

Chapter 3

Have you ever visited a a huge, ramshackle, chaotic, third world city like Chennai (formerly, Madras)? Have you travelled across a broad rural landscape, with facile similarity to many countryside districts in Australia—the road to Bungendore, say—but realized that within your field of view are perhaps 600 villages and 600000 people? What a challenging and very, very confronting experience India is.

The most vivid street and crowd scenes from a film like *Ghandi* are sparse and pale and sanitised and stagey compared to the real thing. Pictures, or your imagination (because, although you don't, you can't possibly, know what India *is*, it is also everything you might have ever imagined it to be), cannot simulate the assault on all the senses; the noises, smells, and stifling heat, the dust and rubble and filth; the emotional impact of witnessing such horrific poverty and deprivation; the unfamiliar spectrum of length, time, and velocity scales that one's brain is not used to processing. Perceptions, prejudices, and absolutes are challenged constantly. For example one realises very quickly that "dirt" and "filth" are entirely cultural constructs. Visitors who do not understand this simply refuse to leave their hotel room (which is dirty and mildewed in any case, so they might as well go out and engage with the streets), or say things like *Just get me out of here on the next plane!* (But getting out of India can be a complicated business!)

The smells of course become less noticeable after the second or third day but still bang hard on nasal receptors; they are an imperfectly mixed cocktail of diesel and two-stroke exhaust fumes so dense that the atmosphere is a choking brown haze, of spices, sewage, animals, and incense, and of urine all-pervasive. (Aside: notions of privacy are quickly revised too. The men urinating in streets and crapping on embankments are simply not seen, nor, it seems, do they see you. What one *sees* in India is also a cultural construct, and has very little to do with the biophysics of images on retina.)

I love India. On this visit I stayed in Chennai for 10 days, visiting the Mathematical Sciences Institute, and in Bangalore for 10 days, attending a conference.

Chennai seems to consist of villages glued messily to a vast complex city of crumbling concrete and colonial arches-in-decline, that is built around, in between, and on top of them. The villages of straw and sticks and palm-frond thatch can be found between and behind offices, banks, public buildings, and railway stations, and as far as I can tell, village life goes on just as in the countryside. There are huge numbers of people everywhere you look, the teeming millions teem and mill, but I cannot describe them as crowds. It's just that there are millions of people occupying every niche of the coordinate and velocity space, 24 hours a day! I like the people.

I like the multiplicity too. For example, a significant component of the traffic is small motor-bikes, but they rarely have a single rider. Often the motor-bike conveys an entire family. A husband is driving, in front of him perches a child, the sari-clad wife, holding the baby, rides side-saddle behind, and a third child is sitting between wife and husband. Another example is seen on the giant advertising billboards (we do not have them in Canberra, oh no, no, we are much too precious). The billboards are painted by hand, each one by a dozen or so billboard-painters holding buckets of paint and brushes. They cling with their bare feet only (both hands are needed for paints and brushes) to scaffolding of bamboo or thin branches and execute technically perfect lettering and artwork.

The edge of every street is a crazy broken line of jerry-built or dilapidated shops and businesses, or two or three layers, horizontal and vertical, of shops and businesses. But in Chennai one revises ideas of what, exactly, consists a “shop” or “business”.

A tiny booth, sometimes up a precarious staircase on an upper floor, every 100 metres or less, crowded with people and grimy computers sells internet access for a few rupees an hour. Indians are addicted to the internet, for web surfing, e-mail, chat, marriage-brokering, horoscopes, and, of course, pornography, but services such as on-line banking and bill-paying have not yet caught on.

The business next door to the Institute has no door at all: it is merely a table with a canopy where an ironing-wallah is busy or waits for customers. He has no electricity so his iron is filled with hot coals, from a charcoal fire. He charges four rupees to iron a sari.

A shop may be a “proper” shop, selling iron or chromed or stainless steel kitchen ware such as iddli steamers and dosa pans and tiffin-boxes, salwar kamize and saris, or shoes; it may be a medicine booth where you can buy any drug you like without prescription; or it may be just a table stacked with green coconuts, behind which sits some old women, or a rug on the pavement or on the dirt where a boy is selling a few dusty items of cargo, or, often, the few goods without even a rug or mat to define the boundaries of the shop.

Restaurants are plentiful and simple, usually nothing more than few old laminex tables and metal chairs on the pavement, in front of which is a gas or charcoal fire where a cook prepares thales, or “meals”. A thales platter consists of various dishes such as spiced vegetables, rice dal, baja, raitas, and roti served on a banana leaf. It costs around 18 rupees (47 rupees \approx US\$1) and is a delicious and substantial meal. As with most meals in India, no cutlery is provided: you eat using the fingers of the right hand. A thales is very satisfying but afterwards the sweet-shops are irresistible! Have you tasted Indian sweets? Well . . . they are gooey and crunchy and chewy and dripping

with ghee and sugar syrup and rich with nuts and seductive with rose-essence and cardamom and sparkly with silver and gold leaf — an acquired taste for some people.

There is rubbish and rubble everywhere, but people also fix things. For example there are many repair shops for electric motors (usually from truly ancient sewing machines or fridges). There is no such place in Australia — broken-down electric motors are simply thrown out. One day I might try the suit-case repair shops too.

In the streets between the shops, the densely packed traffic whizzes and rumbles and buzzes and plods, horns are sounded constantly, the noise and stench are horrendous, and at first it is chaotic and bewildering. The traffic is comprised of little yellow three-wheeled autorickshaws, buses, trucks, motorbikes, bicycles, cars such as the venerable Hindustan Ambassador (a sort of 1947 Morris Oxford, still manufactured in India) and new Suzukis and Daewoos, proudly driven by new yuppies, cycle rickshaws, pedestrians, cows, tawny dingo-like dogs, and carts pulled by oxen — all in about equal numbers. If you wish to cross the road, you simply plunge into the traffic and, somehow, it parts around you as you cross! There seems to be a drive-on-the-left rule, but what is defined as “left” is quite rubbery and broadly interpreted (as are many things in India).

Incredibly though, the traffic flows. Vehicles move and turn and merge and pass and stop with much honking, but collectively they flow. Somehow there’s an unspoken language between the drivers that keeps the flow moving, or, I don’t know, a sort of Lennard-Jones interaction potential¹ between vehicles. There ought to be gridlock but there isn’t. The only situation where there is a traffic jam is at the occasional intersection where a policeman standing in a booth in the middle is directing the traffic with traffic lights, worked by hand. And I have not seen a prang, or noticed a dingle on any vehicle yet, although they are always just inches from each other. One day I’ll do comparative modelling studies of traffic flow in Chennai and, say, London, and measure velocity spectra — I think the results could turn conventional strategies for improving traffic flow upside-down.

As well as all that movement there is quite a lot of stillness too. Unemployment is officially 15%, and groups of men simply stand around, or squat, doing nothing at all.

If someone asked me how would I go about tackling the problems of Chennai, of India, I would simply throw my hands up and shrug helplessly. I simply don’t know. Improve the city’s plumbing, to help combat all those water-borne diseases? (The diseases of India . . . oh, my . . .) For a large proportion of Chennai’s population i.e., the crore

¹The Lennard-Jones potential is a mathematical model for the attractive and repulsive forces between atoms in a system of millions of atoms.

(in Tamil a “crore” is 10 million) who live in the shanty districts of sticks and palm thatch, or on the streets, “plumbing” consists only of a well or tank at the end of a street, from which women pump water with a hand pump into earthenware jars which they carry away on their heads, or use in situ to wash their children. Men also wash at the pumps. Municipal garbage collection? They have it. A municipal garbage wagon pulled by oxen is driven slowly along the street and the garbage collectors pick up the mounds of wet rubbish and sewage and throw it onto the wagon. They are barefoot and scoop up the garbage with their bare hands.

Yet my colleagues say the poverty is worse in rural areas, much worse. People starve to death, although the government denies it.

My antennae picked up a general sense of dissatisfaction with the path India has taken. Among people I talked with (Indian colleagues, mainly) there is a general feeling that India has failed, that the government does nothing, that a fundamentally good constitution and laws (bequeathed by the British) are not being implemented, that the country is sinking under bureaucracy, corruption, apathy, appeasement of war-lords, bad politicians, bad business practices, pollution, and social backwardness and religious fanaticism. There was, they say, great promise and hope for improvement during the 1980s, but the country has slipped behind, in spite of the IT revolution.

By any United Nations type of measure India *has* failed, although there is enormous wealth there too. (For thousands of years, until oil became the measure of a nation’s wealth, colonial powers from Alexander the Great to the Romans to the British dipped their grotty paws into India and plundered it shamelessly.) Here are a few of those comparative measures (taken from www.unescap.org/):

India:

Infant mortality rate, per 1000 live births:	65 in 2000
Adult literacy rate, %males/%females:	68.0/44.0 in 1999
Primary school enrolment ratio, males/females:	101/83 in 1999, 104/84 in 2000

Sri Lanka:

Infant mortality rate, per 1000 live births:	17.0 in 1999
Adult literacy rate, %males/%females:	92.8/88.0 in 1999
Primary school enrolment ratio, males/females:	115/112 in 1995

— there’s lots more, but I won’t bore you with the figures.

From reading the newspapers I feel that some of India’s problems are due to state jurisdictions and rivalries, which could stem from flaws in that British constitution. Basically, each of the states is interested *only* in raising as much revenue as they can,

by whatever means, and are totally indifferent, or even hostile, to the other states, the national interest, or even the people of their own state. Take the Cauvery River dispute for example. This was very much in the news, and I pieced together the story.

The great Cauvery River rises in the Western Ghats of Karnataka, and winds through Karnataka then through Tamil Nadu to the Bay of Bengal. As you would guess, many crore of farmers (to remind you, a “crore” is 10 million) depend on irrigation from the Cauvery for their livelihood, and many more crore are indirectly dependent on the river.

The Karnataka government decided that the Cauvery water belonged entirely to the Karnataka government, and could not be allowed to flow into Tamil Nadu for free. So they cleared a few lakh peasants (in Tamil a “lakh” is one hundred thousand) off the land and built a huge dam to contain the water and prevent its flowing into Tamil Nadu. But soon the dam filled up, so they shoved off a few more lakh farmers and built another one, all the while promising the dispossessed ones a marvellous new network of irrigation canals, which would make them prosperous for ever after.

Meanwhile, in Tamil Nadu the Cauvery was soon empty, the monsoon did not come, and a few crore farmers were facing starvation. The Tamil Nadu government couldn't give a stuff about starving farmers, but it was interested in getting the better of Karnataka, and in saving face, and in capturing Cauvery water in dams of their own so they could sell it to *their* neighbours, so it began court proceedings in the High Court in New Delhi. This took years. Karnataka argued that they had been providing 100s of crore litres of free water for many years to Tamil Nadu, because when that state was divided into two states, Tamil Nadu and Andhra Pradesh, the water allocation from the Cauvery was not reduced proportionately — therefore, Tamil Nadu should receive *no* water for the next 30 years, until the water they “owed” had been “paid back” (or until an appropriate large amount of hard currency had changed hands).

Back in Karnataka, the promised canals did not, of course, eventuate, and soon their own farmers were starving too, while women labourers with baskets of concrete raised the walls of the two dams, in a beautiful feat of civil engineering that the Karnataka government boasted about to United Nations Development Commissions, and nosy people like that.

(Women do most of the labouring on construction and building sites — you can see them in the cities, barefoot and sari-clad, working on roadworks, building sites, and rail-gangs — because they are even cheaper than male labourers, and they carry bricks or concrete in trays on their heads, which men will not do.)

The last I heard on the Cauvery dispute, just before I left, was that the High Court

had ordered Karnataka to release some water into Tamil Nadu, but they had not yet done so, and the Karnataka government was grudgingly and perfunctorily constructing irrigation canals.

On social issues, I have the following observations. To begin with, one sees many more men than women in the streets. Why is this so? I suppose one reason is that women do not frequent public places as much, although it is common enough to see women labourers, as mentioned above, or more affluent women riding little motor scooters or walking in groups of two or three during the day. Another reason must be that there are 933 women for every 1000 men in India, due to the widespread practice of female fetus abortion and female infanticide. I read in the *Hindu*, a national daily English language newspaper, that the government is introducing incentive schemes to persuade families not to kill their newborn female infants. Oh really? Such as? How about arresting, trying, convicting, and jailing a few of the perpetrators for murder? Apparently that is not an option.

This, I said to myself, I must investigate more, and the statistics I uncovered sound quite horrifying (I took the raw data from www.infochangeindia.org, which gives data from the latest Indian census). The live birth rate of India in 2001 was 26 per 1000 persons and the total population of India is 1027 million, thus an annual total of 26.7 million live births. In the 0–6-year-old age group there are 927 girls per 1,000 boys, implying that 7.3% of girls are killed before or after birth, assuming that males and females are conceived in equal ratio. That means that $0.073 \times 26.7/2$ million = 974550 — nearly one million — girls are killed each year. Is my arithmetic right?

This female/male ratio is becoming worse every year, because of the widespread availability of sex-determining ultrasound imaging from the third month of pregnancy. On TV there are competing ads for “low-cost, easily portable, fully mobile, fail-safe diagnostic ultrasound machines”, which anyone can buy and take around the cities and countryside offering “tests” — the entrepreneur’s sidekick is invariably an abortionist.

The newspaper reported an interview with a district nurse who suspected that a village family had allowed the in-laws to kill the wife’s second female newborn infant and bury the body. According to the nurse, the woman said: “I’m not sorry she’s dead. Why would I want raise another girl, who would have a life as terrible as mine? I don’t want to condemn her to a life worse than death.”

People aren’t stupid. I think families surely must know quite well the consequences of this widening gender imbalance in the population: namely, that a large proportion of their sons will never find wives, and will be condemned to lead disempowered, probably unemployed and unemployable, lives, never having families of their own, and relying on furtive homosexuality. However they would prefer to take the risk of this fate for

their sons than take any risk at all of bringing girls into the world.

The female infanticide and abortion is blamed on dowry — the widespread, and spreading, practice whereby the family of a girl must pay the parents of her husband-to-be a vast sum of money. The in-laws can and do demand further large sums at any time after the marriage, or throw the wife out, or kill her. That may be so, but I bet you anything that making dowry illegal will not change the situation one iota. In fact the mobile ultrasounds will change the practice — faster, more efficiently than killing newborns, and even more in favour of males.

Like I said: I simply don't know. Once you get over the knee-jerk shock horror (oh, oh, oh, how could anyone kill darling little newborns, or abort a baby just 'cause it's the unwanted sex, oh me oh my!) — you think, well, if nothing else it is a sort of long-term control on population. The fewer females are born, the fewer babies in the next generation, and if fewer females are born in *that* generation . . . I wonder what *will* happen, long-term? Is there a self-correcting dynamic or is that situation inherently unstable, leading to wars and epidemics?

That's all. No it is not! There is so much more to tell! I have not yet mentioned the Keeper of the Toilets, or the painted horns of the city cows, and how they live off discarded newspapers (cows can digest cellulose), or the sculptors of Mamallapuram, or the breathtaking temples and relics from ancient civilizations literate, artistic, talented and brutal, or the electrician and the cricket-team in my hotel room, or the dhobi-wallahs, or . . .

Well, I *will* mention the dhobi-wallahs then. A dhobi-wallah turns up to collect your washing every day or two. The clothes are taken to a river or dam, where they are beaten until the dirt that was in them is evenly distributed through all your garments, then they are dipped in the opaque water and beaten again, so that some more dirt is added firmly to them for good measure. Then they are spread out to dry, ironed, and folded. When the clothes are returned, wrapped in brown paper and interleaved with tissue or newspaper sheets in Tamil script, your white undies are an interesting grey colour but are beautifully ironed with sharp creases! Dhobi-wallahs can be seen at work on any river or dam; they are born into the trade as a caste.