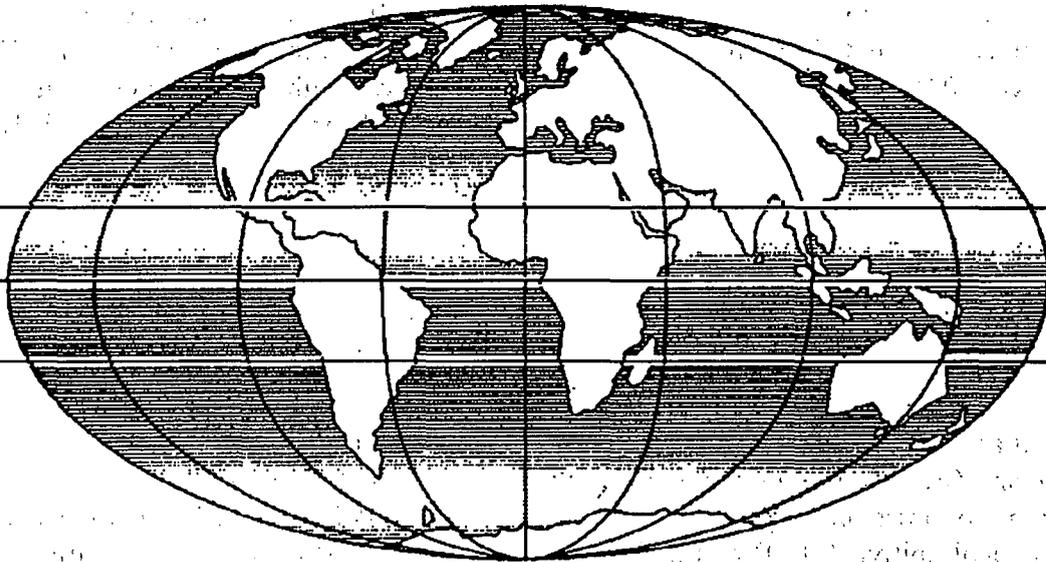




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**TITLE A tale of two cultures: ethnicity and cycling behaviour in urban Ghana**

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**A tale of two cultures:  
ethnicity and cycling behaviour in urban Ghana.**

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**Abstract**

*This paper reports the findings of a preliminary study of attitudes towards cycling in Accra, Ghana. Significant differences have been found to exist between cycling practice and attitudes towards cycling in two areas of the city which share low income characteristics but have a different ethnic social base. The paper explores three key propositions.*

- \* *Riding is commonplace in Nima, where it appears an everyday part of childhood and an accepted means of transport. In Jamestown, it is seen as dangerous and the behaviour of rebellious, deviant school age males.*
- \* *There is an established network of bicycle hiring traders which facilitate access to bicycles at a higher level than ownership figures suggest.*
- \* *Women riders and women hiring traders act as role models for other women of all ages to ride bicycles.*

*It then considers the policy consequences of these findings in the context of the promotion of non-motorised means of transport.*

- \* We would like to thank our colleagues at the Ministry of Transport and Communications, Accra, Ghana, for their expert contributions to this research. We also wish to thank our talented interviewing team from the Department of Sociology, University of Ghana, Legon, for their help in tuning us to local nuances. Memunatu Affah is also to be thanked for her skilled research assistance. Last but not least, we would like to thank Phil Fouracre, Overseas Centre, TRL, for sharpening our analysis through his penetrating questions and queries on how we were going to go about qualitative research in a way that would generate policy contributions.

## 1. THE LOCAL DETERMINANTS OF CYCLING BEHAVIOUR: CULTURAL VARIATIONS IN AN AFRICAN CITY.

Recently, attention has fallen upon the development of non-motorised transport options as an appropriate and sustainable strategy for the Third World (Howe and Dennis, 1993; Kipke, 1988; Replogle, 1988). Transport policy research has identified substantial differences in the extent to which different developing areas of the world have taken up the cycling option (Table 1). Dramatic differences between Asia and Africa have been identified. Furthermore, within Africa itself significant differences are to be found between Francophone West Africa and Anglophone West Africa (World Bank, Sub-Saharan African Transport Program, 1990). It is this established pattern of differences which formed the rationale for our research into attitudes towards and patterns of cycling in Ghana<sup>1</sup>.

**TABLE 1: REGIONAL CYCLE OWNERSHIP STATISTICS.**

Region <sup>2</sup>	% of inhabitants who own a bicycle
China	> 50
Asia	circa. 40
Latin America	16
Africa	3.5

A less remarked upon but equally distinctive difference between regions is to be found in Ghana itself (Howe and Barwell, 1987) where, in the 1980s, of the national stock of 200,000 cycles, 34.2% were to be found in the Northern region, 43.8% in the two upper regions and only 0.7% in greater Accra. In the three uppermost regions of Ghana, cycle ownership was around 53 per 1000 persons, some 65 times higher than Accra. Cycling in Ghana has been primarily a Northern practice. Recent figures indicate an expansion of this stock with imports of bicycles estimated at 67,000 for 1992, 225,000 for 1991 and 158,000 for 1990 (Howe and Dennis, 1993).

Currently, there is considerable policy activity, not least on the part of the World Bank, to diffuse cycling practice to the large urban centres of the South (Pankaj and Coulthart, 1993). There is some evidence of suppressed demand for bicycle use in Accra (Pankaj and Coulthart, 1993). It has been estimated that in certain low income areas 62% of households own a bicycle (Ministry of Transport and Communications, 1992), however, this figure does not hold true for all or most low income areas of Accra. Even where households own a cycle, conditions for cycling on the main thoroughfares are so poor that most cycling only takes place within local areas. Even casual observation indicates that cycle use is not evenly distributed amongst the low income districts of urban Accra. In this context, it was decided to investigate differences in attitudes towards cycling and cycling practice itself within urban Accra. Personal observation, contacts with local transport experts and information provided by interviewers engaged on other transport research projects all indicated that the level of cycle use by the residents of Nima was higher than was the case for other areas.

<sup>1</sup> This research forms part of a joint project conducted by TRL and the Ministry of Transport and Communications, Ghana with linkages to the World Bank's Sub Saharan Africa Transport Program.

<sup>2</sup> Source on China, Replogle, 1988; source on other regions, Kipke, 1988.

Nima, a low income densely populated urban district, has traditionally been and remains a major reception area for migrants from the North. As cycling is a more common practice in the North, this migration link provides a path for the transference of the northern culture of cycling into the urban south. Migrants are carriers of a **non-motorised transport culture**. Moving from this analysis, which was largely shaped by local expert knowledge, an investigation of cycling attitudes and practices in the low income area inhabited by Northerners (Hausa, Fra-Fra, Kusasi, Dagomba, Busanga, etc.) and in a low income area (Jamestown) inhabited by indigenous social groups (Ga) was conducted. Our preliminary evidence indicates that there are indeed variations in transport culture within the city, variations which correspond with patterns of migration linkage to areas of greater non-motorised transport use.

Understanding these differences in transport culture has important policy implications. Substantially different patterns of childhood socialisation were found with regard to cycling in Nima and in Jamestown. In Nima, adults encouraged male children to learn to cycle, although attitudes towards females cycling were more problematic; in Jamestown, both male and female children were strongly discouraged and frequently punished by their parents for cycling. These differences in patterns of socialisation have their consequences for subsequent use of the bicycle and thus for the viability of the bicycle as a mass means of non-motorised transport. A clear policy implication of such differences in transport cultures within a city is that where policy makers intend to install cycling infrastructure, the positioning of the initial parts of the network should be anchored on the existing areas of high usage. Locating facilities where the user population has poor access may very well lead to implementation failures.

The work reported here is the outcome of three pilot surveys and a conventional travel diary survey. The first survey on the household activity patterns of low income households was of fourteen households. The survey attempted to capture a number of types of household (nuclear, large extended male headed, female headed). As a consequence of the inclusion of large extended households, the survey contains information on a large number of persons (245), albeit of a preliminary form. Questions about the use of cycles and the ability to ride were included in the semi-structured interview format used for the household activity research. On the second survey which was explicitly concerned with cycling, sixteen individuals were interviewed, eight of which came from Nima, eight of which came from Jamestown. Of the eight from Nima, four were cyclists, four were not; similarly, with Jamestown. Within their interviews, these sixteen individuals made reference to the cycling/ non-cycling experiences of 216 other persons. The third survey was concerned with the transportation needs and experiences of women petty traders; included in this category of women traders were those women who sold their own services as human transport ('kayayo' - head load carriers who carry goods from the market to the bus stations or lorry parks). On this survey, there was no prompt on cycle ownership or opportunities for riding. None of these twelve economically active low income females made any mention of bicycle use or ownership. Although further ethnographic and survey work is planned on these issues, for the moment our evidential base is confined to these forty two interviews which span the personal travel experiences of 473 low income persons. Of these, 290 persons are Nima based, 116 are Jamestown based and the rest are based in other low income areas of Accra (Russia and Madina).

This paper is divided into five sections. In the introduction, the concept of transport culture and its significance for policy decision making has been discussed. The second section explores the different socialisation processes in respect of cycling in Nima and Jamestown. The third section examines the importance of hiring arrangements as opposed to ownership rates in the transmission of cycling skills and identifies the obstacles such hiring arrangements pose for the use of cycles for economic or occupational purposes. The fourth section examines the opportunities and constraints surrounding women cycling in a Third World location. The final section and conclusion provides some concrete policy implications of this analysis.

## 2. PERMISSION OR PUNISHMENT: AREA DIFFERENCES IN PARENTAL ATTITUDES TO CHILD CYCLING.

As a consequence of nation building dynamics, the ethnic composition of local areas has rarely been an explicit focus of official statistical research. As a consequence, it is difficult to provide a definitive estimate of the social composition of the Nima and Jamestown areas. Local knowledge (Nukunya, 1992) and dissertations conducted at the University of Ghana (Neequaye, 1992; Nyarko, 1992) indicate the strongly migrant and Northern composition of Nima and the indigenous, coastal social composition of Jamestown.

From the qualitative materials which have been collected, a clear distinction in attitudes towards cycle use exists between these two locations. In Nima cycle use was widespread amongst male adults, such cycle use having a strong economic and occupational component. In Jamestown, reports of adult cycle use were substantially less, cycling in Jamestown appears to be primarily a leisure activity for male youths. Respondents' reports on the 'cycling culture' of these two areas were congruent with the on-street observations of our local interviewing and research team.

Both in Nima and in Jamestown, young adult males are to be found enjoying the freedom of mobility provided by the bicycle. In Nima such riding activities on the part of male youths typically occurs with parental encouragement, however, in Jamestown, our respondents, both adults and children, reported parental resistance towards and prohibition of cycling activity on the part of children. Thus children cycling in Jamestown are typically doing so without parental consent and in opposition to parental authority. Indeed, it may very well be that part of the pleasure of cycling in Jamestown is derived from this flouting of authority. Whether this is the case or not, it is certainly clear that cycling in Jamestown was seen as a deviant, male, school-age behaviour. Cycling in this context was the equivalent of hooliganism, a negative behaviour for which children would be punished when parents became aware that they had been engaged in such an activity.

On the question of whether his parents knew he was cycling, since he rode in the community, he said they knew and saw him on several occasion on a bicycle. The question as to how was their reactions towards his riding, he said, my parents did not take kindly to it all, each time I am reported, I was beaten and denied from food for that day. It was not a good experience at the time, because it was always tempting to ride.

Jamestown, adult male non-rider.

The language that both children and adults reflecting on their childhood cycling experiences use to describe the way in which their parents became aware of their cycling activities is that of being 'reported'. Where children were 'reported' to their parents for their involvement in cycling activities, punishments frequently extended to being beaten. That such negative attitudes towards children cycling were not simply parental attitudes but were communal attitudes is indicated by the involvement of other persons in 'reporting' the child to the parent.

The involvement of the wider community in the social control of children provides a social surveillance capability which extends beyond the immediate residential area; were surveillance viewed as the responsibility of parents alone, the chances of detecting such 'wayward' behaviour would be significantly lower, communal surveillance increases the probability that children cycling will be detected and reported.

Q: How did your parents know you could ride?

A: Someone went and reported me to them.

Q: What were their reactions when they realised you could ride?

A: They advised me to stop immediately because I could easily be hit by a moving vehicle.  
Jamestown, female child rider.

Whilst these attitudes necessarily generated substantial barriers to cycling as a routine activity on the part of children, the thrill of cycling clearly exceeded the fear of punishment for most male youths and whilst parental and community attitudes militated against ownership and routine use of cycles by children, the episodic bouts of riding by risk-taking children resulted in a wider diffusion of cycling skills than ownership statistics suggest. In order to finance their deviant behaviour, children frequently made use of their 'feeding money' to hire bikes for periods as short as 15mins to half-an-hour. The availability of very short term cycle hire permitted Jamestown youth to circumvent the prohibitions placed on riding by their parents. No doubt the redirecting by their children of financial resources reserved for food towards leisure activity played its part in further alienating Jamestown parents with respect to cycling.

In Nima, community acceptance of bike riding meant that male children almost without exception learnt to ride bicycles. It also meant that female children also commonly learnt to ride, although community acceptance did not extend to women riding bicycles much beyond puberty and those that did were comparatively rare. The respondents in Nima commonly reported pleasant feelings and experiences whilst riding bicycles. These included both feelings of superiority over friends and peers, when they were children, because they could ride and others could not, to feelings of independence in their movement, when they were older. The problems of learning to ride reported by Nima respondents were mostly about the physical problems of riding.

"For children, I feel it is part of childhood activities to learn to ride bicycles especially for most children like these in our Nima community."

Nima, adult, female non-cyclist

By contrast, in Jamestown, as we have seen, community acceptance of bicycle riding did not exist and so whilst it was still common amongst male children of school-going age, a number of children did not learn to ride especially girls.

The learning problems cited by Jamestown respondents were not confined to the physical dangers of learning to ride on busy inner-city streets without the provision of safe play areas but also explicitly included the moral penalties of detection and punishment by parents, or indirectly through the offices of other members of the family or neighbourhood. Whilst cycling in Nima was an open and esteemed activity for children, cycling in Jamestown was a furtive if thrilling experience.

Nima culture provides for a process of encouragement in terms of children acquiring cycling skills whereas Jamestown culture provides for a process of discouragement in terms of children acquiring cycling skills. Nevertheless, the male children of Jamestown typically overcome such social

barriers and achieve cycling skills. However, the negative culture surrounding cycling in Jamestown militates against youth viewing cycling instrumentally that is as a major means of transport as opposed to a mode of leisure. By contrast children in Nima tended often to cycle purposefully to places such as school and market places. They also reported the use of bicycles when running errands for parents, this was even cited sometimes as a method of winning parents consent to more playful bike-riding.

Q. What do you use your bicycle for?

A. I use the bicycle to run errands for my parents and myself. I also use it to derive my sparkling pleasure.

Nima, child female cyclist.

Before leaving this discussion of the cultural differences towards childhood cycling, it is important to note that there are good reasons why parents in Jamestown might seek to influence their children against pursuing cycling activities. The mixed road use patterns of developing contexts generate many dangers for the young cyclist. The interactions between cyclists and pedestrians (many of whom may be operating as human transport bearing head loads and children on the back) and cyclists and motor vehicles in contexts where road surfaces are in poor repair and roadside gutters crumbling and broken do not provide a safe environment in which children can learn and practice cycling. Nevertheless what remains interesting is why the parents of Jamestown, which enjoys more or less the same traffic and infrastructural conditions as Nima, discourage their children from riding whereas the parents of Nima do not.

### 3. NON MOTORISED TRANSPORT IN A DEVELOPING CONTEXT: CYCLE HIRE IN A PETTY TRADING ENVIRONMENT.

The low cycle ownership levels found in urban Accra disguise how widely spread the ability to cycle in fact is. Clearly, the extensiveness of hiring facilities in a context where ownership statistics are low is very important in providing low income youths with the opportunities to learn these skills. However, it is not simply a question of the extensiveness of such hiring provision rather the explanation of such widespread diffusion is to be found in the special character of hiring arrangements in the developing urban context.

There are some special features of cycle hiring arrangements which enhance the opportunities of youth to make use of the service. Firstly, much of the hiring is undertaken on the basis of very small time units or hiring by small specified distances (popularly known as 'kobo-kobo' - pole to pole). These can be seen as the transport equivalent of other petty trading arrangements in developing countries, petty trading arrangements typically mean that the poor are paying more for a commodity than are the wealthy. The consequence of small time unit hire and small distance unit hire in transport is no different as the information below indicates.

**TABLE 2: COST OF HIRING AS RECOUNTED BY RESPONDENTS**

Hiring duration	Nima	Jamestown
15 min	50 cedis	
30 min	100 cedis	60-100 cedis
1 hour	200-300 cedis	120 cedis
pole to pole	20 - 40 cedis	20 cedis

The cost of a new bike was given by one respondent as 27,000 cedis. At the rate of 200 cedis an hour, the cost of a bike to a hirer/ trader could be recovered in 135 hours of hiring. Rates appear to be lower in Jamestown, this is perhaps to be explained by the low levels of adult patronage.

These petty trading arrangements around cycling appear to be primarily used for learning to cycle and thereafter for leisure cycling by youth. First use of cycles predominantly occurred as children for all categories of respondents, with most respondents having ridden a cycle at some stage of their life. Many first had access to bicycles through the cycle-hire traders that existed within their communities.

**Q:** Who taught you how to ride?

**A:** The boys who hire or rent the bicycle out on commercial basis taught me how to ride. I used to give them some extra money after I have hired and paid for the time or distance I use for cycling and asked them to push me around. They did this for a couple of days and number of occasions before I became finally perfect and started riding on my own.

Nima, young female cyclist

Respondent started riding bicycle with school mates at a bicycle hiring unit at Jamestown. According to him, peer groups about the same age, go to this pool to hire bicycles at break-time which lasted for an hour.

Jamestown, male child rider

Petty hiring arrangements, although overall an expensive means of gaining access to riding opportunities, are offered at sufficiently small units of income to permit children to be the major purchasers of the service. These traders offer, from a child's perspective, the additional benefit that bicycle access can be obtained without the presence of overbearing parental supervision. Respondents from both communities reported that often hirers restricted learners to riding between two posts (kobo-kobo) that were within sight of the hirer so that they could oversee any damage being done to their bikes. This arrangement, of course, transfers the burden of supervising the child's safety in learning to cycle from the parent to the trader; preventing damage to the bike cannot be ensured without preventing damage to the child. Given the youthful character of this market for cycle hire, it is in the interest of the trader to ensure that hirers have achieved sufficient proficiency before letting them loose on the wider road network. The involvement of traders in generating cycling proficiency for children

has its counterpart in the lack of parental involvement; parents were not reported as being involved in the teaching of bike riding.

A: I hire it on the pole to pole or "kobo kobo" method thus a short distance is estimated for you to ride and pay small amount of money, if you can not afford to ride on time basis.

Nima, young female cyclist

The financing of bicycle riding amongst those that were riding as male children appeared predominantly to be from allowances given to them for other purposes. Monies given to them to buy food whilst at school were commonly siphoned off to pay for bicycle hiring fees. It was noticeable that in general females were using different means of being able to afford to ride from males, either by using other sources of funding, such as trading activities or borrowing bicycles from relatives for free.

Q: How do you finance the initial riding of the bicycle?

A: As part of my labour activities after school, I sell Nido powdered milk in bits to children in the neighbourhood and makes a profit of about 300.00 cedis on each container. It is out of this amount of profit, I set aside 20.00 cedis to hire the bicycle to learn to ride. This is how I initially financed my riding.

Nima, young female cyclist

Through such hiring arrangements, and despite vehement parental opposition, the cycling skills necessary to support sustainable mass non-motorised urban transport policies may be present in areas such as Jamestown, however, childhood socialisation processes which define cycling as a dangerous form of leisure may work against the adoption of the non-motorised transport option by the adult. Existing short term/ distance hire arrangements do not permit the opportunity for the development of childhood routines of purposeful cycle journeying nor do they provide the necessary motivation for the acquisition of maintenance skills or even the necessary acquaintance with the techniques and procedures involved. The time/ distance constraints of petty hiring mean that the cyclist never moves beyond the hirer's local area and thus never out of the range where maintenance becomes the user's and not the hirer's responsibility.

A good deal of the attention on the promotion of the cycling option as a sustainable transport strategy has focused on the need to establish more flexible purchasing arrangements and to reduce import taxes and tariffs which place the bicycle out of the financial range of low income households. Whilst this policy impulse is undoubtedly correct, there is mileage to be gained in considering a re-organisation of existing hiring arrangements towards a lengthier leasing period for cycle hire. Similarly, it may be of use to consider purposely reshaping the character of the hiring market. Currently, the market is largely a youth leisure market, however, the promotion of cycle-trailers on a hiring basis has the potential for converting these existing cycling facilities into more economic and occupationally useful services. There is evidence that in the North of Ghana female traders have begun to make use of such cycle trailers (Howe and Dennis, 1993) whilst there is not yet any evidence of such activity on the part of women traders in Accra. Purchasing such transport equipment may prove a substantial barrier to adoption on the part of low income women, certainly in urban centres where relatively cheap motorised transport is available; the hiring or long leasing option on such enhanced load bearing facilities may have the capability of altering existing preferences.

#### 4. MAVERICK RIDERS? BARRIERS AND OPPORTUNITIES IN WOMEN'S CYCLING

Both in Jamestown and in Nima, there was clear evidence of a prejudice against adult women cycling: adult women learning to cycle in Nima did so late at night when social and traffic activity had substantially decreased. The comments of cyclists themselves reflected the negative attitudes of the community around them towards women cycling. Males, cyclists and non-cyclists alike, appear to consider cycling not suitable for women, though in Nima female children riding is greeted with some acceptance.

Q: What type of people ride bicycles in this community?

A: A few workers, few school children and many children have taken to bicycle riding from hiring.

Nima, adult male non-cyclist

In Jamestown, even female children riding bicycles are treated with some suspicion and are considered of 'questionable sexuality'. The most common justification for why women should not ride bicycles is the apparent danger of the activity on the main roads. Such attitudes are also often held by female non-cyclists. Other explanations also demonstrated an apparent unwillingness to allow female children an ability to 'play' but rather that their role, from a very early age, is to assist in reproduction within the household, be it social, or at a later stage in life, biological.

" It is not safe at all to see women riding, our roads are very bad, with many pot-holes and women riders often run into children and people's wares by the road side". Asked whether he knows some female riders, respondent explained that, he knew a few and those females behave like men, they even play football with their male counter parts.

Jamestown, adult male rider.

By contrast, the attitude of female cyclists, in both communities, is often one of support to other riders, particularly other female cyclists. They themselves derive encouragement from greater numbers of female riders and try and support other females who want to ride. One of our Nima respondents was a female cycle hire trader. By her account the presence of female hirers increased the likelihood of females learning to ride or hiring bikes to practice as there was reduced embarrassment and social pressure.

Q. What are your feelings about females riding bicycles? and why?

A. I admire females who can ride perfectly well. When they ride, I always have the urge also to go on a bicycle and ride. With adult female cyclists, I see them as role models and a source of encouragement to develop and advance in cycling activity. Why because as many females cycle, they help to change our attitudes towards female cycling and more females would join in the activity.

Nima, child female cyclist.

Respondents drew attention to the problems women's dress posed for modesty were they to cycle. We should remember that the arrival of the bicycle in Western culture produced exactly the same concerns, with the consequence that a specific cycling dress designed to ensure the appropriate level of modesty was initially adopted by female cyclists. Indeed, although such concerns over dress are not confined to the Muslim community alone, the Muslim male community represents a substantial component of the cycling community and such concerns about modesty operate, given present dress codes, against the diffusion of adult cycling activity to the adult female sector of this community.

Any policy concerned with promoting cycle adoption by women will have to engage with this problem at some stage. There is, however, a practical solution which might be incorporated in any promotional policy. In a number of Muslim communities, most particularly those where women are heavily engaged in field agriculture, women make use of trouser and tunic dress. This dress is highly suitable for cycling activity and could be promoted in conjunction with cycle use; in such circumstances, its Muslim pedigree could usefully be emphasised.

Concerns about the environmental damage caused by motorised transport and constraints imposed by global financial problems have resulted in the re-assessment of motorised developments as the appropriate transport policies for the Third World. However, our pilot research has already provided us with some indication of the difficulties that women face in gaining community acceptance as cyclists. If environmentally friendly policies are promoted without such gender differences in the social acceptability of cycling being attended to then we will reach a situation where environmentally friendly policies can negatively affect the economic activities of women. The promotion of fair transport policies must ensure that if the cycle option is adopted where motorised transport would previously have been the appropriate policy candidate - motorised transport being socially acceptable for women albeit as passengers - active promotional measures must be taken to ensure that cycling by women is not socially discouraged.

Our research indicated a number of changes which could be made which would be likely to encourage higher levels of cycling by women. Firstly, the poor design of existing infrastructure exposed women cyclists to ridicule, harassment and injury from other road users; improved infrastructure could do much to make cycling less risky for women and thus more socially acceptable, exposure to danger currently being regarded as unfitting experience for women. Here it should be noted that a programme to construct segregated cycle ways in Accra will commence in January, 1994 under the auspices of the World Bank. Secondly, alterations in the design of cycles and cycle accessories could do much to change the bicycle from a transport mode for the solitary individual into a facility for transporting occupational loads. The promotion of trailers and substantial front load carrying baskets<sup>3</sup> to women petty traders would if successful generate a substantial market for cycling. Any such campaign would have to focus on providing safe locations for the parking of vehicles. Currently, women who use cycles to make purchases at markets encounter major problems in finding facilities for the securing of their bikes. If cycle trailers do indeed become adopted in the urban trading context then this problem will be very much magnified.

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<sup>3</sup> Currently, the only visible use of such a technology is by the males who sell Fan ice cream from cold boxes designed into the front of their vehicles - the Fan boys. There is no corresponding use of such a facility by female traders in Accra.

## **5. PROMOTING NON MOTORISED TRANSPORT IN DEVELOPING COUNTRIES: THE POLICY IMPLICATIONS.**

This paper has argued that cycle ownership and use is not evenly distributed across the low income areas of Accra. Rather the clear focal hub of low income cycling activity is located in Nima. Consequently, any programme of cycleway infrastructural provision in the city would do well to consider the benefits of centring the initial stages of such a development in this area of high usage. Locating cycleways in areas of low cycle usage would enable their invasion by other road users.

Much of the focus around the promotion of cycling as a sustainable transport option has fallen upon the purely technical infrastructural requirements, however, in order for implementation to be successful in developing such cycleways, special features of the developing context need to be taken into account. Given the existing patterns of mixed road use, even where segregated facilities are provided, the danger remains of the spill over of road-side trading into these newly provided areas. Consideration should therefore be given to establishing strong visual signing which indicates and helps enforce the moral rights and entitlements of cyclists at least to priority in such locations. As we have noted, there are particular problems of interaction between cyclists and human transport (head load carriers). Given the importance of human transport in Africa, policies designed to promote cycling will also need to be sensitive the highway requirements of this particular social group.

Whilst the extensiveness and petty renting character of present hiring arrangements enable the development of the technical skill of cycling, such arrangements do little to promote the ready economic or occupational use of cycles. Such hiring arrangements can contribute little towards the mass adoption of sustainable non-motorised transport options, apart from providing the conditions for the wide diffusion of cycling skills. Clearly, the provision of infrastructure has to be accompanied by arrangements which enable the financing and purchasing of vehicles.

We have seen that anti-cycle childhood socialisation processes are in play in certain African low income areas. We have noted that road use conditions may play some considerable part in explaining the pattern of such 'prejudice'. Policy makers can, according to our respondents, usefully think about providing safer learning environments for child cyclists. In this way the negative attitudes of parents in such areas may be encouraged to alter in the more positive and sustainable direction.

We have also noted that there are clear cultural barriers to women cycling. This is a matter of some considerable importance for if policy intentions are to favour the bicycle as a transport mode in developing contexts where women have key economic and transport roles and there are cultural barriers to women cycling then any such transport policy will be likely to increase gender inequity. Specific attention is thus required to promoting such infrastructural, vehicle design, dress and social adjustments which will facilitate the development of female cycling.

To summarise, we have indicated that there are cultural factors which condition transport behaviour, in this case, cycling behaviour. We have attempted to show that unless transport policy takes explicit account of such factors, there are likely to be real and substantial policy failures.

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