_____	Community-unfriendly
Socially acceptable	_____	Embarrassing
Dangerous	_____	Safe
Enjoyable	_____	Not enjoyable
Odd	_____	Normal
Environmentally-friendly	_____	Environmentally-unfriendly
Common	_____	Uncommon
Impractical	_____	Practical
Stylish	_____	Unstylish
Convenient	_____	Inconvenient
Fast	_____	Slow
Time-consuming	_____	Not time-consuming
Stressful	_____	Stress-relieving
Related to status	_____	Unrelated to status
Aggressive	_____	Non-aggressive
Sociable	_____	Unsociable
Associated with personal image	_____	Not associated with personal image