Car Sewa: The Iconography of Idle Worship

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Knowing full well that the private motor car is more a bane than a boon in terms of the various costs it entails, the time for policymakers in India to encourage greater use of public transport and non-motorised modes is past. Illustrating the politics of privileging car users over the vast majority that uses public transport like buses, this paper points to the vicissitudes the bus rapid transit system in Delhi has gone through from its introduction in 2005 to the present. Given that there is already little space and energy for more cars in India's cities, and the social and political problems they engender, the vicious cycle within which the system is trapped has to be broken. But that is easier said than done.

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There is this rather odd fact – globally 131 million people are estimated to have died of war in the 20th century, 103 million in the two world wars alone. And, in the same century, 60 million people died in road traffic accidents (Starr 2013).[1] Add to that the curious aspect that modern war is particularly devastating because of the mobility of armies dependent on the same internal combustion engine that drives the car, and the massive fuel consumption of this energy-intensive technology has given birth to lethal amounts of air pollution leading to climate change. This gives rise to the inevitable query whether the motor vehicle is really necessary for "quality of life". If private cars were removed from roads, would the economy collapse? Would transportation and mobility come to a grinding halt? Or would there be benefits that would accrue to a city as a whole, even make for a better society? All things considered, should not the private motor car be considered a weapon of mass destruction?

It is clear from Figure 1 (p 91) that the greater the degree of "development" (Australia, Japan, Netherlands, Norway and the US) the higher are the deaths of those who travel in motorised four-wheelers (≈70%).[2] In the "developing" countries (India, Indonesia, Malaysia, Sri Lanka and Thailand), the number of pedestrians, cyclists, and two-wheeler riders who die hovers around 80% of the total – and their deaths are, fittingly enough, caused by the car. So what kind of development is desirable – the one that murders people in non-motorised modes or the one that kills those in motorised ones?

The first injury crash in the US was supposedly suffered by a cyclist in New York City on 30 May 1896, but if we look at the number of deaths by motor vehicle accidents subsequently, Figure 2 (p 91) tells us that it climbed steeply from almost nil to about 29 deaths per 1,00,000 people between 1900 and 1939, and then began a slow decline that brought it down to about 12 per 1,00,000 by 2009, even though the number of cars kept increasing, particularly after 1945.[3] Currently, the average number of accidents every year is about six million and three million people are injured, of which two million are of a permanent nature and 40,000 lose their lives. Not surprisingly for a society that prides itself on being "free", 40% of the deaths are reportedly caused by accidents that involve alcohol, while 30% are attributed to speeding. Of those surveyed, 69% admitted to talking on the phone while driving and one in three said they sent or received text messages at the same time.[4]

In India, the figures are not near those of the US, but have been edging closer over time, as befits a nation that is committed to the same path as the US, with the same visions of "world class" and "double-digit growth", but perhaps not the same

Figure 1: Road Users Killed in Various Modes of Transport as a Proportion of All Road Traffic Deaths (in %)

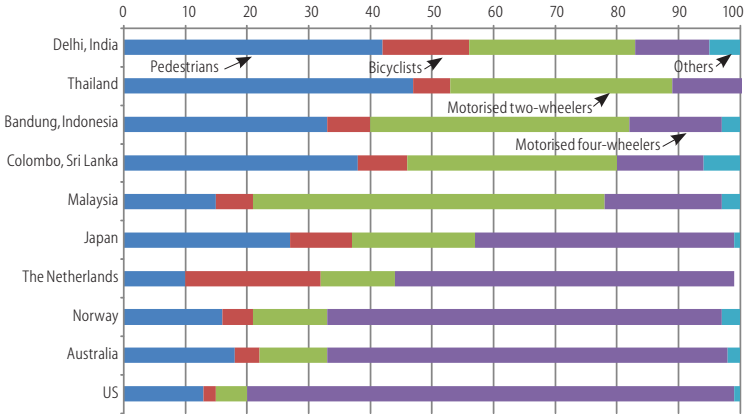
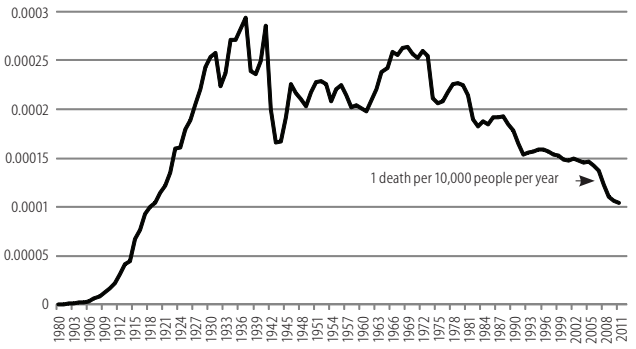
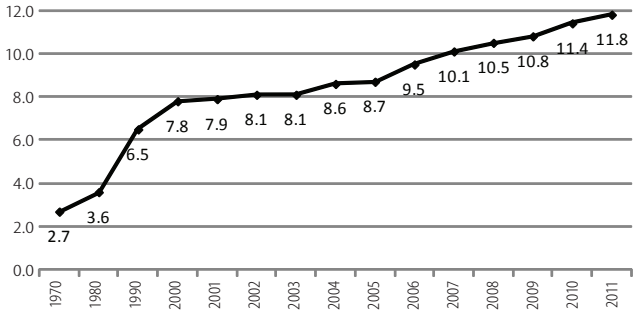


Figure 2: US Motor Vehicle Deaths as a Fraction of the Total Population



degree of resources and wealth to put into safety and regulation. Thus, as Figure 3 illustrates, the number of persons killed in road accidents in India climbed steadily from 2.7 per 1,00,000 in 1970 to 11.4 in 2010, with a spurt after 1980 when the "people's car" became available. In other words, India is approaching what the US has been able to achieve over 70 years of research and development in the field of vehicle safety and accident prevention. More "developed" states such as Karnataka, Himachal Pradesh, Andhra Pradesh, Haryana and Tamil Nadu, have crossed the 16 per 1,00,000 line of death. Bicyclists and pedestrians constitute more than 50% of traffic fatalities in cities and more than 30% of fatalities on highways (Mohan et al 2009; Tiwari et al 2000). Bicycle riders and

Figure 3: Number of People Killed in Road Accidents in India Per 1,00,000 Population



pedestrians are the most unprotected road users and have to share scarce road space with motorised vehicles of different engine power and speed resulting in serious conflicts within traffic flows. The question is whether India will willy-nilly follow the path of development set by the US to provide some degree of safety to its citizens over the next century or whether there are other options for policymakers to get to that goal faster and cheaper.

Policy Double Speak

The question of development choice is obviously a political one because it has to resolve the "conflicts in traffic flows" – between motorised and non-motorised forms, and between public and private transport modes. How should this political choice be made, and by whom? For instance, the National Urban Transport Policy (NUTP) of 2006 tries to make this choice explicit in its vision statement, which says that "people should occupy the centre stage" and all plans should be for their common benefit and well-being, with "equitable distribution of road space". It clearly mentions that free movement has been hampered by the explosive growth in the number of motor vehicles while the road space remains limited. Further, it tries to encourage greater use of public transport and non-motorised modes by offering central financial assistance for this purpose. And it aims at reducing pollution levels through changes in travelling practices, integrated land use, and technological improvements.

But then the NUTP suddenly shifts the emphasis to "improving access of business to markets and other factors of production", by tapping the "strengths of the private sector", along with a series of reforms to make private investments "sustainable". Key to this business vision is the concept of turning land into a commodity from which revenues can be generated for paying for mass transit and its infrastructure. The high value that land will acquire, mainly around and near transport corridors, because of this commodification becomes a concern of the policy only in the context of parking space for vehicles, and not because such gentrification will exclude large sections of the urban population from shelter and livelihoods because they can no longer afford land. In other words, there is a kind of double-speak implicit in the policy, which seems to provide for the rational need for public transportation to the huge majority, but at the same time argues for huge investments to build an infrastructure that will be paid for by the sale of land, which will result in the exclusion of the same majority that will be using public transport. This is the underlying politics where opposing tendencies steer decision-making towards the more powerful of the tendencies. Nowhere is this politics more apparent than in the strange case of the bus rapid transit system (BRTS) as it has unfolded in the "world-class" city of Delhi (Hazards Centre 2012a).

According to the Hazards Centre, the story of the BRTS began with a public interest litigation (PIL) against growing air pollution filed in 1995 by environmental lawyer M C Mehta in the Supreme Court, followed by a campaign by the Centre of Science and Environment (CSE) against "dirty diesel" in 1996, and the switch to "clean" fuels between 1999 and 2002. In 2000, a study by the Central Pollution Control Board (CPCB) showed that there had been a significant reduction in pollution at traffic intersections and in industrial areas in terms of

carbon monoxide (CO), nitrogen dioxide (NO_2), lead, sulphur dioxide (SO_2), and suspended particulate matter (SPM) levels because of the move from diesel to compressed natural gas (CNG). But, in 2003, CO, SPM, and respirable suspended particulate matter (RSPM) levels were still reported to be above permissible limits and, in 2004, an amicus curiae reported to the court that the rapidly growing number of vehicles were leading to crippling congestion and slow traffic, and threatened to destroy the gains of pollution control.

Subverting Public Transport

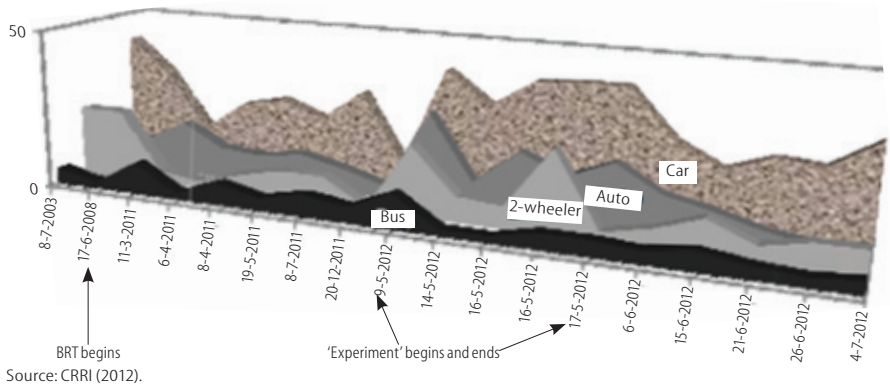
It was in this context that the Supreme Court accepted the recommendations of the Environment Pollution (Prevention and Control) Authority (EPCA) to implement five corridors of the high capacity bus system (HCBS) in Delhi and, on 30 November 2005 passed directions for its implementation, The court accepted the logic that the HCBS (or BRTS) was designed not only for buses (carrying about 40% of the commuters), but also to provide a demarcated space for bicyclists and the pedestrians (accounting for 42%), leaving two lanes for private cars and two/three-wheelers (8% and 10%, respectively). The Hazards Centre study reveals that, right from its inception, the BRTS faced stiff opposition from the motorised private vehicle lobby and sections of the media, which grew over time and eventually led to a PIL filed in the high court in February 2012, saying that "the large number of other vehicles is far disproportionate to a small number of buses which ply on the exclusive corridor".

As the study argues, the Supreme Court was concerned with the congestion and pollution caused by private motorised vehicles, and augmenting public transport. But the high court ignored this concern while admitting the petition, directing that expert bodies (like the Central Road Research Institute; CRRI) carry out a study of the BRTS corridor to look into whether non-bus vehicles had been slowed down and how many people were suffering because of the BRTS. The transport department enlarged this to compare the BRTS corridor with other roads. And the CRRI seized the opportunity to take this into a completely different, and unwarranted, realm with an actual "trial" modification of the corridor to evaluate it with and without BRTS. This eventually led it to conclude that the "trial run scenario in 2013 would reduce the total travel time... by 39%", the "no BRT option yields better benefits for this corridor with the given traffic conditions", and "allowing other vehicles to ply on the earmarked lane for buses yielded better benefits" (CRRI 2012) – where all "benefits" were clearly vehicle-centric.

The Hazards Centre, on the other hand, spelt out the three original objectives, as embodied in the Supreme Court's directions, as (1) implementation of the HCBS as planned to provide access to cost-effective and rapid public transport; (2) reduction of congestion by controlling the number of motorised vehicles; and (3) consequent lowering of the levels of pollution. It then proceeded to examine whether these three objectives had been fulfilled by the BRTS. To begin with, its researchers collected primary data on the corridor and compared it with information available from the operators of the BRTS, the Delhi Integrated Multi-Modal Transit System (DIMTS). The information was from the global positions system (GPS) monitors installed on cluster buses, automatic ticketing, video cameras, and periodic surveys. They showed that the modal share on the BRTS compared very favourably with that for all Delhi. Thus, the BRTS carried 65% of commuters on buses (6% of total vehicles) compared to Delhi's average of 44%; and 26% by cars and two-wheelers against Delhi's 38%. In other words, the BRTS was providing access to cost-effective and rapid public transport as mandated by the court.

As for reducing congestion and traffic density, the study examined video footage and photographs of one of the junctions in the BRTS corridor when the traffic light was red. This was done for three years – before the BRTS, during the BRTS, and during the CRRI trial when the corridor was thrown open to private cars. The results in Figure 4 show that the number of buses at the traffic light throughout the period did not vary beyond two to seven except on two occasions at the start of the "experiment" when it crossed 10. The number of cars and two-wheelers levelled off around 20 and five once the BRTS became operational, but sharply rose when the CRRI trial was initiated. They dropped dramatically when the trial was over and the DIMTS managed to restore the dedicated bus lane to some semblance of order. But with the court's consent to the petitioner's plea that the bus lane should remain open to all other traffic, the numbers have steadily started climbing again.

Figure 4: Vehicle Share on BRTS Before, During and After the Trial



Source: CRRI (2012).

Finally, the hypothesis behind the BRTS was that a good public transport system would help people to move away from private vehicles and thereby significantly reduce the pollution per passenger-km travelled. An air monitoring study was conducted by the Hazards Centre on the BRTS at three traffic signals, both under normal BRTS operations as well as during the CRRI trial, and at three intersections on the parallel Khel Gaon Marg, both during morning and evening peak traffic hours. The results are in Table 1 (p 93), and demonstrate that the values of all parameters were found to be considerably higher

during the trial, except for the anomalous value for SO_2 at Chirag Delhi, which was higher during normal BRTS operations even though NO_2 and SPM values were considerably lower. The corresponding values for the adjacent Khel Gaon Marg, with much lower traffic flow, were uniformly higher. Hence, it can be postulated that the BRTS did bring down pollution levels.

Table 1: Air Pollution Monitoring Results on BRTS and Parallel Corridor

Sites	Sampling Time (Mins)	Flow (lpm)	Volume = QT	SO_2 ($\mu g/m^3$)	NOx ($\mu g/m^3$)	SPM ($\mu g/m^3$)
Chirag Delhi BRT	240	1.3	312	11.86	56.64	673.07
Archana BRT	240	1.4	336	0.91	56.47	446.62
Moolchand BRT	240	1.25	300	1.10	54.75	566.67
Chirag Delhi trial	240	1.4	336	3.95	61.72	1,428.70
Archana trial	240	1.2	288	6.29	72.15	416.70
Moolchand trial	240	0.9	216	7.80	144.55	601.85
Panchsheel Khel Gaon	240	1.2	288	5.85	111.24	694.44
Gargi College Khel Gaon	240	1.06	254	9.83	112.15	1,100.62
Ansal Plaza Khel Gaon	240	1.3	312	10.22	110.25	1,142.30

Source: CRRI (2012).

The Hazards Centre study, therefore, concluded that "the Supreme Court's directions in 2005 for implementation of the HCBS, based on scientific investigation and sound technical advice, have been carried out to the extent possible in the present BRTS corridor from Ambedkar Nagar to Moolchand" (2012a). This was despite the full corridor not being implemented; other planned corridors being kept in abeyance; the traffic police abandoning the role of regulation; and no attempt being made to restrict the growth of private motorised transport. This study was presented to the high court with the plea that the full 19 kilometres of the BRTS corridor be implemented; the number of buses be substantially increased; other planned corridors be taken up; the traffic police be asked to take up their mandatory role of regulation; and attempts be made to restrict the growth of private motorised transport.

The Politics of Cars

In October 2012 the high court ruled on the matter and dismissed the public interest petition, much to the relief of votaries of public transport.[5] But while it referred to the original order of the Supreme Court, it did take into consideration the arguments of the EPCA that led to the ruling. It also noted the logic of the NUTP, but ignored the primary objective of keeping "people, rather than vehicles, as its main focus", and thereby equated the rights of persons with that of vehicles. The high court acerbically commented on "Cars, cars and cars and nothing else", but suggested that the Delhi government take "remedial measures to decongest traffic at the Chirag Delhi crossing". The bench also expressed its gratitude to the petitioner for having highlighted the problem at the ground level, but did not take any notice of the Supreme Court's 1998 direction that the bus fleet be increased from roughly 3,500 to 10,000 by 2001 – something that has still not been done. Overall, the judgment implies that car users (and their concerns about "congestion") should continue to be privileged.

This political choice has manifested itself in what has transpired after the October 2012 judgment. The BRTS corridor is in total disarray with cars given free reign over all road space, and road dividers have been disrupted all along it. There has been no increase in the number of buses, and there is no policing whatsoever. There is no determination on the part of the state government to restore the single truncated BRTS to its original design, forget expanding it to its full length, or attempting to construct the 14 other promised corridors. But the expansion of the metro network continues, even though 1 km of metro costs as much as 20 times that of a bus corridor. Most revealingly, the shrill voice of the media that consistently attacked the BRTS has died down after the judgment. All the studies carried out by the CSE, Delhi Greens and the Indian Youth Climate Network (IYCN), EMBARQ, Hazards Centre, DIMTS, and NDTV that consistently point to widespread approval for the BRTS by all types of road users have been consistently ignored.

If these other voices were heard in the policymaking process, what would they say? According to the Hazards Centre study (2012a), 94% of bus users, 30% of car users, 86% of motorcycle and scooter users, and 92% of pedestrians agreed that the BRTS should be continued. Even shopkeepers and residents in neighbouring areas were largely in favour of the BRTS. According to the CSE study (2008), 83% of the respondents were happy with the BRTS and wanted it to be continued, while 88% to 91% of bus commuters, cyclists, and pedestrians supported it and wanted it to be extended to other areas of the city. The EMBARQ study (2009) emphasised that 88% of bus commuters, 85% of pedestrians and cyclists, and nearly 50% car and two-wheeler users were satisfied with the BRTS system. The DIMTS data demonstrated that net throughput of all kinds of vehicles in the BRTS corridor had improved, along with a reduction in transit time for bus commuters and cyclists. An NDTV poll in 2008 showed that there was a sharp divide of opinion on the success of BRTS between those who used buses and those who drove cars. But these voices were not heard, either in the media or in the executive chambers. Clearly, there was an implicit political choice being made all the time.

We now turn to the final question. If a different political choice had been made to favour the bus and the cycle and the pedestrian on city roads and to increase their numbers dramatically, while taking away the priority given to the private car and the two-wheeler in city design, would the economy collapse and urban life come to a standstill? As the data presented above shows, the BRTS in Delhi has the capacity to provide equitable road space to the bus commuter, the cyclist, and the pedestrian, as well as the private motorised vehicle, in keeping with the vision of the NUTP. Arguably, if the car were to be removed from the road (it is pertinent to remember that for every one hour a private motorised vehicle occupies the road, it spends about 10 hours squatting on public space), there would be more than enough space to accommodate many more public and non-motorised modes. And, bearing in mind that buses carry 50 times more passengers on an average than cars, congestion would be a thing of the past while public space would expand hugely to accommodate a variety of social life. Pollution and traffic accidents would come down significantly. Safety and security could be enhanced through appropriate road design and street furniture. Many of these have already been extensively documented in cities all over the world where there has been the political

will to push through large-scale road-based public transport projects (for instance, ADB 2012; Gutscher et al 2000; Penalosa 2008; Alpkokin and Ergun 2012; Norquist 2000).

The key argument, then, may lie in the economic value of automobile manufacturing. The contribution of the automobile sector to the nation's gross domestic product (GDP) has been estimated at 5% to 7%, and is targeted to reach 10% by 2016 and, very optimistically, jump to 25% by 2025.[6] According to the department of industrial policy and promotion, the auto sector accounts for 4% of the total foreign direct investment in India.[7] The Indian automobile industry is estimated by the Ministry of Road Transport to be manufacturing (in 2010) 14 million vehicles annually, of which cars constitute roughly two million, two-wheelers 10.5 million, and commercial vehicles 5,70,000. Bus production is about 1% of the total or, in other words, less than 1,50,000.[8] On the other hand, the share of the bicycle industry in GDP stands at less than 0.1%, although the number of units (in all segments) produced annually is around 13 million, according to the Planning Commission. This is a little over 10% of world production, compared to China's huge 40%.[9] The anticipated jump in car manufacture to 25% of GDP is actually quite unsustainable from the point of view of land and fuel requirements.

Now, just assuming the extreme case, suppose all car and two-wheeler manufacturing was suspended. Would that cause transportation to collapse? It would, but only if the bicycle and bus sector were not geared to rise to the challenge. If the new two-wheelers were replaced by cycles, that would immediately double cycle manufacture and take India to 20% of global production. If the new cars were replaced by buses, assuming that each bus would carry the passenger equivalent of 30 cars, there would be a need for 70,000 buses every year. That is, about 50% more than the current capacity. Then there is, of course, the replacement of older vehicles which would significantly boost additional production of cycles and buses. Considering that road transport accounts for 4.7% of GDP currently, and that buses constituted as much as 11% of the vehicle population in 1951, the benefits to the economy and to mobility may not outweigh the loss from the non-production of cars, but the additional value of other social factors such as increased employment, reduced health and mortality costs, a huge decrease in expenditure on car-centric infrastructure such as highways and flyovers, massive savings in land and the oil import bill, and a far more democratic society would be considerable.

It is, therefore, transparently clear that as more and more cars are produced, it will it be difficult to find adequate space and energy for those cars, and there will also be corollary social and political problems. Hence, there is a need for urgent proactive action to break the vicious cycle within which the system is trapped. Why, then, do our power-brokers and policymakers not take cognisance of these arguments and figures? Why do they not restructure or "reform" our cities and land-use patterns and move away from a growth-centred focus to a livelihood-centred one? Why do they not abandon the private motorised vehicle for the public or non-motorised one? Why do they not themselves walk? But, ah, that is a political question, is it not?

NOTES

1 Leitenberg (2006) estimates 148 million deaths.
2 Schopper et al (2006).
3 http://en.wikipedia.org/wiki/File:U.s._traffic_deaths_as_fraction_of_total_popualtion_1900-2010.png
4 http://www.census.gov/compendia/statab/cats/transportation/motor_vehicle_accidents_and_fatalities.html
5 High Court of Delhi, judgment pronounced in WP (C) No 380/2012, *Nyaya Bhoomi vs GNCT of Delhi and anr*, 18 October 2012.
6 http://www.slideshare.net/Jalaj_purohit/auto-industry-india-2011; www.siamonline.in/ac2012/; and http://economictimes.indiatimes.com/policy-aims-to-raise-manufacturing-share-in-gdp-to-25-by-2025/articleshow/20744604.cms
7 http://www.investindia.gov.in/?q=automobile-sector
8 http://morth.nic.in/writereaddata/mainlinkFile/File838.pdf
9 http://planningcommission.nic.in/plans/stateplan/sdr_punjab/sdrpun_ch6.pdf

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