

vehicle of valuables, the locals are often extremely reluctant to help the injured in an accident. (This was, sadly, the case at every accident aftermath I witnessed during my journeys. One case in point was a truckload of animals being driven to market; the local populace was more concerned with the free meat that had appeared than with the drivers who needed a hospital badly.)

Part of the reason for this is that accidents often escalate in the aftermath into fights and violent melees, so there is ample reason for locals not to get involved. (As The Rough Guide: India states, "If you have an accident... leave the scene quickly and go straight to the police to report it; mobs can assemble fast, especially if pedestrians or cows are involved." -- p. 32) At the accident site in question several surviving Semester at Sea students who extricated themselves from the overturned bus "ran to the road to seek help and not one car or bus would stop." (letter of Amy C. Fangman; August 9, 1996)

Traffic jams, which are a frequent if different hazard of the GT, and which can often be many miles and hours long, can also produce high-energy argument and outbreaks of violence between frustrated drivers. Naturally, such fights can escalate with passionate and deeply rooted Hindu-Muslim-Sikh tensions, for truck driving, always a macho and tense profession, is one of the few that admits people with less regard to their religion or caste than most in India.

The famous shade trees along both sides much of the Grand Trunk, many dating back several centuries, are essentially a

deadly obstacle for any vehicle that loses control and leaves the road; one often sees trucks impaled on or wrapped around trees. Though it is often discussed in government road safety proposals, these trees are rarely marked with some white stripe to make them more visible at night. From the days when the road was in fact several separate carriageways, there are sometimes trees in the middle of the road. And most perilously, along a road which often has ruts, ditches, or steep declines on both sides, the GT essentially has no guard-rails (except on bridges) to help prevent vehicles that are losing control from going off the road. (An Indian government road safety study determined that Indian bridges frequently tend to be dismayingly and quite hazardously narrower than the roadways by which they are approached.)

Speed limits are utterly ignored and entirely self-imposed.

Lastly, though it may be stating the obvious, India is one of the poorest countries in the world. As a result the majority of vehicles on its roads are well-used and kept running long, long after what might be termed their viable or safe life here. This adds yet one other element of chance, of the tenuous -- the risk of sudden breakdown -- to the conditions of Indian highway travel.

There is nothing mysterious or difficult to grasp about the hazardous nature of Indian road conditions in general and on the Grand Trunk Road in specific, once it has been seen first-hand. More than one reporter has described it as "a game of chicken." It does not remotely resemble any road in Western Europe or the

United States, and this is obvious after ten minutes' travel on it. One surviving student recalled that on the GT on the night of the accident, "We were scared from the very beginning." (Kelly Glass, Orange County Register, April 14, 1996).

She was right to be scared. With 1% of the total vehicles in the world, India has 6% of the road accidents. (Traffic Accidents in India -- Facts, Characteristics, Causes & Countermeasures, Central Road Research Institute, New Delhi, 1992). The same study found the drivers of private buses "rash and negligent... risky."

### III. Night Driving Conditions in India

The GT at night has other particular dangers that do not exist on it during daylight hours. There is, first, a strong Indian road tradition of not using headlamps at night out of the folk wisdom that to turn them on expends gas unnecessarily. (In much the same way, the windshield wipers are often kept safely in the dashboard and only clipped into place in the severest monsoon rainstorm; even then, incredibly, usually only the driver's side wiper is used.) Thus the GT at night becomes a maelstrom of trucks barrelling along without any headlamps on, the only clue to oncoming danger being the roar of other engines and a horn being sounded, somewhat instinctively and haphazardly, to warn those ahead. It is of course very difficult to locate the precise distance and direction of a honk. Headlamps may be switched on and off rapidly at the last moment -- often to blinding effect, or too late.

The general other lesser traffic of the road -- bicycles, ox-carts, pedestrians, etc., never wears blinkers, signal-lights, or reflectors of any sort, much less horns or headlamps. These lesser vehicles thus have no way of signalling their presence. (To hit a strolling villager may not seem as dangerous as hitting another bus, but the ill will of the victim's extended family can easily extend to a bus's passengers.) It cannot be stressed enough that the general regulations guaranteeing normal vehicle equipment (reflectors, blinkers, horns, headlamps, etc.) that we take for granted in the U.S. do not enforceably exist in India.

Because there is somewhat thinner traffic on the GT at night -- and because it is always cooler and the air fresher and thus the physical effort of travel easier -- the lesser vehicles often mistakenly believe the road is safer then, and journey by night. They are, however, only proportionally increasing the danger to themselves and to the trucks by being on the road then, with no way to indicate their presence until it is too late.

A 1992 Indian government General Report on Engineering Measures in Highway Safety points out the revolutionary idea that "[a]nother important aspect for which maintenance teams are responsible is guiding traffic at places of road repair and illuminating these at night. An appreciable number of accidents are due to vehicles colliding at night with road machinery left on the road without light[s] or to their running into road building material placed on the roadside."

In the course of my book researches I interviewed a large

number of truckers, who know the road better than anyone. All agreed that the road's dangers were multiplied exponentially in darkness. Over the course of my own journeys I made a deliberate effort to be on the Grand Trunk Road in darkness as little as possible. This was because, risky as my trip already was, I knew that to be on the GT or, indeed, any Indian road by night significantly and quite unacceptably raised my chances of being in an accident.

There are other famous and traditional dangers, which may be found described in any Indian newspaper on a daily basis. These are the bandits known as dacoits -- some are in private gangs, some operating as the strong-arm men of the local government. Such bandits are notorious for controlling parts of the GT at night, predominantly in Bihar State but also in parts of Uttar Pradesh (the state in which Benares, Allahabad, and Agra are found.) The thieves block the road with stones, or nails, then hijack a truck's cargo by killing the drivers. As a result, trucks at night often travel in convoy, and the drivers are armed. The situation has been thus for many years; it is another reason why the solitary bus is rarely seen on the GT at night, in order to protect passengers who would be highly vulnerable.

The primary danger of the GT at night, though, baldly stated, is that it is difficult to see anything on it in the dark. As a result journeys routinely take much longer than they might during the day -- extra time to be out on that dangerous road at its worst time. The road is unlit; it is far harder to

judge whether another vehicle may be safely overtaken (as several students reported was the cause of the accident.) There are very rarely any reflectors along the road itself to mark a dangerous curve or a pothole five feet deep that might have been there since last month; likewise, a semi-destroyed truck from an accident last week or last December may still lie across half of it, blocking it; and as the driver of the bus from the March 27, 1996 accident testified, it is commonplace that the high beam headlamps from an oncoming truck blind a driver coming from the other direction, who then cannot possibly negotiate a curve in the road which he does not see.

There was nothing remotely unusual about the accident of the night of March 27, 1996, except that it was Americans who were killed, not Indians. Such an accident is, otherwise, an absolutely ordinary occurrence on the GT, made more ordinary by the fact that it occurred in darkness.

#### IV. Indian Drivers

The most important danger factor besides the conditions of the road itself is the nature of Indian driving. As has been stated, most of the vehicles on the GT are trucks. Theoretically one must be 21 years of age to attain a driver's license in India for heavy vehicles, but as I found in my many interviews with truckers, (see Ch. 5, pp. 65-71, Days and Nights on the Grand Trunk Road) very, very few of them have driver's licenses at all. (This leaves open the issue of defective eyesight -- a principal

culprit in official Indian road accident studies -- though Indian driving exams are notoriously lax about eye exams and equally corruptible with tiny bribes.)

Most truckers start driving professionally around age 14, which means that some trucks are being driven by newcomers who have neither a license nor any experience. There is no mandatory training in a driving school for drivers of the large commercial vehicles which dominate the road. To quote from an Indian government report on Traffic Safety Education and Publicity, "The present practice of 'driving tests' is often nothing more than... eyewash. There is both corruption and connivance at several levels..."

Another General Report of Traffic Control, Regulation and Enforcement (1986) singles out bus drivers as "inadequately trained" and requiring "the lowest qualification." It is worth noting that whereas truckers always drive in pairs and often as a trio, so that one man can always relieve another, bus drivers including the drivers of private buses like that involved in the accident in question almost never do. Fatigue inevitably sets in.

At the night the regular high risks from truckers increase. One reason is that they are, like truckers anywhere who are paid by the load, pushing themselves to drive as far as possible, as quickly as possible, on as little sleep as possible. One frequent method in India is the use of opium to keep awake. Many truckers confirmed to me that on opium, washed down with tea, they could easily drive twenty-four hours without sleep. Since the drivers

work in pairs, they may roll through the night with only short stops in dhabas (truckers' roadside rest areas) for a quick meal, a quick nap, some whiskey, more opium, or a prostitute.

It has been determined by different road safety experts in India, according to the minutes of various symposia, that around 80% of the drivers do not know the traffic rules in the general sense. More specific studies determined that only 21% of Indian drivers understand the rules of overtaking, and that only 27% understand basic rules like priority at intersections.

#### V. The GT between Delhi and Agra

The GT between Delhi / New Delhi and Agra is one of the very busiest stretches of the road, due in part to the fact that New Delhi is the capital. The road also passes through Mathura and Vrindavan, two highly popular Hindu pilgrimage towns connected with the god Krishna. Lastly, there is the commercial importance of Agra, about 120 miles to the south of Delhi, a major tourist destination because of the Taj Mahal.

About 25% of this stretch is usually among the best maintained of the GT, specifically within a 20-mile radius of Delhi and of Agra. (The accident in question occurred on a section that may have been recently re-tarred, about 15 miles from Agra.) However, in my experience those sections of the GT that are in physically better shape do not appreciably lessen the dangers, because the better road surface (like better surfaces anywhere) tends to simply encourage the traffic to drive faster

and with less caution.

This stretch of country is well known to foreigners. During the day many tourists travel from Delhi south to Agra by rail, a journey of two to two and a half hours on several special extra-comfortable tourist express trains at the high price of \$15 each way. They are then able to visit the Taj Mahal and related sites in Agra for a half-day and come back to Delhi. Indeed, train service from Delhi to Agra is so regular that it seems odd that, under these circumstances, an extra first-class railway car was not hired for the 60 students, to be attached to the next regular train. However, by the same token, there was no need for the students to fly north all the way from Varanasi [Benares] to Delhi, then drive backwards, retracing their flight, as far south as Agra. The same hypothetical "extra" train car could have been easily hired to take them north from Varanasi direct to Agra. Rather than seeing nothing from a plane, they could have seen the countryside during the day from the safety and comfort of a train. This would, of course, have been far less expensive than purchasing air tickets up to Delhi.

Other tourists do the same journey as the fatal bus route (Delhi -- Agra) via the GT, but in a private hired car. The hired car invariably comes with a driver; foreigners may not rent a car without a driver in India (i.e. drive it themselves) for reasons of both safety and employment. In this case the journey is always done during the safety of daylight hours. Indeed, the two highly experienced drivers I used in my researches in that part of India

both refused to drive at all on the GT at night, and when <sup>one</sup> was  
forced to, north of Agra, as a result of my extended note-taking,  
he was extremely upset.

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As has been demonstrated, the dangers of the Grand Trunk Road are immediately obvious to anyone with open eyes, Indian or foreigner. No one who has seen the GT first-hand needs to be shown statistics to understand that this is a highly hazardous road. I can only presume that those dangers would seem even more eloquent and outlandish to someone with little third-world travel experience.

Suppose, though, that one had spent little time in India? Suppose one were trying to investigate the question of road safety there in the most cursory way? Suppose the question was simply whether it was okay to put kids on buses on a certain road in the daytime, or whether there were other, better alternatives? Would one encounter ample warnings that made clear that, say, in terms of fatal accidents per thousand vehicles, India's roads are 13 times more deadly than those of the United States?

An apt question, therefore, is to what extent the readily available travel literature and professional travel advisories here in the U.S., both make the GT's risks clear and articulate other choices.

#### VI. Book Information about the GT Road's Safety

A number of sources discuss the Grand Trunk specifically in

terms of its dangers, by day and by night. (To this writer any travel on Indian roads should be avoided if at all possible, no matter what time of day or night.)

Since the Semester at Sea / Institute of Shipboard Education planners claim to have spent, individually and collectively, little time in India, they must presumably be getting their information on that country -- as well as their ideas about where to send their students on Indian excursions -- from some outside source, not just word of mouth. Possible published sources fall into several principal categories: non-fiction books about India, including books of documentary photographs; travel advisories; magazine articles; and travel guidebooks, of which there are many of high quality. An accurate sense of the dangers of Indian roads might have been gleaned from any of these sources from at least 1990 onwards. (I will, of course, refer in this Expert Report only to those published and available prior to the accident.)

~~Two~~ <sup>One</sup> prominent non-guidebook source~~s~~ that might easily come to the attention of those with a vested interest ~~are~~ <sup>is</sup> a book of color photographs by Raghubir Singh, one of the most highly esteemed photographers of India. This book, The Grand Trunk Road (Aperture, New York, 1995), though primarily about the people, historic remnants, and local culture of the road, is full of photographs that show wrecks or the mutilated residue of a truck. Though it is far from being a book on driving, its images contain the steel corpses of many accidents.

Singh writes of (and unforgettably photographs) traffic jams

ten miles long that last, literally, days; and of the "coughing and groaning and overladen trucks... this is one hell of a road."

In the introduction, Singh (an Indian) reminisces about his many journeys along the Grand Trunk Road. He recounts the GT in monsoon flood, "rendered unusable in many places," with an enterprising Sikh farmer tugging cars with a chain and a tractor "through the narrow and treacherous track submerged below the flood-fragmented road. Those who did not avail themselves of the help of the tractor driver and his assistants -- the latter running alongside each vehicle to indicate depths to the driver -- invariably overturned or stalled their cars or trucks." Singh goes on to recount places where a road bridge had collapsed, or where wide sections of the road had been washed away in many places, or parts of the road turned into a refugee camp. At one point "there was a wide breach in the two-lane highway, through which water flowed as swiftly as in a mountain stream... I saw a man swept from one side of the road to the other... he saved himself from drowning by clutching at a thorn tree that came his way."

① Another convenient source for a sense of the road is in a book of essays about the politics of most of the countries of South Asia, called On the Grand Trunk Road (Times Books, Random House, New York, 1994), by the Pulitzer Prize-winning journalist Steve Coll of the Washington Post. The title essay of the book (pp. 19-32) is non-political, however, and entirely about riding with an Indian trucker on the GT from Calcutta north via Agra to

Delhi.

Coll cites the Grand Trunk as a leader in "the chaos and carnage of South Asia's intercity roads... where the chance of being accidentally blindsided is high" and writes of the GT: "... the road is vividly dangerous. More than one thousand truck drivers, passengers, and pedestrians die in accidents along the highway each year. Its shoulders reveal an almost surreal display of wreckage: trucks lying smashed and upside down in ditches... buses wrapped around trees, vans hanging from bridges, cars squashed like bugs. Sections of the road are controlled by bandits who hijack trucks... sometimes killing the drivers. Corrupt policemen demand bribes at every checkpoint and throw drivers in jail if they don't oblige. And in rural areas, if a cow or pedestrian is run over, mobs of villagers attack... and lynch drivers in revenge...."

Coll also describes the regular use of opium, other drugs, whiskey, and beer by "daring and reckless" truckers, against the backdrop of "the carcasses of crashed vehicles, resting... in the exact position in which their accidents left them" along the GT. "Often," he adds, "drivers refuse to leave their vehicles unattended, fearing that bandits or corrupt police will loot the cargo. So the wreckage sits, week after week."

Coll likewise points out that in India kidnapping wealthy industrialists for ransom has become big business -- leaving to us to ponder the question of how attractive a bus of American college students could be to kidnappers. He also describes what

it's like to be in a vehicle on the Grand Trunk Road attacked by an angry mob of villagers simply because there had been an utterly unrelated accident there earlier that day.

Had those Institute of Shipboard Education administrators and Semester at Sea professors failed -- while planning their Indian trips and a curriculum of Indian background information -- to notice Coll's book, they might have noticed his essay on the GT reprinted in the large and magisterial collection Travelers' Tales: INDIA (Travelers' Tales, San Francisco, 1995) arguably the single best anthology of articles about India ever assembled.

② Had the Coll essay been missed, several other articles in the enormous anthology make the same point about the country's dangerous roads -- for example, a driver "laughing when we nearly ran somebody over" and "taking us to the edge of doom every few minutes" in a country whose roads have "one of the highest mortality rates in the world" (pp. 119-20). Another journalist, a bicyclist, describes how Indian drivers are "fond of taking hairpin bends and blind corners at full throttle... Trucks careened down the road straight at me, forcing me to pitch myself into the shoulder... Pairs of overtaking trucks... made me dive for my life. Here and there an upturned truck or a smashed-up car would loom up... a kind of monument warning the living to slow down... Indian drivers were maniacs." (pp. 286-7).

Someone curious, planning Indian itineraries between 1990 and 1995 but not necessarily researching the risks of the roads, might have read at least one of several prominent non-fiction

books about the country -- journalism and travel -- published in those years.

③ One of the best reviewed, for example, was Chasing the Monsoon (Knopf, New York, 1991) by Alexander Frater, chief travel correspondent for the London Observer. It contains (pp. 170-172) a nightmarish description of a 5-vehicle crash on the Grand Trunk Road between Delhi and Agra. One car is tossed clear off the road and into a ditch; a truck mangles a jeep and crushes another car. The transport manager of a local company tells the dazed author, "There are one million-plus lorries on Indian roads, many driven by lunatics."

④ Surely, too, anyone curious might have looked at what was undoubtedly the most celebrated book published on India during this period: V.S. Naipaul's India: A Million Mutinies Now (Viking, New York, 1991). Naipaul, winner of the Jerusalem Prize and the Booker Prize, provides in this, his third book on Indian politics and society, a memorable description of road conditions. "The road was very busy," he writes, "reflecting the agricultural activity. But the trucks, though decorated with love, were overloaded in the Indian way, and were driven fast and close to one another, as though metal was unbreakable and made a man a god, and anything could be asked of an engine and a steering wheel and brakes... that day 10 or 12 trucks had been wrecked, and some people had almost certainly been killed, in seven bad truck accidents. Trucks had driven off the road into ponds; trucks had driven into one another. Drivers' cabs had crumpled,