Urban transport in Cape Coast, Ghana: A social sustainability analysis

Gina Porter

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Gina Porter has undertaken extensive field research on social aspects of transport and mobility in sub-Saharan Africa for over 30 years, with particular reference to gender and, most recently, young people. She trained as a Geographer and is currently Senior Research Fellow in the Department of Anthropology, Durham University. Her research has been funded principally by the UK's Department for International Development and the Economic and Social Research Council. She has published widely for academic, policy and practitioner audiences. Comments may be sent to the author by e-mail: r.e.porter@durham.ac.uk.

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Introduction

This case study of urban transport in Cape Coast, Ghana was selected as a background paper for the *Global Report on Human Settlements 2013* because it raises important questions regarding social sustainability in a low-income country context where walking is a principal means of transport for a majority of the population. Delivery of social sustainability is about creating and maintaining quality of life for people and requires attention to both human needs and the preservation of sound socio-ecological relationships. Drawing on grey and published literature and detailed field research conducted by Durham University and the University of Cape Coast,[1] it offers insights, based on end-user perspectives, regarding the mobility patterns of different ages, social classes and both genders, the ways in which travel and transport disadvantage affects people's lives, and suggests means whereby a more socially sustainable transport system might be achieved. The discussion is premised on the argument that access to mobility and transport is a key element shaping access to services, livelihoods, life chances and well-being and consequently a human right.

Following a review of local context, the study considers transport accessibility, affordability and the transport gap (which forces much pedestrian load-carrying), then related safety and security issues. The needs of disadvantaged groups – the poor, women, children, elderly and disabled – are highlighted throughout. To conclude, suggestions are made towards improvements in physical infrastructure, reduction of pedestrian load-carrying, mainstreaming of disadvantaged groups and improved governance, whereby a more socially sustainable transport system could be achieved.

Background: The Local Context

Cape Coast, capital of Ghana's Central Region, is a city of approximately 82,000 people (Ghana Statistical Service, 2002).[2] It is one of Ghana's smaller urban centres, ranking only about tenth in population size. However, its importance outweighs it size, not least because of its role as a trade and transit centre for the region's coastal fishing industry and the surrounding agricultural zone, its position as a leading education centre (with some of Ghana's elite schools and one of the country's three main universities) and its growing role in Ghana's tourist industry due to the city's historical significance (including its role as capital of the former Gold Coast colony until 1877 and its 17th century slave castle, a UNESCO site).[3] The important surviving core of pre-1900 buildings offers considerable tourism potential but also helps generate and shape current transport problems within and beyond the congested central area. The location of the city south of the Accra–Takoradi trunk road further contributes to urban traffic congestion.

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1. This includes, most recently, interviews with children and young people of about 8 to 18 years of age and with other community members through to the elderly, focused particularly on the transport and mobility issues faced by children and youth; see www.dur.ac.uk/child.mobility/. Key papers from the project on which this case study draws are as follows: Porter, 2010; and Porter et al, 2010a; 2010b; 2010c; 2010d.

2. According to Cape Coast Metropolitan Assembly (2009), the Metropolitan population (i.e. including surrounding settlements) is estimated at 142,398.

3. See Agyei-Mensah and Ardayfio-Schandorf (2007) for more historical detail.

Field research on which this case study draws focused on two areas of Cape Coast, Abura, a poor, high density neighbourhood, and Simiw, a peri-urban settlement located towards the north of the city: the poor and other disadvantaged groups are well-represented in both locations. Abura, with a population of over 15,000 in 2000 is a busy, congested area in which a majority of households are male-headed nuclear families and ethnicity is mixed, with northern in-migrants in addition to the Fante indigenes and other Akans. The area is favourably located in terms of access to hospitals, clinics and schools and contains the city's second largest market. It is well-served by local transport – principally taxis and minibuses- which travel along the main paved roads and the narrow unpaved lanes of the residential areas at speed, when traffic and road quality allows (there are many potholes, especially on the unpaved roads). Simiw is a much smaller, nucleated settlement of only around 1,300 people (in 2000), largely composed of indigenous Fantes living in mostly male-headed nuclear families. Unlike Abura, there are no formal health facilities and no educational provision within the settlement beyond Junior High School. There is reasonable motorable access to the settlement along a 3km unpaved laterite road from the main Cape Coast–Elmina road, but the shortest routes to the town centre and to surrounding settlements are along un-motorable pathways. Within Simiw the streets are unmade, sandy and highly eroded in places, making surfaces uneven and walking hazardous.

Transport Accessibility, Affordability and the Transport Gap

In Cape Coast, as in many other African cities, transport-poverty linkages are strongly in evidence. The city's middle class, including government and university staff, commonly own private vehicles for their personal and family use. In the morning, as government office and school opening-time approaches, and in the afternoon when they close, large areas of the city, including the residential areas, become highly congested and often grid-locked. However, the majority of people living in the study neighbourhoods (Abura and Simiw) do not own personal vehicles. From small surveys with around 125 children (aged about 9–18 years) in both areas, it emerged that only 4.5 per cent of children's households in Abura owned a private car and none whatsoever in Simiw: the majority must thus either take public transport (mostly minibuses or taxis) or walk to work or school. Given the congestion on Cape Coast roads and the poor quality of many roads (numerous potholes due to heavy traffic and inadequate maintenance), public and private transport alike typically moves slowly. Hold-ups are exacerbated by the numerous hawkers (often young girls and boys) who take advantage of the traffic 'go-slow' on main roads and key junctions to attempt to trade with drivers and passengers, sometimes risking their lives as they run after vehicles, dodging traffic (see Figure 1).

Most men and women in Abura and Simiw work in the informal sector and women and young people, in particular, often obtain a living from petty trade. The goods they need to carry around the city, to and from markets and other locations, are frequently transported with them, in taxis or minibuses, being too small in quantity to merit separate freight consignment.[4] It costs 1,500 Cedis (in 2007)[5] or more as a passenger for a short minibus journey across the city: loads attract an additional charge. Mary, a young woman who cooks and sells *kenkey* (a maize dish) in Abura described how she buys fuel wood from a settlement about 20 minutes drive away every three days: It is carried to the nearest motorable road junction about 5

4. As in other African cities such as Accra (see Grieco et al, 1996).

5. Old Cedis, worth around US$0.16 in 2007, when Ghana's minimum daily wage rate was 19,000 Cedis. This was a period of rapid fluctuation in exchange rates, just prior to Cedi redenomination (The Ghana Cedi was introduced in July 2007 and is equal to 10,000 old Cedis).

Figure 1. School children dodging traffic on the outskirts of Cape Coast

Photo: Gina Porter.

minutes walk from the house by a commercial vehicle, then her two foster daughters (aged 11 and 13 years) are expected to carry it along the narrow lane to the house.

Operating such home-based enterprises in the absence of good transport access is particularly challenging for women, because they are expected to organize porterage of the wood and other items required for their business (in addition to domestic needs for water, etc.): head-loading is not considered an appropriate job for men or boys above 15 years in this cultural context. Recourse to children, their own or others brought in on a fostering basis (e.g. from rural family members), is often an important component of women's transport solution, with potential implications for children's education, health and well-being. Men and boys, however, are employed in loading and off-loading vehicles and pushing hand carts in and around the market areas. This and other transport-related work, as minibus call boys, drivers' mates and assistants to vehicle mechanics is often a key employment niche for the poorest in Cape Coast (as across much of urban Africa). For example, Peter, a 17 year-old boy living with his widowed mother and younger siblings, works as a push-truck operator in Abura, carting maize for the market women, to help support his mother and siblings. He himself employs a 10 year old boy whom he pays 3000–5000 Cedis each day (i.e. a fraction of the 19,000 Cedi national minimum daily wage) to help. Peter's ambition is to buy his own truck.

In the poor neighbourhoods of Cape Coast, much household transport organization is shaped by activities associated with child labour. This is in part due to the need to physically transport domestic loads that, in Western contexts, would be carried by pipes or wires (Grieco, 2009; Porter et al, 2011). In Simiw, under 1 per cent and in Abura only 23 per cent of survey children's households had piped water into their dwelling. In Simiw, all survey households and in Abura 82 per cent of households were dependent on wood or charcoal for cooking. From the age of around five or six years, particularly in the case of girls, a portion of most days is taken up with carrying water and fuel to the house; dumping refuse is usually a child's task too. Water carrying is the main domestic task and, although the vast majority of individual journeys to collect water are reported to take under 30 minutes (97 per cent in

Abura, 92 per cent in Simiw), over 70 per cent of children made more than two journeys per day for water. Many children must also help family members to carry the numerous other goods which need moving between house, market, transport pick-up points and other locations. The vast majority of children's load-carrying is unpaid domestic work (though some occasionally earn money from commercial porterage; for instance, older boys carrying sand in Simiw).

Many of these load-carrying journeys are over comparatively short distances but the weights can be substantial. A standard water container when full weighs 20 kg; other loads can be far heavier. In Abura, 65 per cent of girls and 64 per cent of boys interviewed in the survey reported suffering pains or tiredness (mostly headache, neck-ache and waist-pain) from load-carrying in the previous week. In Simiw the figures were even higher, at 72 per cent for girls and 86 per cent for boys. The following observation made by a 12 year-old boy in Abura is representative of many similar reported experiences: *'My mother sells yam on the street and I carry the load* [for about 1 km]*. I carry* [one] *big sized yam at a time thrice a day. I feel pains in the neck and waist as well. I complain to my mother and she boils water and massages me with elephant ointment '*. There are (largely unknown) potential impacts not only on health but also on education (Porter et al, 2011): *'The following day* [after carrying firewood home] *you are so tired that you cannot do any meaningful learning at school* (girl, 17 years, Simiw). There can be little doubt that the pedestrian load-carrying required of women and particularly of children affects quality of life and thus undermines the potential for socially sustainable transport (see Box 1).

Box 1: Pedestrian load carrying, children, and gender

A mother aged 32 years who lives in Simiw and works as a trader describes how boys and girls carry similar loads. Both genders fetch water and foods from the farms on the outskirts of the settlement to roadside market vehicles but: *'the difference in porterage among the males and females is that the males often use the land trucks to carry the heavy loads but the females have to carry them on the head. This is because the females do not have the physical strength to push the trucks….. there are some parents who would let the foster children carry heavy loads but not their own…. Loads carried by the children have effect on their health. Some usually complain of neck and backaches. Normally if drugs from the store are not able to treat the ailment then they are taken to the Ankaful hospital…. Such incidence does occur here… it happens usually especially during harvesting of oranges and maize, etc. … Transport can ease the children from carrying such loads but the vehicle cannot go to the farm. So we still have to carry the load to the roadside or homes.'* The observation about females not being as strong as males in the context of pushing carts is interesting, given the massive loads carried by both women and girls on their heads. The complex intertwining of perceptions about physical capabilities and gender stereotyping is widespread in Ghana, among women and men (see Grieco et al, 1996; Porter et al, 2011). Even simple technology such as the push cart is appropriated for male use.

For young people, load carrying and other household-supporting journeys usually have to be arranged around school attendance: they mostly occur before school, after school and at weekends. Occasionally, however, girls in particular may be required to attend market with their mothers or act as household 'anchors' (i.e. staying at home to oversee home-based enterprises and activities, so that other household members can travel to attend business elsewhere), as in the case of Victoria, a girl of 15 living in Abura with her grandmother. She

goes to school every day except Thursday, when she must stay at the shop while her wholesaler-mother is busy distributing vegetables to retail customers. In Ghana's capital city, Accra, there is stronger evidence of widespread dependence on young girls and elderly relatives working as household anchors (Grieco et al, 1996, p131), probably because the transport stress is even greater in this much larger city than in Cape Coast.

Travel to school represents the other main type of journey made by young people and again illustrates the vulnerability of a disadvantaged group with little voice. The majority of journeys to school are short (50 per cent of children in Abura, 78 per cent in Simiw estimated them at 15 minutes or less; distance-wise, 57 per cent in Abura, 86 per cent in Simiw estimated them at under 1 km). However, even long journeys are mostly made on foot, since school children do not usually have the funds for transport fares.

In Abura most children attend local primary and junior high schools close to their homes but when the rain is heavy and there is deep mud and flooding on the unpaved side roads, many are late and some do not attend at all. In the child mobility surveys, over 98 per cent of children in Abura and 100 per cent in Simiw had walked to school the previous day. One young man in his 20s described how, when his parents divorced, he had to change schools to a local (private) school in Abura because his mother could no longer afford the transport to the better school in town. Some private schools in Cape Coast have their own school buses which pick up pupils from home and drop them again after school, but few children in Abura attend such schools; there are none located within the neighbourhood. However, there is an Islamic primary school here which attracts children from across the city – according to staff, some pupils walk about 6 km to and from school each day. Such long walks across the city to access education results in children being exhausted before they start the school day and in a poor position to learn effectively.

For the few children who are able to access motorized transport to school, there can still be problems related to their lowly position in the social hierarchy. One 18-year old Abura school-girl who attends senior secondary school elsewhere in town observed a range of issues:

> *The fare is 1500 but some* [drivers] *charge as high as 2000 Cedis or even 2200… Some of the drivers also insult at the least chance they get. At times too they agree to take you to your destination but on seeing other passengers they ask you to alight at an undesired point at the convenience of the other passengers. Perhaps they do this to some of us because we are children. This happens often and this makes me become late for school to receive lashes or purchase a broom as the forms of punishment. … when the drivers overcharge, I find it difficult'.*

Cycling might seem to offer advantages for children and other people who lack access to motorized transport. However, cycling activity among young people is low in these poorer urban neighbourhoods, partly because few households (only 4 per cent of children's households in the Abura survey, 10 per cent in Simiw) own a bicycle. Nonetheless, 51 per cent of girls surveyed and 89 per cent of boys in Abura and 51 per cent of girls and 93 per cent of boys in Simiw said they know how to cycle – this is a skill usually learned from a sibling or by hiring. The gender difference in cycling experience is significant. Girls tend to hide their cycling activities from their parents, who expect them to be at home helping with the household chores, not cycling around town. Sometimes cycle riding is presented as more suitable for boys than girls because of the dangers of riding in traffic. However, there is a commonly reported view, among children and parents of both genders, that cycling will have adverse gynaecological impact on girls:

> *'I have never used a bicycle for any long distance because I am afraid of being knocked down by a vehicle. My parents always warned me against riding a bicycle because according to them a female is not supposed to ride a bicycle. ..Bicycles are not good means of transport for girls because according to one of my friends if a girl rides a bicycle very often she may not be able to give birth in future. I believe in her story'* (secondary school girl, 17 years).

In these circumstances it would be particularly difficult for girls to take advantage of the benefits that cycling might offer in terms of improved accessibility to school and work, were more cycles available to the general population. Awareness of these and other gendered travel constraints is important in the development of socially sustainable transport.

Access to health services is vital for a healthy society. Visits to clinics and hospitals are usually needed on a less regular basis than travel to work or school locations, but travel costs can pose significant problems for patients and their families, especially when coupled with payments for treatment. There are few ambulances operating in Cape Coast so all except those able to pay for treatment at one of the private health centres (some of which have ambulances) rely on hiring a taxi to get to hospital, if it is too far or too difficult to walk, including women in labour. In busy periods, travel in the congested urban centre can be dangerously slow in an emergency. Although the journey may only take about 5 minutes outside rush hour, sole use of a taxi would still reportedly cost 10,000–50,000 Cedis (in 2007) depending on distance. A 13-year old boy living with his grandmother described how, when he started vomiting blood, he was taken to the regional hospital in a hired taxi, paid for by a neighbour. Following diagnosis of TB and sickle cell disease, he has had to attend a local clinic daily for injections. Consequently, he has had to leave school and hawks kerosene for his grandmother to help pay for his transport fares and other living costs. The case illustrates well how transport constraints can worsen already disadvantaged lives.

Urban Transport Safety and Security with Special Attention to Vulnerable Road Users

Road traffic accidents are now one of the principal causes of injury and death across Africa, but statistics do not capture the full picture due to deficiencies in reporting (Mock et al, 1999; Lagarde, 2007). In Cape Coast, the majority of vulnerable road users are pedestrians. They face a range of hazards associated with dense traffic, many poor, narrow roads (many unpaved, thus often dusty and with associated poor visibility), badly maintained and substandard vehicles, inadequate traffic controls, limited attention to traffic regulations from drivers (who may not have received adequate training) and few (working) street lights at night.

These conditions are a major concern for many pedestrians. A young woman teacher stressed:

> *'I am always afraid of crossing the road because there are no traffic lights and most times drivers do not stop for people to cross… the road is not tarred and I am asthmatic so I always have a tough time when I walk along the route and the wind blows dust in my direction'.*

Very young and elderly pedestrians are particularly vulnerable road users, in the former case because of their smaller physical stature and limited traffic experience and, in the latter case, because of age-related physical and cognitive changes (Amosun, et al, 2007; Mabunda et al, 2008). In the urban child mobility survey, dangerous vehicles were among the fears of 22 per cent girls and 33 per cent boys in Abura and of 7 per cent girls and 23 per cent boys in Simiw. The following quotations are representative of the issues raised:

'Walking along the road is … dangerous as the drivers drive very close to you as if wanting to knock you down…' (secondary school girl, 18 years).

'when the vehicles pass by me they drive at top speed and blow dust on us…' (boy, 12 years).

For many low-income people, exposure to traffic and transport danger is increased because they make a (meagre) living as street hawkers (in the case of children, often in combination with school attendance). They are commonly aware of the dangers of hawking in heavy traffic:

'I hawk with tomatoes from Abura to Essuekyir [30 minutes walk] *with a pan. I have not had any accident before but some of the tooting horns of the vehicles scare me. At times the cars move very close to the edge of the road so you have to go into the bush nearby'* (boy, 14 years).

However, the prospect of a sale can encourage young hawkers, in particular, to move dangerously through traffic. Non-motorized transport equipment adds to the traffic hazards encountered: there are conflicts between non-motorized and motorized transport but also between different types of non-motorized transport (such as bicyclists and pedestrians): '*I was knocked down by a bicycle when I was crossing the Abura main road to go and buy some items at the other side… (girl, 17 years).*

The rise in road traffic accidents has raised concerns in the Cape Coast Metropolitan Authority, though their focus appears to be vehicle crashes rather than pedestrian traffic dangers (Cape Coast Metropolitan Authority, 2009).

Apart from traffic dangers, there may be other potential safety issues in Cape Coast, especially for women and children (though the threat of harassment and attack appears relatively low by comparison with that reported in cities in countries such as South Africa). Occasional reports of abductions in the Ghanaian press, nonetheless, raise parental concerns about young people's travel safety:

'children who walk alone to school can easily be kidnapped. About two years ago a small boy on his way to school was kidnapped, killed and the body was later found with some parts of the body removed' (male shop owner, 48 years).

'nowadays it's a little scary walking around this neighbourhood in the evenings because there are ritual murderers around…' (girl, 18 years).

Teachers have also reportedly warned their pupils that people abduct children and kill them. It is thus not surprising that in Cape Coast (as elsewhere across Africa), parents encourage children to walk to and from school and other locations in groups (since adults are otherwise occupied and rarely accompany children to school).

In the case of teenage girls and women, parents and husbands often express concerns about the mobility of those in their household (though not to the extent observed in some other Africa cities). The concern appears not only to be about dangers of harassment, physical attack and rape, but also the potential promiscuity of women, especially those who may be 'roaming' the streets (Porter, 2011). These concerns are reflected in the views of a young man from northern Ghana: '*A lot of the young people here have given birth. They are always roaming about – they do not sleep in the evenings. Because of their behaviour I will not allow my family to come and live here with me*'. While there may be dangers of rape, the constraints imposed by husbands and fathers on the mobility of their wives and daughters present an issue with very significant implications for female livelihoods and life chances. It also emphasizes, once again, the linkages between travel and (gendered) social practices.

Policy Implications

This study has raised a variety of issues concerning the social sustainability of urban transport and travel in low-income country contexts where poverty impedes access to motorized transport and walking is a principal means of transport, particularly for the most disadvantaged. The findings suggest the need for a concerted effort to develop more socially sustainable transport systems which will enable people of all social groups to achieve a good quality of life (without contributing to environmental damage). A number of policy options which need consideration are discussed below.

Physical infrastructure for improved pedestrian and driver safety

In Cape Coast pedestrian safety is a major issue. Given the dense network of narrow streets (without pedestrian sidewalks) which characterizes the central urban area and creates massive traffic congestion, one potential improvement could be to pilot a one-way traffic system along major routes. This would then allow the creation of adequately demarcated pedestrian walkways and vehicle pull-off and re-entry points for access to small on/off-loading and hawking areas (and for broken-down vehicles), providing potential benefits not only for intra-urban motorized traffic flow but also for pedestrian safety (not least hawkers, who would have access to vehicles at such points, rather than to rapidly moving traffic in the consequently improved circulation system).

There are also specific wet season dangers associated with road flooding (particularly on badly potholed roads). In such conditions drivers try to avoid the flooded areas and find alternative routes: the ensuing traffic chaos increases discomfort for all pedestrians, and may also put child pedestrians of small stature at particular risk since they are less easily seen and less traffic-aware. Engineering improvements are needed in the form of higher capacity storm drains, attention to potholes and improved road surfacing. Rain-day awareness and road safety could also be promoted among school children, as an adjunct to standard road safety training. Among out-of-school children there is a particularly urgent need for road safety training because they miss out on school-based programmes, yet are probably most at risk of traffic accidents.[6] A course specifically aimed at illiterate children (and another for taxi and minibus

Figures 2-3. Road conditions in Simiw, peri-urban Cape Coast

Photos: Gina Porter.

6. Adesunkanmi et al, 2000, note the traffic risk faced by young hawkers in Nigeria.

drivers) could be designed for implementation by local non-governmental organizations engaged in road-safety activities. Improved street lighting would also be highly beneficial for improving pedestrian visibility in such conditions (and at night).

Reducing pedestrian load-carrying

The demands of pedestrian load-carrying currently placed on women and children require urgent attention. They could be reduced by:

- Substantial investments in piped-born water to reduce water-carrying.
- Promotion of more fuel-efficient wood-burning stoves to reduce wood-carrying.
- Improved *availability* and *promotion* of low-cost transport equipment such as wheelbarrows and bicycles (with panniers and child seats) for women and girls (plus provision of training in operation and maintenance).
- Mainstreaming disadvantaged groups: promoting end-user focused planning

The travel needs of the poor, women, children, older people and the disabled all need far greater attention. Many *women and children (*especially girls) are disadvantaged in a travel and transport context, apart from load-carrying, because they have less funds than men to pay transport fares and are more likely to be subject to harassment when they travel. Ghana also has a growing population of *older people*, many of whom are infirm and disabled. They, like the disabled population more widely, face numerous difficulties when they access public transport. Some of these difficulties appear similar to those reported by children (harassment, being cheated on fares by operators, having to stand up and keep balance in an unstable vehicle when all the seats are taken, etc.) but they may also face other difficulties around specific problems sometimes associated with old age, such as urinary incontinence among women due to earlier obstetric problems (e.g. obstetric fistula and related conditions). Their travel constraints may also impact negatively on the educational, health and livelihood opportunities of young people in their care when they affect income-earning ability. The relationship between children and older and disabled people's lives requires careful analysis in a mobility context (see Turner and Kwakye, 1996; Abane, 2010). Additionally, it is important to recognize that improved transport *per se* will not be enough to improve the lives of the elderly and disabled: direct cash transfers, including allowances for transport fares may be critical for many.

The lack of power and access to wider decision-making processes among disadvantaged social groups means that their views are less likely to be heard and their needs even less likely to be met than those of other groups. Social sustainability has been largely ignored in transport planning, except as an add-on (like the gender tick-box) which is easily discarded when funding cuts are required. Vulnerable and disadvantaged end-users need to be at the heart of the planning process, with their needs embraced through the construction and adoption of an end-user (as opposed to stakeholder) focused model. Such demand-responsive transport will require radical changes to the approach which most transport professionals currently adopt: not least, they will need to become far more conversant with the attributes, methodologies, ethics and potential barriers to successful genuinely participatory planning. The starting point will become needs assessments which involve these end-users themselves: even quite young children can make important contributions to travel and transport research, as has been found in Cape Coast.

Governance-related interventions

Local, regional and central government transport agencies in Ghana currently lack adequate institutional capacity for building social sustainability. An increase in the number of women transport professionals in the national and regional ministries would be advantageous, but in itself will not ensure adequate attention to broader issues of institutional support for socially sustainability transport, without the existence of a strong core of relevant expertise. An expansion of teaching related to socially sustainable transport planning within the universities will be essential for future improvements in this field. The department of Geography and Regional Planning at the University of Cape Coast has strong relevant staff expertise and currently provides transport and mobility-related teaching within its Masters' courses. A dedicated transport planning unit within the department also providing undergraduate courses would offer a valuable extension to the current teaching programme.

Improved transport planning *per se* will not be able to resolve all the transport issues faced by disadvantaged, less mobile groups in Cape Coast. So long as planning in each individual ministry is conducted in isolation, effective and efficient access to services by the disadvantaged is unlikely to be achieved. Resistance within ministries to cross-ministry interaction and planning appears to be widespread in Africa: this is an area where donor support for experimentation with new integrated ways of working could be extremely helpful.

It is vital that politicians are also made more aware of the critical role of socially sustainable transport in health, education, work and as an employment niche for the poorest: its value for the well-being of poor populations remains surprisingly under-recognized. Adopting an end-user model of transport planning will be vital, but insufficient. Lobbying of politicians will be essential for sustained funding support: this is work in which local non-governmental organizations could play an important supporting role.

Exploring the potential offered by virtual mobility

There may be greater potential among populations in Africa (than has occurred to date in Western contexts) for mobile phones, in particular, to substitute for physical mobility in contexts of constrained physical mobility such as that imposed by poverty. In Cape Coast, there are reports of such a trend. For instance, a 28 year-old woman *kenkey* trader in Abura observed that:

> *'Mobile service has changed our travelling and movement patterns greatly in that we now call before we travel. At times, you will be told not to travel because the person you are going to visit is not available so you don't at all unlike before…'.*

The possibility that people are reducing their travel as a result of access to mobile phone communication has emerged elsewhere in Ghana and other parts of Africa. It was also emphasised by the (male) local secretary of the Ghana Public Road Transport Union:

> *' my phone helps me a lot in my work, for instance, any time a passenger comes around looking for a vehicle. I easily communicate with some of the drivers to come around to convey passengers to their destination. … the disadvantage* [of mobile phone use] *however is that it has reduced the rate at which people travel by a chartered taxi'.*

There may be potential to improve linkages between mobile phone communication and physical transport, so that taxis and minibuses can operate pick-up services which obviate women's need to organize goods transport from home to the nearest pick up point or lorry park, for instance, with considerable potential benefit to both them and their children.

Conclusion

This case study has reviewed the difficulties faced by disadvantaged groups in accessing transport services in a small Ghanaian city where the dominant mode of travel is on foot, and has reflected on the challenges they present for the delivery of socially sustainable transport. The study emphasizes the importance of pedestrian transport (a common feature of most African cities), which has substantial benefits in terms of non-pollution, but also draws attention to the negative aspects of the transport gap, especially for women and young people, many of whom must spend a considerable portion of each day carrying loads. Mainstreaming of these disadvantaged groups is essential to the delivery of social sustainability. A commitment to socially-inclusive transport planning in Cape Coast, as in other Africa cities, could substantially aid poverty reduction, lessen inter-generational tensions and other conflicts and enhance overall well-being. Suggestions have been made regarding potential policy interventions: significantly, many of these are more dependent on a change in attitude among those in power than on massive financial investment. Such a change in attitude is urgently required.

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