TRANSPORT AND URBAN POVERTY IN ASIA
A Brief Introduction to the Key Issues

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INTRODUCTION

This article provides an introduction on how transport issues interrelate with urban poverty,[1] especially in Asia. Transport is an issue that is often viewed in isolation from sustainable human development and from other human settlements issues.

The article introduces a large number of key issues and many of them can be given only very cursory treatment. Plentiful references are provided where possible to allow the reader to pursue each of these issues in more depth. The article also examines the principles of a poverty focus in urban transport and some of the possible approaches. A number of specific examples of pro-poor transport initiatives are discussed briefly, but there are no in-depth case studies. Finally, some lessons and recommendations are presented, especially as they are relevant to the mission of the proposed Asian Forum on Urban Poverty.

URBAN POVERTY AND TRANSPORT — A NEGLECTED ISSUE

The transport problems of the urban poor have received considerable attention in the development literature of the past.[2] Nevertheless, the connections and interrelationships between poverty and urban transport are poorly understood.[3] Nor are distributional impacts of urban transport projects well understood, although this is now a focus of interest by multilateral lenders such as the World Bank in the wake of criticisms and subsequent reviews of the poverty impacts of transport projects.[4] Although equity (fairness) is often cited as a concern in transportation decisions, it has in fact received little attention from researchers.[5] This is an indictment and action is needed to remedy it. The crucial role of transport in the quest for sustainable human settlements and improving the lives of those living in poverty has been acknowledged at a number of recent international meetings[6]; however, much remains to be done to translate good intentions into practical initiatives that can make a difference to the lives of people living in poverty.

TRANSPORT PATTERNS AND THE NEEDS OF THE URBAN POOR

The poor cannot afford private cars. Nor can the very poor afford the small motorcycles that are now plentiful in many Asian cities. People who are economically, physically, and socially disadvantaged are harmed by transport policies that focus on economic efficiency (narrowly defined) and by automobile-focused transport priorities that do nothing to meet their travel needs. They also tend to suffer a disproportionate share of external costs, since they can afford less protection against traffic impacts. Increased dependence on private motor vehicles tends to displace nonmotorized transport and reduce the range of public transport available to the poor. There is a threshold effect in motorization, which means that a small increase in a city's level of income (when it is within the lower-middle-income range) can lead to a sudden rapid surge in the ownership of private vehicles, as was seen in Malaysian and Thai cities roughly between 1987 and 1997.[7] It is early in the motorization process that public policy intervention can apparently have the greatest impact and help preserve the viability of those modes that the poor depend upon most.[8]

People living in poverty travel, on average, shorter distances and make fewer trips but take more time to do so than people from higher-income groups.[9] There are intimate links between the mobility of the poor and their range of housing and employment options. For low-income people in many Asian cities, even public transport fares are not affordable or are a very great burden. For example, in 1990 in the (then) lower-middle-income city of Jakarta, 14 per cent of households could afford only twenty bus tickets or fewer per month, and 40 per cent could afford only fifty-three, compared with the average household usage of 101 bus tickets per household per month.[10] Small changes in public transport prices and service levels can make a large difference to the mobility of the poor.

In most cities, the majority of trips by the urban poor are on foot. For example, in Jakarta in 1985, walking accounted for almost 60 per cent of all trips taken by the lower-income half of the population.[11] The transport needs of the poor have been neglected or are invisible, partly because walking itself has been too often ignored and not even considered to be transport at all. The prevalence of long walking trips is a key indicator of poor accessibility by the urban poor to facilities and affordable mobility. The economic privations of the 1980s in Brazilian cities saw a large increase in the share of walking trips.[12] In most Asian cities, pedestrians suffer extraordinarily hostile and dangerous street conditions and official neglect. Bicycles are within reach of many poor households in most Asian cities, and have been widely used for the last several decades.[13] In Asia, unlike most African and Latin American cities, bicycles are affordable even to many of those for whom public transport is unaffordable.[14] Nevertheless, the up-front cost, lack of credit facilities, and fear of theft are significant barriers to bicycle ownership among the very poor in many cities.[15]

FOCUS ON TRANSPORT MODES USED BY THE POOR

Clearly, an important approach in a pro-poor transport strategy is to make improvements that benefit the modes most widely used or potentially used by the poor.[16] Thus, making walking easier and safer, especially in and around low-income settlements and concentrations of low-income employment, would benefit the poor, since most of their trips are on foot. Similarly, policies that succeed in making nonmotorized vehicles (NMVs) and public transport more accessible and affordable to the poor will make a large difference.

It is important that policies aimed at making public transport affordable do not undermine public transport service levels by causing a reduction in investment. There has been a great deal of debate over the issue of exactly how to ensure plentiful and affordable public transport, but there is not the scope to explore the issue here. Employer-subsidized public transport ticket schemes, such as Brazil's *vale transporte* scheme and a similar system common in Japan, are promising examples, although they miss the informal sector (IS), and hence miss the very poorest.[17] Giving priority to public transport on the roads also deserves to be much more widely implemented, but there are few successful examples so far in low-income contexts. There are wide variations among Asian cities on whether they have been able to retain or foster plentiful and affordable public transport services. Manila, Madras, Seoul, Hong Kong (now Hong Kong Special Administrative Region of China, hereinafter, Hong Kong SAR), and Singapore (since 1970) are among those that have had some success, whereas Singapore (prior to 1970), Kuala Lumpur, Bangkok, Jakarta, Delhi, Ho Chi Minh City, and many others have had little success. There are no simple answers to the question of how to foster public transport, but apparently it is possible in cities at all levels of income.

Making NMVs, especially bicycles, more available and safer to use also benefits the poor and has enormous potential in many cities. However, such policies are often overlooked or trivialized. Several Asian countries have successfully pursued policies in the post-Second World War era which enabled a local bicycle manufacturing industry to flourish, and for large numbers of affordable bicycles to be available on the local market. The main low-income example is the People's Republic of China (hereinafter, China) but bicycle manufacturing is also significant in India and Pakistan, while earlier, Japan and Taiwan Province of China (hereinafter, Taiwan) also developed very large bicycle industries.[18] In China, before 1979, bicycle ownership and production remained something of a privilege but, with market reforms, bicycle ownership rose steeply.[19] China has also long provided direct government and employer-based subsidies to workers for the purchase of bicycles.[20] India and China have also managed to become large-scale exporters of bicycles. The lack of a significant domestic bicycle industry and high tariffs on imports in Bangladesh contribute to bicycles being beyond the reach of the poor in Dhaka.[21] There are some examples of successful credit schemes for the purchase of NMVs by low-income people in Sri Lanka and Bangladesh.[22] In the Bangladesh case, most of the loans, by the Grameen Bank, have been for pedicabs (cycle rickshaws) with a very small number for bicycles.[23] Low-interest loans for bicycle purchase are also available in at least some Indian cities.[24]

A corollary of a changed emphasis among the different modes of transport is that there must be reduced priority in planning and spending on the modes used mainly by the higher-income groups, and reduced emphasis on large-scale infrastructure projects.

FOCUSING ON THE INDIRECT BENEFITS OF TRANSPORT INVESTMENTS IS NOT ENOUGH

The main approach in the past has been to assume that through their effect on economic growth, transport improvements should be an instrument of poverty reduction. The adequacy of this approach has been questioned by recent commentators, including some within the World Bank.[25] On this assumption, multilateral development bank (MDB) lending for transport has tended to have less of a poverty focus than other sectors. Of transport projects in Gannon's and Liu's survey of World Bank projects since 1988, only 29 per cent stated poverty alleviation as an objective compared with 58 per cent of all of the projects examined.[26]

A narrow economic efficiency focus helps the rich more than the poor (and may actually harm people living in poverty). For example, an efficiency focus leads to a bias towards "strategic" infrastructure — higher-speed, longer-distance links and projects that "save time" for motor vehicle users. This is at the expense of pedestrian and NMV facilities, bus and jitney[27] enhancements, and projects that improve local, low-speed accessibility — all of which have a much greater direct positive impact upon the lives of the poor.[28] This bias is partly because of inherent anti-poor features of standard project assessment techniques, and because of distorted pricing regimes which often feature indirect or hidden subsidies that favour the private motorized modes of transport that are used most intensively by the highest-income groups.[29] There has been a long and concerted attack on narrow economic approaches in the development literature. For example, the United Nations Development Programme (UNDP) has concluded that the relationships between development and economic growth are highly indirect. As Hook paraphrases it, "...economic growth is not an end in and of itself, and is only important to development to the extent that it contributes to the goals of expanding people's opportunities to live long, healthy, and decent lives."[30] All of these arguments point to the need for a much greater emphasis on the basic access and mobility needs and travel patterns of the poor themselves.[31]

LAND-USE PATTERNS AND THE URBAN FORM

The intimate interconnections between urban transport and land-use patterns are well-known (although policy implications are controversial).[32] However, the importance of urban form in understanding transport in Asian cities has not been widely acknowledged or explored.[33] Furthermore, there has been surprisingly little analysis of the connections with poverty (which are somewhat complex) — an issue urgently needing a more thorough investigation.

Common features of the land-use patterns of large low-income cities in Asia include: high urban densities (usually well above 150 persons per ha)[34] despite a generally low-rise urban-built fabric; intense mixing of different land uses at a fine scale, especially in inner-city areas; low-income settlements interspersed or mixed with other land uses throughout the urban area; and a high proportion of jobs (in both the secondary and tertiary sectors) located in the central and inner areas of the city. However, within this inner-city area, jobs

are often relatively dispersed with no intense concentrations of employment.[35]

Such land-use features developed in response to the requirements of transport systems dominated by NMVs, buses, and jitneys. They also developed in ways that tended to minimize the need for expensive motorized travel. For example, high densities and intense mixing of land uses allow for many daily trips to be very short, and thus able to be made on foot or by NMVs. Once a city grows too large to be served primarily by nonmotorized transport, a relatively centralized pattern of employment maintains the potential to support plentiful bus and jitney services (although for various reasons this potential is not always realized). Although there are some problems associated with high levels of crowding, such an urban form is apparently in many ways intrinsically pro-poor, in the absence of significant numbers of private cars.

However, a number of trends associated with motorization (and other factors) have begun to undermine the pro-poor features of many large Asian cities (and have created other transport-related problems).[36] As upper- and middle-income earners have acquired private vehicles, real estate developers increasingly locate new developments so as to be easily accessible by private vehicle, even if this leaves them inaccessible by public transport and NMVs.[37] To the extent that high-speed, high-capacity roads have been built, they have tended to encourage haphazard development in long corridors, resulting in longer trip distances for residents of such areas.[38] Although Asian cities have spread out to some extent as they have become increasingly motorized, this is a slow process and most still retain high urban densities, especially in their inner areas. High-density cities are unsuited to high rates of private car use, and inevitably have low levels of road capacity per person.[39] Congestion has therefore become serious even at low levels of motorization. The rise of private vehicular traffic has decreased bus speeds and service levels drastically, and made nonmotorized transport dangerous and difficult. Travel for the poor has thus become slower and more difficult, even as other economic and planning forces have caused many of them to be displaced from central informal settlements to more peripheral locations.[40]

Asian cities' land-use characteristics are well-suited to transport policies that place the highest priority on transport modes that are best suited to these conditions. Public transport, walking, and cycling are much more space-efficient than private vehicles, especially cars.[41] Spatial arguments are an important additional reason, over and above the equity and ecological sustainability arguments that are usually heard, to promote these modes and to discourage private vehicles.[42]

SHELTER

Many economic development programmes completely miss the link between housing location, livelihoods of the urban poor, and transport. Housing rights activists have often not made this connection either, although this is gradually changing. Again, there is an urgent need to investigate this issue. Access to affordable transport is one of the most important factors in determining livelihoods for the urban poor. A survey of pavement dwellers in central Bombay by the Society for the Promotion of Area Resource Centres (SPARC) showed that 80 per cent walked to work. The reason for their choice came down to "...they were willing to live in congested dwellings without safety or security just so they

could walk to work."[43] Other studies have found similarly very limited mobility by the urban poor, especially poor women.[44] Some of the urban poor have to make a different trade-off by accepting long travel distances from a peripheral location in order to obtain affordable but secure housing. For some, this trade-off is forced on them, since in many cases relocation sites (after evictions) are often in remote locations that take little or no account of access issues.[45]

Clearly, expanding the level of mobility that is affordable to the urban poor would expand their range of shelter options. A general increase in mobility allows a city to spread out, which can potentially allow a drop in housing prices, and which may therefore also benefit the urban poor. However, as was seen earlier, an increase in the motorized mobility of higher-income groups can actually decrease the poor's accessibility by undermining nonmotorized and public transport, and by dispersing their destinations. This suggests that if attempts to achieve greater mobility in low-income cities are to help the poor, they must not focus on private vehicles. In fact, they must actively restrain private vehicle use.[46]

There are additional connections between transport and shelter issues. Unrealistically high standards and requirements for transport infrastructure in new developments (such as minimum road-width standards and minimum parking supply requirements) significantly raise the cost, taking them beyond the reach of the poor. This is also true in high-income cities.[47] Conversely, an explicit decision not to provide access for four-wheeled motor vehicles to houses within low-income settlements is one way that such settlements can avoid or reduce "gentrification," even if they are located in central areas.[48]

Finally, transport projects themselves have become an important cause of relocations. Transport is the largest cause of resettlement in the World Bank's portfolio of projects. Transport-related resettlements and evictions affect the poor in disproportionate numbers because low-income settlements naturally tend to be identified as low-cost, "easily cleared" alignments for new transport routes.[49]

GOOD GOVERNANCE

Good governance involves participation, the rule of law, transparency, responsiveness, consensus orientation equity, effectiveness and efficiency, accountability, and strategic vision.[50] In the transport arena, efforts aimed at better governance are needed to correct both market failures and government failings which affect the poor. Although some transport decisions are primarily technical, there is a widespread tendency to misuse the technical transport planning tools to justify decisions that are, in fact, primarily political in nature.[51]

The poor, being relatively powerless, are always likely to suffer most from the effects of inefficiency, misuse of power, corruption, and arbitrary decision making. It is therefore essential that efficient mechanisms and administrative structures are set up for both the technical and political processes, and that sufficient human resources can be developed and devoted to transport planning.[52] In many cities, responsibility for transport matters is divided among a large number of agencies with different priorities, subject to different pressures, which are often at loggerheads. Bangkok's case is perhaps the most notorious.[53] Strong mechanisms to ensure transparency and accountability are essential in order to

reduce the likelihood of corrupt practices, such as improper influence on the award of major contracts, an ever-present danger in the transport field in cities at all levels of income. Furthermore, meaningful participation requires a high level of transparency and accountability of major transport decisions, which are currently shrouded in secrecy in most countries of the region.[54]

Receptiveness to user needs will be more likely when responsibilities are decentralized to appropriate levels of government.[55] For example, most responsibility for urban transport decisions is best held at the level of the city or the urban region rather than with the central government.[56]

The common methods of evaluating transport projects are fundamentally and systematically biased against the poor and against the modes most used by the poor.[57] Project assessments also frequently fail to assess impacts on the poor and on other particularly disadvantaged groups, and major studies often fail to provide adequate disaggregated data on these groups. Specifically, conventional cost-benefit analysis does not take distributive impacts into account, and hence does not inform decision makers about which groups stand to gain and lose.[58] There is an urgent need for a thorough reform of these methodologies in all parts of the world. The World Bank has indeed begun to respond to earlier criticisms of its economic assessment methodologies. Gannon and Liu reject the idea that distributional factors should become an integral part of the assessment procedures themselves. There is a need for further debate on this point. At the very least, such issues must be publicly highlighted by assessment studies so that they can then be taken into account in the political decision-making process. All strategic plans and studies for transport projects must include an equity analysis which clearly identifies the beneficiaries and losers as well as specifically assessing the impact on people in poverty and other disadvantaged groups.

LISTENING TO THE POOR

The Recife Declaration includes a strong emphasis on recognizing the fundamental right of the poor to take part in decisions which impact on them. It states that the voices of the poor must be heard.[59]

Some governments and experts fear that an openness to participation will hinder decisive policy-making. There is a traditional mistrust in transport planning of all community involvement, let alone involvement by the poorest people. However, experiences are showing that such involvement can be constructive in making public policies more likely to be well-considered and enforceable. Meaningful participation in transport planning decisions by stakeholders, with a special effort to hear those who are usually voiceless and powerless, can lead to workable solutions to otherwise intractable conflicts. Poor communities have demonstrated that they can be reasonable when treated fairly and sincerely, but they are very vulnerable and their range of choices is extremely limited. When consulted in a meaningful way, with the help of experienced nongovernmental organizations (NGOs), low-income people have demonstrated the ability to state their interests, to appreciate many of the wider issues, and to seek reasonable compromises.

Documented cases that illustrate these points include negotiations involving the inhabitants of settlements along railway lines in Bombay and consultations with pedicab

(cycle rickshaw) drivers in Dhaka about potential changes to their operating conditions.[61] This year, a number of NGOs have championed the rights of low-income pedicab drivers in Java who are seeking the right to ply their trade in Jakarta after having been banned since 1989, and have managed to open up a process of negotiation and debate with the relevant authorities. The chances of success appear to be high. These good examples are unfortunately isolated and the documents include a realistic assessment of the enormous effort that will be required to make official agencies more receptive and consultative. The norm is that many communities have seen insincere consultations that merely seek to legitimize unfair actions that harm their communities, and which have left them justifiably suspicious and cynical.

Hearing the voices of the poor requires proactive effort from the relevant agencies. Nongovernmental organizations (NGOs) and networks need to develop a much greater role in this proactive effort in the transport sector as they already have in other sectors, such as in shelter issues.[61] Most of the NGOs and community-based organizations (CBOs) in Asia that assist poor communities to organize and empower themselves have not yet established strong capabilities to tackle transport issues and to make the connections between transport and other urgent issues for the poor, such as shelter, employment, and basic services. The organizations that champion the interests of the poor in higher-level policy debates have also sometimes missed the key transport issues that affect low-income people the most. Environmental organizations have taken up transport more often, but sometimes in ways that are not sensitive to the needs of the poor. Civil society organizations that specifically champion the modes of transport used by the poor are generally nonexistent or weak in most Asian cities (although there are exceptions). If the voices of the poor are to be heard more strongly in transport, decision makers will need to become more receptive **and** civil society will need to develop its capacity to tackle transport issues in a well-informed way (and be assisted to do so).[62] One of the key aims of the Sustainable Transport Action Network (SUSTRAN) for Asia and the Pacific, is to help community groups and NGOs gain access to the information and assistance that they need to demystify transport issues and to tackle them in a pro-poor way. Without broad-based consultation, the main voices that tend to be heard by government on transport issues are the well-organized and wealthy lobbies for car users, the trucking industry, the motor vehicle industry, the oil industry, and the infrastructure construction industry.

Categories of actors and stakeholders in urban transport are numerous and their interactions complex.[63] Transport is one field where public policy clearly does have a major impact upon the outcomes, even in low-income settings.[64] Political processes and public participation must go hand-in-hand with technical planning procedures. Participation is essential in order to balance the effects of market and government failures.[65] Hearing alternative voices can also help to overcome the "windscreen view" of transport problems by many urban transport decision makers. Most politicians, senior planners, and transport engineers have little personal experience of using nonmotorized transport or public transport as adults. This is particularly acute in cities where there is a strong polarization between rich and poor. The transport planning profession is also highly male-dominated in most countries. This is a serious obstacle to a gender-aware approach.

CRIME PREVENTION

Transport issues overlap with urban safety and crime prevention in several ways. Bicycle theft has been mentioned as a barrier to cycling by the poor who fear the loss of what is to them a very valuable asset. Lack of effective enforcement of road rules designed to protect vulnerable road users leads to aggressive driving that is a form of violence directed primarily against the poor. Crime and harassment on public transport vehicles and while waiting for public transport is a problem in many cities, especially for women — even to the extent of preventing them from using buses in some cases. Poor street lighting affects low-income areas more than higher-income areas and contributes to poor road safety as well as curtailing the after-dark movements of many people (especially women) for fear of crime. Heavy traffic on a street can cause it to become desolate and devoid of pedestrians or of informal surveillance, increasing the risk and fear of crime. Inappropriate pedestrian facilities, such as desolate pedestrian tunnels or overhead bridges, can become havens for attackers. Conversely, an obsession with security against crime can create an urban environment full of fences and walls which make for long circuitous routes for pedestrians (for example, when they are forced to walk around a long perimeter to reach the single security-gated entrance of a condominium or office complex).

GENDER

Recent research has greatly improved understanding of gender issues in the rural transport context, but so far there has been little research on the gender dimension in Asian urban transport. This is of vital relevance for poverty issues and must be quickly remedied, since women are estimated to account for 70 per cent of those living in poverty worldwide.[66] The growing literature on women and transport has also clearly shown that they tend to have different travel needs deriving from the multiple tasks they must perform in their households and in their communities.[67] Low-income women also tend to be dramatically less mobile than men in the same socioeconomic groups.[68] They are more dependent on walking and tend to have less access to bicycles or motorcycles in the household. Social restrictions hinder women's mobility in many cultures.[69] Efforts to increase the mobility of poor women may face stiff resistance from those who feel threatened or offended by such direct empowerment of women.[70] Since many more women than men are the caregivers to frail and elderly people, people with disabilities, and of children, the transport problems of these disadvantaged groups also impact disproportionately on women. Poverty, of course, compounds each of these disadvantages. Urban transport planning must quickly become gender aware, beginning with the routine collection of gender disaggregated data in surveys. Gender needs to be "mainstreamed" in the transport planning process. It is not enough just to discuss gender as an afterthought. Efforts to promote meaningful public participation also require special attention to allow the voices of women to be heard.

CHILDREN

There are also several linkages between transport and urban children. Even in high-income contexts, it has been noted that children's independent mobility has been progressively curtailed as motorization has increased.[71] Access to school is a vital issue for the children (especially girls, who shoulder a greater burden of home-based work) of low-income parents. Poor school location or a lack of affordable mechanized transport may be important barriers to school attendance by many poor children who generally have no choice but to walk to school. Children are vulnerable to the ill effects of air pollution, especially lead. The campaign to remove all lead from gasoline is a transport intervention of great importance for children's health. Many countries have yet to take this important step. Children are also more vulnerable to the effects of noise pollution than adults. Traffic danger is also an extremely serious issue for children who are much less capable than adults of dealing safely with traffic as pedestrians or cyclists. Safety campaigns which place the onus for safe road behaviour on parents or children themselves are most unlikely to have any impact on accident rates for children of low-income families. Children need traffic-free or traffic-calmed public spaces and these are usually particularly lacking in low-income areas. For various reasons, poor children face these issues more strongly and directly than children from higher-income families. For example, low-income settlements are often exposed to greater vehicular air and noise pollution. Children employed as street vendors face dangerously high levels of exposure to pollution, traffic danger, and noise.

TRAFFIC SAFETY

Rates of casualties per km of vehicle travel are extremely high in low- and middle-income cities (many times the rates in high-income cities),[72] and in middle-income cities with moderate motorization (such as in Malaysia, the Republic of Korea (hereinafter, Korea), Taiwan, or Thailand). This translates into the world's highest road casualty rates of over twenty deaths per 100,000 persons per year.[73] The urban poor are especially vulnerable to traffic danger. In low-income cities, vulnerable road users (pedestrians, bicyclists, and motorcyclists) comprise a high proportion of road fatalities[74] and the poor are disproportionately represented in these vulnerable road user groups. Car occupants constitute only a tiny proportion of road deaths in low-income cities. There is an urgent need for greater attention to the safety of vulnerable road users, using such measures as control of vehicle speeds, safer vehicle exteriors, greater conspicuity of NMVs and motorcycle users, and locally-appropriate (and affordable) traffic calming techniques.[75] It is important that measures that are supposed to improve the safety of vulnerable road users do not unduly restrict their mobility or discourage walking or cycling.[76] The overuse of pedestrian bridges and tunnels in Asian cities is an example. These so-called "pedestrian facilities" speed motorized traffic but they make life much more difficult for pedestrians and curtail the mobility of disabled people, NMVs, and handcarts. Also, they often actually increase the risk of accidents since in most cases, many pedestrians will continue to cross at street level.

THE INFORMAL CITY

Linkages between transport and informal settlements were mentioned earlier in the sections on land-use patterns and shelter. High densities and mixing of land uses were seen to be positive features that minimize the need to travel for residents of low-income settlements. These features can be retained in upgrading exercises (including those involving land readjustment) rather than completely swept away by eviction and redevelopment. Unfortunately, forced eviction and violations of housing rights continue to be rampant in many countries of the region.[77] Part of the mobility burden that is faced by the urban poor (especially women) relates to the lack of basic services in low-income settlements. Trips to collect water and dispose of waste may be burdensome in many low-income urban settlements and would be rendered completely unnecessary by nontransport sector solutions, such as the provision of these basic services via piped water and efficient collection services.[78] Toleration of a vibrant IS also reduces the need to travel in many Asian cities by allowing many goods to be sold by mobile vendors, thus reducing the need for household shopping trips. Vendors who use NMVs are often themselves poor and will be directly benefited by improvements to the street environment for their NMVs. Other important linkages through employment in the informal transport sector are further discussed below.

COMMUNITIES AND MUTUAL AID NETWORKS

New infrastructure meant for high-speed traffic flows and for middle- or long-distance transport (such as major arterial roads, highways, expressways, and many kinds of railway) can be a significant and direct negative impact on access and mobility by low-income people and by NMV-users in general. Low-income households are extremely vulnerable in the face of unforeseen mishaps, such as illness, accidents, or sudden changes in income or expenses. Community ties of mutual aid and support are an important cushion against such vulnerability. New transport infrastructure can destroy long-established communities or create barriers within them.[79] The poor, who control little private space in the city, are particularly dependent on the "commons," including public spaces such as streets, alleys, paths, parks, and squares. Traffic and cars (both moving and parked) usurp an enormous amount of urban public space,[80] thus adding to the already highly inequitable distribution of space (both private and public) in most cities. Traffic calming and similar approaches can reclaim public space to be used by the poor and rich alike. Residents of low-income settlements often enforce their own bans on motorized vehicles or install speed-restriction devices themselves, as for example in Surabaya's *kampung* where motorcyclists must dismount upon entering the alleys.

EMPLOYMENT

Urban transport interacts with employment issues for the poor in two main ways: indirectly by providing access to employment opportunities, and directly through employment of low-income people in the transport sector. The relative immobility of the urban poor,

especially poor women, is a central fact in their lives and severely limits their employment options. As mentioned earlier, the poor must make a trade-off between the time and costs required to access livelihood opportunities and their security and quality of housing.

Employment in transport for the poor can be in both transport infrastructure construction and in transport services. There is now widespread recognition of the benefits of employment of the poor for the promotion of labour-intensive techniques for transport infrastructure building, which could be pursued to a greater extent in urban areas than it has been so far.[81] IS transport services, such as jitneys and pedicabs (and associated industries), employ especially large numbers of low-income people in certain Asian cities, particularly in South Asia.[82] Policies towards these modes thus have an impact on the poor as customers, as operators, and as employees. The issues involved may be complex. There has been a great deal of debate over what policies should be adopted towards the various "noncorporate" transport modes, such as jitneys and pedicabs.[83] However, focusing on poverty issues, it is widely agreed that reducing barriers to the informal supply of both passenger and goods transport will be a "pro-poor" policy.[84] Investments in motor vehicle industries are sometimes justified on the basis of generating employment. However, this industry is a capital-intensive one and such investments generate relatively few jobs.

GOODS TRANSPORT

Goods transport is neglected in many studies of urban transport which more often tend to focus on passenger transport. Goods transport in low-income cities can be an important employer of the poor, for example, in labouring jobs hauling goods on handcarts or by NMVs. Efficient goods transport also affects the poor through its indirect impact on the prices of essential goods. In many cities, goods vehicles are more strictly restrained than private passenger vehicles (for example, through truck bans on major roads during peak periods or in some cases throughout the whole daytime period). This is despite the much greater importance of goods transport for economic development than the "luxury" of passenger transport by underpriced private passenger cars.[85]

ENVIRONMENTAL ISSUES AND SUSTAINABILITY

Global environmental concerns are not (yet) an important argument for changed priorities (away from private vehicles) in Asian urban transport. However, local environmental and traffic impacts are a compelling issue and reason for change, and one with an important environmental justice component. Densely populated Asian cities of all levels of income tend to have rather low uses of energy per capita in transport and the related parameter of CO_2 emissions per capita from transport (generally about one-tenth the levels of American cities).[86] Thus, Asian cities' urban transport tends to contribute little (per person) to the negative global impacts of urban transport. However, when local pollutant emissions are examined on a spatial or per ha basis, Asian cities register emissions per ha that are much higher than the averages in other regions. Densely populated Asian cities tend to face severe problems with local air pollution and other local impacts of traffic (greater than those in

most American or European cities). This is despite rather low levels of motorization and vehicle use per person in Asian cities.[87] These local impacts affect the urban poor particularly severely, since they are the least able to avoid or seek protection from them.[88] These impacts are unambiguously perpetrated upon the poor, primarily by the actions of higher-income groups.

QUESTIONS ABOUT MOTORCYCLES

Small motorcycles are now within reach of a surprisingly high percentage of households in low-income Asian cities, such as Ho Chi Minh City where it was estimated that by 1996 about 80 per cent to 90 per cent of households had access to at least one motorcycle, and public transport use had dropped to only 2 per cent of mechanized trips.[89] A high prevalence of motorcycle use in low- and middle-income cities is often associated with a poor supply of public transport (as in Viet Nam, Malaysia, Indonesia, Thailand, and increasingly in India).[90] There is an urgent need for a wide-ranging debate on the role of motorcycles in Asian cities and the implications for the poor and for future policy options.[91] Motorcycles are problematic in many ways but do provide relatively affordable mobility. So what is an appropriate and equitable policy, taking into account long-term synergies with public transport and with urban land-use patterns? Would a policy of gradual restraint of motorcycle use have a disproportionate impact upon the urban poor?

THE EMERGING ACCESSIBILITY PARADIGM

It has already been argued that a pro-poor transport policy must not emphasize the requirements of fast-moving private motor vehicles and large-scale infrastructure projects at the expense of walking, cycling, and low-cost public transport facilities, and at the expense of an emphasis on local, low-speed access. These comments dovetail with the emerging paradigms of transport planning even in high-income settings, which are increasingly abandoning the approach of attempting to expand transport capacity in a never-ending but futile attempt to cater to "demand". Accessibility planning is increasingly replacing "automobility" planning.[92] At a fundamental level, a pro-poor approach to transport policy is compatible with most aspects of the emerging worldwide push towards "sustainable transport". Nevertheless, it is important to keep the poverty focus explicit so that it does not get submerged by the enthusiasm for ecological sustainability.

STIGMA

There is an unfortunate tendency everywhere that if any mode of transport comes to be seen as being for the poor, it tends to become stigmatized as being suitable **only** for the poor. Thus, in certain cities, walking, cycling, and/or the use of public transport may all be considered as being beneath the dignity of a middle-class person. For example, in Dhaka, middle-class people are embarrassed to be seen on bicycles, even though ironically the very

poor actually cannot afford bicycles.[93] In many cities, buses are stigmatized while rail systems are not; however, in some Brazilian cities the opposite is the case.[94] The stigma that attaches to certain modes can also influence decision makers to ignore them, despite their importance to the majority of the population. Conversely, if previously stigmatized modes do receive a high priority in public policy, their low social status can gradually be reduced. In order to maintain the viability of plentiful public transport and to help justify investment in pedestrian and cycling facilities that benefit the poor, it may be necessary for these modes to continue to be used by middle-income people. The impact of social status issues on transport policy is complex, but needs to be borne in mind when attempting to devise pro-poor policies.

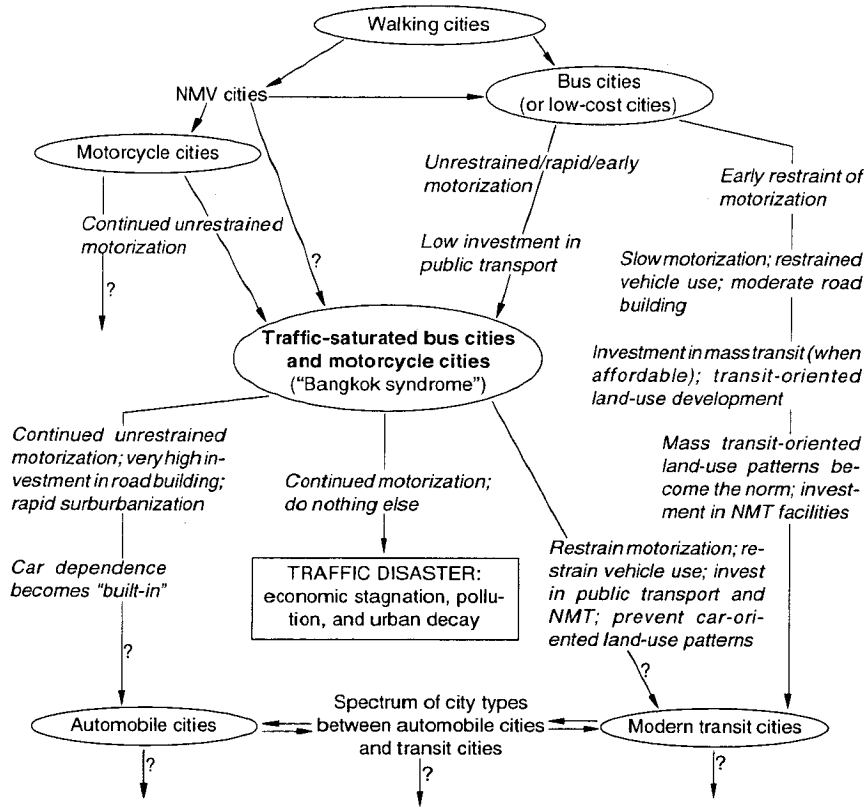
LOW-COST STRATEGIES IN TRANSPORT AND URBAN DEVELOPMENT

A pro-poor approach to urban transport must inevitably be a low-cost approach. Such a strategy is also compatible with economic efficiency, an emphasis on ecological sustainability, and with the creation of highly livable and attractive cities.

The successful low-cost strategy of Curitiba in Brazil with its "surface metro" using busways is now well-known.[95] A low-cost, pro-poor approach is also not necessarily a second-class transport approach. It is not widely realized that a number of cities that are now quite wealthy, but which have successfully retained a prominent role for public transport (and in some cases also bicycles) actually adopted a low-cost strategy during the early stages of motorization. Figure 1 illustrates some of the possible development trends in a schematic way. Seoul, Hong Kong SAR, Singapore, Amsterdam, and Copenhagen are all cities in which the ownership of private cars was severely restrained for decades, beginning when motorization rates were low. Investment in public transport and road infrastructure was also kept at modest levels until per capita incomes had risen to high levels.[96] Even Zurich in wealthy Switzerland has had great success with a relatively low-cost approach to both its public transport and road systems.[97]

Few low-income cities can afford mass transit systems such as those now seen in Singapore, Seoul, and Hong Kong SAR. But in fact, Singapore, Seoul, and Hong Kong SAR began their restraint measures in the 1960s or early 1970s, long before they were able to afford to build mass transit systems. Indeed, it is likely that traffic restraint helped them to keep traffic congestion at bay and to buy time so that they could continue to function successfully with bus-based transport systems, and then to eventually provide high quality public transport.[98] Although it is not easy to formulate politically acceptable restraint policies that are equitable and that do not unduly damage rural interests and commerce,[99] finding such measures needs to be a high priority for low- and middle-income countries everywhere. Korea's example of very strong restraint of private vehicles throughout the post-war period right up until the mid-1980s may be a particularly useful example to other countries that currently have low incomes and low motorization.[100] The examples presented here show that restraint of private vehicles offers a way for such cities to buy the time needed for gradual improvements in public transport. Restraint of private vehicles also reduces the urgency to expand the road system.

Figure 1. A Simple Generic Model of Urban Transport and Land-Use Evolution in Developing Cities



Source: P. A. Barter, "An International Comparative Perspective on Urban Transport and Urban Form in Pacific Asia: Responses to the Challenge of Motorisation in Dense Cities" (Ph.D. diss., Murdoch University, Perth, Western Australia). (under preparation)

It seems likely that restraining private vehicle ownership and use, especially in low- and middle-income cities, will be an important part of a pro-poor transport policy.[101] However, mistaken equity arguments are often heard in the debates over such measures and it is vital that these debates be better informed. There is therefore an urgent need for a thorough examination of the equity impacts and the impacts on the poor of various options for transport demand management (TDM) and fuel pricing policies in low-income cities. How the relevant revenues are used is a key factor in the equity outcomes. If revenues are used in a progressive manner, lower-income and mobility-disadvantaged people may benefit overall. If they are dedicated to more road construction or are rebated to drivers as a group, then they may be regressive.[102]

CONCLUSIONS AND RECOMMENDATIONS

This article has highlighted many ways in which current transport-related practices can be changed to promote the rights of people living in poverty, particularly women and children. Some of the actors who can be a focus for these efforts include: multilateral aid organizations; the United Nations (UN) system; regional organizations, such as the Association of South East Asian Nations (ASEAN) and the Asia-Pacific Economic Commission (APEC); national governments as well as provincial/state and municipal governments; academia; professional bodies; and NGOs and CBOs of various kinds and their networks and coalitions.

It is impossible to include here the long list of specific policy reforms that could be advocated to improve the situation of the poor in relation to transport. However, action on this issue can fall into the following broad areas:

- Firstly, this article has highlighted a somewhat shocking level of ignorance on many aspects of urban poverty and transport in Asia. There is thus an urgent need to commission well-focused research that is both action- and policy-oriented in order to answer the most important questions and to fill the crucial gaps in knowledge that have been highlighted.
- Secondly, concerned individuals and groups must simply highlight the issues and call for greater policy attention by all relevant actors. An energetic advocacy effort is required to encourage a much greater poverty focus by transport planners as well as greater attention to transport issues by those focused on poverty. Despite the ignorance mentioned above, there are still many steps that are already well-known and which would make an enormous difference to people in poverty. Many pro-poor initiatives in this field are desirable on a number of grounds over and above their benefits for the poor. Some of these synergies have been alluded to in the article.
- Thirdly, and perhaps most importantly, a much greater effort must be made by a wide range of actors to ensure that the voices of the poor are heard on this issue, as on all others that concern them. Effort is required to facilitate meaningful participation by people living in poverty in the transport-related decisions that affect them most. This is not a simple matter but the rewards appear to be high. Therefore, appropriate resources need to be directed towards making this possible.

NOTES

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1/ The focus is on people living in so-called "absolute poverty," but there will be some flexibility on this because of a recognition that narrow statistical definitions of poverty are inadequate. The poor are most numerous in low-income cities. Transport issues for the poor in middle- or high-income cities are thus not emphasized in this article, but nor have they been completely ignored.

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25/ Gannon and Liu, "Poverty and Transport."
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27/ The word "jitney" refers to public transport services offered by the "informal" or noncorporate sector in small vans or minibuses on fixed routes. Examples of jitneys in Asia include the jeepneys of the Philippines, *bemo* and *mikrolet* in Indonesia, the public light buses (PLBs) in Hong Kong SAR, and the *silor lek* of Thailand. The term paratransit is sometimes used to refer to jitneys but is avoided here because it is ambiguous and also includes IS taxi modes and sometimes also pedicabs, which have completely different characteristics to jitneys.
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34/ The term, urban density, has a specific meaning. It refers to the number of people per ha of **built-up** land. Undeveloped land, such as agricultural land, water surfaces, and forest, must be excluded from the calculation to avoid producing "gross density" figures that cannot be meaningfully compared.
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COMMENT

Michael J. G. Parnwell

Paul A. Barter's article provides a useful overview of some of the more important issues relating to the transport needs of the urban poor in Asia, set loosely within a broader debate on "sustainable transport". It is written from an advocacy perspective, and presumably conveys a sense of the ideology and thinking of the Sustainable Transport Action Network (SUSTRAN) for Asia and the Pacific.

A fairly convincing argument is presented about the ways in which the "urban poor" have been marginalized, disadvantaged, and largely overlooked in the pursuit of large-scale, fast, and efficient transportation systems supporting the needs of rapidly expanding national economies and an increasingly affluent and influential urban middle class. There are nonetheless a number of shortcomings that limit the article's contribution to its fundamental underlying objective of helping to "...make a difference to the lives of people living in poverty". The following discussion focuses on these points in the hope that it may contribute to a fuller realization of this objective.

One problem with advocacy as a phenomenon is that it risks introducing a situation where advocates speak on behalf of, rather than acting as a mouthpiece for, their target group. Where the agenda is framed within, in this instance, a neopopulist ideology, there is a real danger that resulting action recommendations are determined more by what advocates think is right than what the people themselves genuinely wish to occur. In my wide experience of Asia, I have tended to find that marginalized and disadvantaged people very often aspire to emulate those who are in a more fortunate position than themselves, rather than become ossified in their present situation. I am in full agreement with the author that we have a responsibility to ease their burden in the short term, most particularly by removing institutionalized biases against them, but the suggestion that, *inter alia*, a pro-poor transport policy should facilitate walking and bicycling as modes of transport, while epitomizing the neopopulist perspective, may not represent the peak of aspiration among the urban poor. I would like to have been convinced more strongly by the author that the problems identified and views expressed in the article were emanating from the popular groups themselves, rather than from the textbooks of postdevelopmentalism.

Continuing from the above, the article seems to be stronger on idealism than realism. Perhaps the major problem, given its ideological and practical underpinnings, is the article's limited discussion of options and solutions. While it is quite strong in detailing what is wrong, and in identifying some of the broad criteria to be considered in a pro-poor strategy, there is very little with regards to an action agenda, and even less discussion of how

the ideals and suggestions are to be put into practice within the context of prevailing development realities (i.e., "doability") and competing interpretations of appropriateness and priority. The statement that anticipatory intervention is preferable to reactive planning, while undoubtedly true in many respects, ignores the fact that the issue with which we are concerned in most instances requires *post facto* amelioration rather than preventative action. One might also argue that the article is more concerned with dealing with the "symptoms" of urban poverty, of which a "transport bias" is but one, rather than some of the more fundamental root causes.

Inasmuch as the article purports to contribute to both the debate concerning, and the movement towards, "sustainable urbanization/cities" (of which "sustainable transport" is an important element), it does not really achieve this objective due to its failure to establish a conceptual framework at the outset. Moreover, the article is not particularly helpful for the generic way it portrays "Asia" (a somewhat amorphous viewpoint which significantly downplays the importance of both diversity and contextuality), "poverty" (which is hardly discussed, let alone defined, even though it is the pivotal phenomenon), and "urban" (using the compartmentalized entity of "city" rather than a more fluid view which would incorporate, for instance, extended metropolitan regions or recognize the importance of rural-urban relations and interractions).

I should conclude by stating that, personally, I have a great deal of empathy with the author's argument and perspective, but as a gnarled scholar I have learned that idealism must be balanced by realism, and that principles must be matched by action. The article makes a very useful contribution to the identification of problems and alternatives, but at this stage falls a little short in respect of charting a reasoned course through the minefield of developmental reality.

COMMENT

Harry Dimitriou

Critique of Views

A possible alternative title for Paul A. Barter's article could be "Transport and Urban Poverty in Asia: A Cursory Examination of Key Issues".

This is a first-class article. The principal criticism I have of it is that it covers so much ground that it might lose the interest of the specialist transport reader and includes, perhaps, rather more cross-references to authored works than it should.

The multidimensional framework of the article is excellent although such frameworks are not always, unfortunately, appreciated by those interested in the transport field. Some form of diagrammatic representation of the interrelationships among the various issues raised would also have been welcome.

Some of the lessons posed (e.g., listening to the poor) are extremely important and warrant closer examination. There is in fact a danger with this article that too many important lessons are given, with the result that individually they do not attract the attention that they each deserve. On the other hand, the title does imply that it merely offers a cursory examination of issues, and, as such, a more in-depth analysis may in fact not be appropriate. In this sense, my comment may be out of context! Given the extensive description of the various issues, the discussion of **low-cost strategies in transport and urban development** was a little too restrained. More of a response to the issues would have been welcomed. If this article were to be followed, however, by another that focused exclusively on such strategies, then the article as it stands is very powerful.

The conclusion posed by the author that "...this article has highlighted a somewhat shocking level of ignorance on many aspects of urban poverty and transport in Asia" needs to be up front, in an introduction or opening section well before the reader of the article comes to the same conclusion. It is an exceedingly important statement that needs to be made and widely disseminated. Barter should write a follow-up article focusing more on proactive and prescriptive measures that could be suggested in tackling the issues raised.

Advancing New Ideas or Approaches

It is very apparent that the strength of this article has more to do with familiarizing the reader with the issues than offering measures to tackle them. This is a very legitimate exercise in itself, but has the implication that no real new substantial approaches are offered — except the call for a multidimensional perception to the subject area.

The above suggestion that the author be invited to prepare a follow-up article, with more of a focus on new approaches would ensure that the contribution Barter has made has much more added value. As a final observation, it would have been extremely useful to have had more statistical evidence illustrating the issues cited.

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