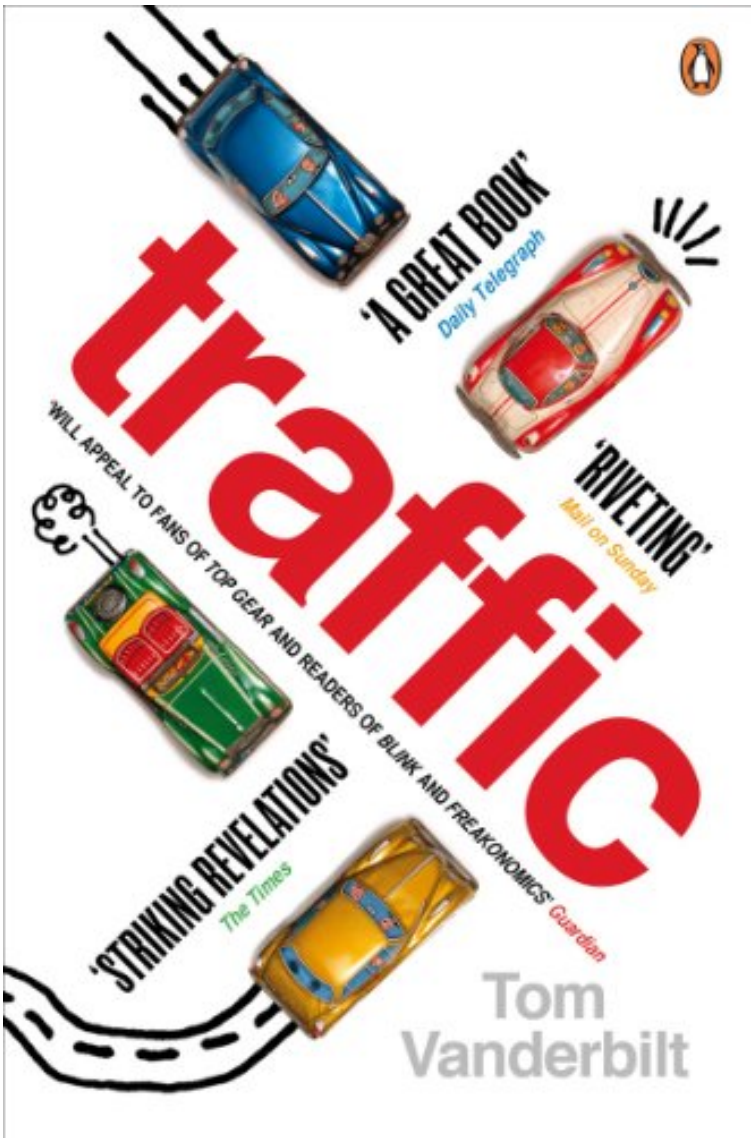
Traffic: Why we drive the way we do (and what it says about us)



Par Tom Vanderbilt
*DOC | *audiobook | ebooks | Download PDF | ePub*

Dtails sur le produit Rang parmi les ventes : #544857 dans eBooksPubli le: 2009-08-06Sorti le: 2009-08-06Format: Ebook Kindle

(Download free ebook) Traffic: Why we drive the way we do (and what it says about us)

Par Tom Vanderbilt : Traffic: Why we drive the way we do (and what it says about us) before purchasing it in order to gage whether or not it would be worth my time, and all praised Traffic: Why we drive the way we do (and what it says about us):

Description :

Prsentation de l'diteurGet stuck in ... Why do some people become demons when they get behind a wheel? Why does the other lane always move faster? Why do New Yorkers jaywalk (and nobody does in Cophenhagen)? And why should you never drive with any beer-drinking, divorced doctors named Fred?Driving is about far more than getting from A to B. As Tom Vanderbilt's brilliant, curiosity-filled book shows, it's actually the key to deciphering human nature and ... well, pretty much everything. From the etiquette of horn-honking to bumper stickers you should avoid, from gridlock in ancient Rome to why getting rid of road signs actually reduces accidents, Traffic will change the way you see yourself, and other

people (and not just through your windscreen)..com Best of the Month, July 2008: How could no one have written this book before? These days we spend almost as much time driving as we do eating (in fact, we do a lot of our eating while driving), but I can't remember the last time I saw a book on all the time we spend stuck in our cars. It's a topic of nearly universal interest, though: everybody has a strategy for beating the traffic. Tom Vanderbilt's Traffic: Why We Drive the Way We Do (and What It Says About Us) has plenty of advice for those shortcut schemers (Vanderbilt may well convince you to become, as he has, a dreaded "Late Merger"), but more than that it's the sort of wide-ranging contrarian compendium that makes a familiar subject new. I'm not the first or last to call Traffic the Freakonomics of cars, but it's true that it fits right in with the school of smart and popular recent books by Leavitt, Gladwell, Surowiecki, Ariely, and others that use the latest in economic, sociological, psychological, and in this case civil engineering research to make us rethink a topic we live with every day. Want to know how much city traffic is just people looking for parking? (It's a lot.) Or why street signs don't work (but congestion pricing does), why new cars crash more than old cars, and why Saturdays now have the worst traffic of the week? Read Traffic, or better yet, listen to the audio book on your endless commute. --Tom Nissley Questions for Tom Vanderbilt, author of Traffic Q: Was this book really born on a New Jersey highway? A: Yes, though it could have been any highway in the world, where countless drivers, driving on a crowded road that is about to lose a lane, have had to make a simple decision: When to merge. For my entire driving life, I had always merged "early," thinking it was the polite and efficient thing to do. I viewed those who kept driving to the merge point, to the front of line, as selfish jerks who were making life miserable for the rest of us. I began to wonder: Were they really making things worse? Was I making things worse? Could merging be made easier? Why were there late mergers and early mergers, and why did people get so worked up about the whole thing? In that everyday moment I seemed to sense a vast, largely under-explored wilderness before me: Traffic. Q: Is it true that the most common cause of stress on the highway is merging? Why of the myriad things to cause stress on the road is this at the top? A: Merging is the most stressful single activity we face in everyday driving, according to a survey by the Texas Transportation Institute. People who have done studies at highway construction work zones have also told me of extraordinarily bad behavior, triggered by this simple act of trying to get two lanes of traffic into one. Sometimes, its simply the difficult mechanics of driving trying to enter a stream of traffic flowing at a higher speed than you are, for example. Drivers, to quote a physicist who was actually talking about grains, are objects "who do not easily interact." But I also think theres something about the forward flow of traffic that makes us register progress only by our own unimpeded movement; as in life, we seem to register losses more powerfully than gains, and registering these losses boosts stress. Q: You say that, "For most of us who are not brain surgeons, driving is probably the most complex everyday thing we do in our lives." How so? A: Researchers have estimated there are anywhere from 1500 to 2500 discrete skills and activities we undertake while driving. Even the simplest thing shifting gears is a decision-making process consuming what is called "cognitive workload." Were operating heavy machinery at speeds beyond our long evolutionary history, absorbing (and discarding) huge amounts of information, and having to make snap decisions often based on limited situational awareness, guesses about what others are going to do, or a hazy knowledge of the actual traffic law. It took years of research, for example, by some of the countrys top robotics researchers, to create expensive, sophisticated self-driving "autonomous vehicles" that are basically mediocre beginning drivers that youd never want to let loose in everyday traffic. When we forget that driving isnt necessarily as easy as it seems to be, we get into trouble. Q: Drivers polled in America say the roads are getting less civil with each passing year. Road Rage is an ever more common term. What is to blame? Hummers? Or are we just getting ruder? A: Every year, more people are driving more miles, so one reason for the sense that the roads are getting less civil is simply that there are many more chances for you to have an encounter with an aggressive or rude driver. Its tough to put numbers on it, but I happen to feel, like many people, that behavior has gotten qualitatively worse surveys have suggested, for example, that using the turn signal is an increasingly optional activity. Leaving aside the issue that not signaling is illegal (because, lets face it, were never going to be able ticket everyone who doesnt do it, nor do we probably want to), its one of those small things, requiring little effort from the driver, that makes traffic flow more smoothly I myself have honked countless times at "idiots" slowing for no apparent reason, only to seem them eventually make a turn. Its antisocial behavior, the equivalent of having the door held open for you and saying nothing in return. So why dont people signal? My immediate theory is that theyre using a cell phone and are distracted or physically incapable of signaling. But a deeper reason, I suspect, may be seen in the surveys of psychologists who measure narcissism in American culture. They find, as time goes on, more

people are willing to say things like "If I ruled the world, it would be a better place." Traffic is filled with people who think that roads belong only to them its "MySpace" that being inside the car absolves them from any obligation to anyone else. People are glad to tell you that their child is a middle school honor student as if anyone cared! but they deem it less important to tell you what theyre going to do in traffic. Q: So much of what you uncover about life on the road seems counterintuitive. Like the fact that drivers drive closer to oncoming cars when there is a center line divider then when there is not; that most accidents happen close to home in familiar, not foreign, surroundings; that dangerous roads can be safer; safer cars can be more dangerous; that suburbs are often riskier than the inner city; the roundabout safer than the intersection. When it comes to traffic why are things so different from how we instinctively perceive them? A: I think part of the reason is its easy for us to confuse what feels dangerous or safe in the moment and what might be, in a larger sense, safe or dangerous. We have a windshields eye view of driving that sometimes blinds us to larger realities or skews our perception. Roundabouts feel dangerous because of all the work one has to do, like looking for an opening, jockeying for positioning. But its precisely because we have to do all that, and because of the way roundabouts are designed, that we have to slow down. By contrast, it feels quite "safe" to sail through a big intersection where the lights are telling you that you have the right to speed through. We can, in essence, put our brain on hold. But those same intersections contain so many more chances for what engineers call "conflict," and at much higher speeds, than roundabouts. So when what seems quite safe suddenly turns quite dangerous will we be as well prepared? Similarly, we might be reassured that that yellow or white dividing line on a road is telling us where we should be, but how does that knowledge then change our behavior, to the point where may actually be driving closer and faster to the stream of oncoming traffic? Accidents are more likely to occur closer to home. Mostly this is because we do most driving closer to home, but studies do show that we pay less attention to signs and signals on local roads, because we "know" them, yet this knowledge actually give us a false sense of security. Q: What were some of the things that most surprised you in researching this book? A: Things that surprised me the most were those that challenged my own long-held beliefs as a driver, like that "late mergers" simply must be somehow worse for the traffic flow at work-zones, that roundabouts were dangerous places, that warning signs were there because they must be working, that car drivers were more of a contributing factor in truck-car crashes than truck drivers. It was also quite a revelation to learn about the many ways our eyes and our minds deceive us while driving, the ways we "look but dont see," the way we sometimes believe, to slightly change up the warning our mirrors gives us, that objects are further away than they actually are. Then there were the things I had never really thought about, but were surprising nonetheless that drivers seem to pass closer to cyclists when those cyclists are wearing helmets, how the ways in which drivers honk at each other contain subtle indications of status and demographics, how much traffic on the streets is simply people looking for parking. I was also unpleasantly surprised to learn how far the U.S. had slipped in terms of traffic safety in the world, where it was once the leader. Q: You write, "The truth is the road itself tells us far more than signs do." So do traffic signs work? A: Weve probably all had the somewhat absurd moment of driving in the country, past a big red barn, the pungent smell of cow manure on the breeze, and then seeing a yellow traffic sign with a cow on it. Does anyone need that sign to remind them that cows may be nearby? To quote Hans Monderman, the legendary Dutch traffic engineer who was opposed to excessive signing, "if you treat people like idiots, theyll act like idiots." Then again, perhaps someone did come blazing along and hit a crossing cow or a tractor, and in response engineers may have been forced to put up a sign. The question is: Would that person have done that regardless of the sign? The bulk of evidence is that people dont change their behavior in the presence of such signs. Children playing, School zone? People speed through those warnings, faster than they even thought, if you query them later. To take another example, the majority of people killed at railroad crossings in the U.S. are killed at crossings where the gates are down. If this is insufficient warning that they should not cross the tracks then is a sign warning that a train might be coming really going to change behavior? At what point do people need to rely on their own judgment? We as humans seem to act on the message that traffic signs give us in complex ways studies have shown, for example, that people drive faster around curved roads that are marked with signs telling them the road is curved. We tend to behave more cautiously in the face of uncertainty. Q: What is "psychological traffic calming"? A: Traditional "traffic calming" relies on putting big, visually obvious obstructions in the road, like speed bumps, or the wider, flatter speed humps. Unfortunately, since the bulk of drivers, like tantrum-throwing toddlers, really dont like to be calmed, a lot of these dont work as well as hoped, or produce negative, unintended consequences, like the fact that people will raise their speed between the bumps to

make up for the time lost slowing to traverse the bump. So-called "psychological traffic calming" basically tries to calm traffic without drivers even realizing theyre being calmed. It does so through things like reducing the width of roads, using pavements of different colors or textures, even removing center-line dividers, which studies have shown is one way to get drivers to slow down. Even creating visual interest along the side of the road, a no-no in traditional traffic engineering because its a "distraction," can be used to calm traffic when somethings worth seeing, after all, people slow down. The most radical approach is removing any signage at all, and forcing drivers to rely on their own wits, as well as the dynamics of human interaction, as has been seen in some interesting experiments in the Netherlands. Q: You cite 20 miles per hour as the speed at which eye contact becomes impossible. How central to understanding traffic, and human communication generally, is this statistic? A: Eye contact is a fundamental human signal all kinds of studies have shown, for example, how people are more likely to cooperate with one another when they can make eye contact. When we dont have it, when we become anonymous, we not only lose some of that impulse towards cooperation, we seem to become susceptible to all kinds of behavior we might not otherwise engage in. In most driving situations, of course, we lose eye contact, and have to make do with our rather limited vocabulary of traffic signals. At much slower speeds, however, like those seen in the experimental roundabouts in the Netherlands were most signage has been stripped away, it is fascinating to see how intricately all the traffic can interweave exactly because some of those human signals have been restored. Q: Weve all had the experience of the annoying passenger who cant stop critiquing our driving when we know are driving just perfectly. Then again, weve all been the back seat driver to people who think they are driving perfectly when we know for sure they are about to kill us. What accounts for the way drivers vs. passengers experience the same ride? A: First of all, I should stress that passengers, even annoying back-seat drivers, are good for us: Statistics show that people are less likely to crash when they are accompanied in the car (except, interestingly, teen drivers). But theres several interesting things going on between drivers and passengers. For one, driving as an activity often lacks regular feedback were often not aware in the moment of how close to a crash we almost came, or our own culpability in that. Secondly, drivers tend to self-enhance. They all tend to think they are better than average, or at least average drivers its been called the "Lake Woebegone Effect." Passengers are not caught up in this dynamic theres no such thing as a "better than average" passenger nor do they feel themselves joined to the mechanics of the car, the way a driver does. Brain scans of people doing simulated driving have even revealed different results from people acting as simulated passengers. In the end, a back-seat driver, like it or not, is providing feedback, the same way someone can view footage of their golf swing to learn what they couldnt see in the moment. Q: You talk about numerous experiments going on around the world to study traffic, what are some of the ones that you found most interesting? A: One of the most fascinating things that is happening, thanks to technology like TiVo style cameras and feedback sensors, is that researchers are becoming increasingly able to study how drivers really behave on the road, learning curious details about, for example, how much time drivers spend looking in certain places forward at the road, in the rear-view mirrors, away from traffic, at the radio, etc. With companies like DriveCam, this information is actually being used to coach drivers beginners but also experienced drivers based on the crashes they narrowly avoided. The work of Hans Monderman, who unfortunately died in January, in the Netherlands was also utterly fascinating. Faced with a visually unappealing, traffic clogged intersection in the heart of the Dutch city of Drachten, Monderman turned it into a roundabout, with fountains and plantings but no traffic lights and virtually no signage the result, more than a year later, is the traffic moves more efficiently through the town, and there have been fewer crashes. It was also quite memorable to be in Los Angeles "traffic bunker" on Oscar Night. They set up special traffic patterns so that the stars limos can all get to the red carpet at roughly the same time. It was striking to see how one person, sitting alone at a computer screen, can orchestrate the whole citys flows, its competing patterns of desire. Q: You have been all over the world studying traffic. So, where was it the worst and how does the city in which we live dictate our highway behavior? A: It depends on how you define worst! Ive been in nasty jams from Seoul to San Francisco. The places that felt the most chaotic were cities like Hanoi, which currently has the highest level of motorbikes per capita in the world, and where, in many parts of the city, the only way one can cross the street is by simply wading into the flow. New Delhi was also quite unnerving, not just for the hustle and bustle of so many modes of transportation on the road at once, but the chronic disobedience of traffic rules. In Beijing, where "driver" not that long ago was only the title of a job, driving was hectic but I found it quite difficult as well to be a pedestrian drivers were always plunging into the crosswalks when I had the "walk" man, I was always having to climb bridges or submerge into tunnels to

cross streets, and the citys "super-blocks" are sort of oppressive I walk quickly but it took me nearly an hour to walk around the block on which my hotel was located. I think traffic behavior is dictated by a complicated mix of cultural factors and the traffic engineering measures in place. In Copenhagen, home of the worlds largest anarchist community, people on foot are astonishingly law-abiding in terms of not crossing against the light. In New York, an arguably more individualistic, ego-driven sort of place, youre viewed as a tourist if you dont jaywalk. But in London, for example, studies have shown that the number of pedestrians who violate red lights literally changes with each block; its not that those peoples culture changed from one block to the next, it was simply that some lights were too punishingly long to wait for. Q: You seem to feel pretty strongly about what constitutes an "accident" on the road. While drugs and alcohol are called out as criminal, cell phone use, texting and general disregard for traffic laws are not. Do you think we are heading toward stricter laws on this front? Should we? A: Since the car was invented, drivers have been reluctant to give up what they see as their "rights," even as these supposed rights keep changing. This is why, for example, cars are sold without "speed governors," a device that would greatly reduce, if not eliminate, the illegal lets call it what it is act of speeding, and certainly reduce fatalities and injuries. It took years for people to accept that drinking and then getting behind the wheel was not a good idea, and obviously many still do think its acceptable. As the science emerges that cell phone conversations, not simply dialing, can seriously impair a drivers attention and reaction times, the very reasons we criminalize drunken driving, Im not sure what the distinction is that should be made if a driver kills a pedestrian while drunk versus while on their cell phone, or for that matter who kills a pedestrian because they were driving 25 miles over the speed limit. Does one get years in jail and the other a slap on the wrist? Dont they both show an equal disregard for the law? People are leery of imposing stricter laws on negligent driving because its always been viewed as a "folk crime," like fudging your taxes, sort of widespread and not as serious as others. People are reluctant to criminalize what they see as "normal" behavior. But how did it become normal behavior? When I got my drivers license, the cell phone hadnt been invented, and somehow as a society we managed to get along. The economy didnt collapse, and, if you believe surveys, people were no less happy then they are now. No one wants to get into an accident, theyre certainly not premeditated, but were people doing everything they reasonably could to avoid an "accidental" crash when it later turns out they were talking on a cell phone while driving? Its something were going to have wrestle with as a society as the science really begins to come in. Q: What is "a forgiving road"? A: This is a school of thought that says, drivers are only human, theyre going to make mistakes, so lets build things so that if they do make a mistake, they wont be seriously injured or killed. Sounds good in theory, and in some places, its good practice. If youre cruising along the highway at 75 mph and your tire blows out, wouldnt you want a guardrail to prevent you from crashing into a tree? The problem is: Where do you draw the line? The early traffic engineers thought the forgiving road was such a good idea they argued it should be extended to every road in the country. Even residential streets, they argued, shouldnt be lined with trees, and instead should have massive "clear zones" for people to skid off into without killing themselves. The problem, apart from the fact that forgiving roads dont really make for nice residential or city environments, is that the forgiving road principles, can, in effect, give permission to drivers to drive more recklessly, which is not good for other drivers, pedestrians, or cyclists and often not good for them. Just as the only safe car is the one that never leaves the garage, the only truly safe road is the one thats never driven. Trying to make roads "too safe" for drivers leads to all sorts of unintended consequences. Q: You write that "as the inner life of the driver begins to come into focus, it is becoming clear not only that distraction is the single biggest problem on the road, but that we have little concept of just how distracted we are." Can you explain? A: To give you an idea, I took a test on a driving simulator. I was doing a kind of logic exercise via a hands-free phone while I drove on the highway. I smacked into the back of a truck. When I looked at the software that tracked my eye movements, they were locked onto the back of that truck. Did I realize how distracted I was? Not at all. Think of when you zone out as someones talking to you. Youre only made aware of it when they ask if youre listening to them. Or take the famous "gorilla video" experiment. Youre trying to pay attention to people passing the basketball to each other. In the meantime, a guy in a gorilla suit strolls by. Most people dont see it. Youre distracted from the gorilla by the act of counting passes, but youve no idea. This kind of thing, scarily, happens in driving all the time. There are times we know were distracted in some way, like physically dialing a phone, but other times when were not aware of the extent of our distraction because we think were paying attention. Q: You write about the cars and technologies of the future and as you put it, "It is probably no accident that whenever one hears of a "smart" technology, it refers to something that has been taken out of human control." Are we headed towards

the driverless automobile? A: Were definitely already in the era of "driver-assist" automobiles, with blind-spot warnings and adaptive cruise control and the like. As people who study automation have noted, these "semiautomated" processes come with very particular challenges drivers may relax their vigilance, thinking everything is fine thanks to the cars technology, but something might happen that actually confounds the cars systems, and suddenly the driver is "out of the loop." This kind of thing has been seen in airline crashes. That said, were it to be fully achievable, full automated driving would have all kinds of benefits, from smoother traffic flow to a reduction in crashes. But thats a ways away the legal issues, for one, are massive but maybe by 2050, like in the film Minority Report, well all have little autonomous pods connected to a grid Q: If you had to choose from the vast array of prescriptions, what would be some of the top things you would recommend to make our roads safer and our traffic less maddening? A: 1. Pay attention to the task at hand. You are operating heavy machinery, not driving a big phone booth or a make-up mirror. Every glance away from the road, every phone call, every fumbling for your last McNugget, not only disrupts traffic flow, it boosts the risk for a crash, which is itself one of the leading causes of congestion. Even though we often read about how much money were losing because of traffic congestion, which people often site as reason to build more roads, its been estimated that crashes cost us more in economic terms than congestion itself. 2. Remember the ants. Army ants are among the worlds best commuters, for a single reason: Theyre all cooperating. They move in unison, they help each other out, the individual doesnt consider his own interests above that of the traffic stream. We all want to assert our individuality, or our sense of superiority on the road, but as everyone does that, it makes it worse for everyone else, and the whole system gets worse. 3. Keep in mind youre not as good a driver as you think you are. On the road, were moving faster than our evolutionary history has prepared us. We cope pretty well regardless, but were still susceptible to all kinds of flaws and distortions in our sensory and decision-making equipment. Just because your eyes are on the road and your hands upon the wheel doesnt mean youre actually prepared to deal with an emergency. 4. We cant build our way out of traffic, but we can think our way out. Building more roads when theyre already under-funded doesnt seem workable, and given that most roads are only congested part of the time, its not really the most efficient solution anyway, for loads of reasons. As a former Disney engineer told me when I asked why they didnt just build more rides instead of worrying about new ways to manage the long queues, "you dont build a church for Easter Sunday." But being able to clear a stalled car quickly because sensors detect the traffic flow has changed, knowing which routes are crowded in that moment, and possibly charging accordingly; or, perhaps, making traffic lights adapt to changing demand or getting rid of traffic lights altogether theres countless innovative solutions out there that are more sophisticated, and more sustainable,than simply laying more asphalt, and that dont necessarily involve not driving though that of course is the ultimate traffic solution. Q: Okay so the big question. We know you have learned a lot about traffic but what have you learned about we humans behind the wheels? A: In a word, that were human! We make mistakes, we misjudge our abilities, were not as aware of whats happening in traffic as we think we are, we act differently in different situations, we get angry over things that matter little in the long run, were susceptible to distortions in our sense of time, we have trouble living beyond the moment, of seeing the big picture oh, and also, that everyone has a different opinion on who the worst drivers are and where they live"Los Angeles! L.A. drivers are the worst No, Atlanta has terrible drivers No way, Boston drivers are nuts" Try this with your friends sometime. ExtraitWhy I Became a Late Merger(and Why You Should Too)Why does the other lane always seem to be moving faster?It is a question you have no doubt asked yourself while crawling down some choked highway, watching with mounting frustration as the adjacent cars glide ahead. You drum the wheel with your fingers. You change the radio station. You fixate on one car as a benchmark of your own lack of progress. You try to figure out what that weird button next to the rearwindowdefroster actually does.I used to think this was just part of the natural randomness of the highway. Sometimes fate would steer me into the faster lane, sometimes it would relinquish me to the slow lane.That was until recently, when I had an experience that made me rethink my traditionally passive outlook on the road, and upset the careful set of assumptions that had always guided my behavior in traffic.I made a major lifestyle change. I became a late merger.Chances are, at some point you have found yourself driving along the highway when a sign announces that the left lane, in which you are traveling, will close one mile ahead, and that you must merge right.You notice an opening in the right lane and quickly move over. You breathe a sigh, happy to be safely ensconced in the Lane That Will Not End. Then, as the lane creeps to a slow halt, you notice with rising indignation that cars in the lane you have vacated are continuing to speed ahead, out of sight. You quietly seethe and contemplate returning to the much faster left lane--if

only you could work an opening. You grimly accept your condition.One day, not long ago, I had an epiphany on a New Jersey highway. I was having a typical white-knuckle drive among the scenic oil-storage depots and chemical-processing plants of northern Jersey when suddenly, on the approach to the Pulaski Skyway, the sign loomed: LANE ENDS ONE MILE. MERGE RIGHT.Seized by some rash impulse, I avoided the instinctual tickle at the back of my brain telling me to get in the already crowded right lane. Just do what the sign says, that voice usually counsels. Instead, I listened to another, more insistent voice: Don't be a sucker. You can do better. I plowed purposefully ahead, oblivious to the hostile stares of other drivers. From the corner of my eye I could see my wife cringing. After passing dozens of cars, I made it to the bottleneck point, where, filled with newfound swagger, I took my rightful turn in the small alternating "zipper" merge that had formed. I merged, and it was clear asphalt ahead. My heart was beating faster. My wife covered her face with her hands.In the days after, a creeping guilt and confusion took hold. Was I wrong to have done this? Or had I been doing it wrong all my life? Looking for an answer, I posted an anonymous inquiry on Ask MetaFilter, a Web site one can visit to ask random questions and tap into the "hive mind" of an anonymous audience of overeducated and overopinionated geeks. Why should one lane move faster than the other, I wanted to know, and why are people rewarded for merging at the last possible moment? And was my new lifestyle, that of the late merger, somehow deviant?I was startled by the torrent of responses, and how quickly they came. What struck me most was the passion and conviction with which people argued their various cases--and the fact that while many people seemed to think I was wrong, almost as many seemed to think I was right. Rather than easy consensus, I had stumbled into a gaping divide of irreconcilablebelief.The first camp--let us name it after the bumper sticker that says practice random acts of kindness--viewed early mergers as virtuous souls doing the right thing and late mergers as arrogant louts. "Unfortunately, people suck," wrote one Random Acts poster. "They'll try whatever they can to pass you, to better enjoy the traffic jam from a few car lengths ahead of you. . . . People who feel that they have more pressing concerns and are generally more important than you will keep going, and some weak-spined schmuck will let them in further down, slowing your progress even more. This sucks; I'm afraid it's the way of the world."Another camp, the minority camp-let's call them Live Free or Die, after the license-plate motto of the state of New Hampshire-argued that the late mergers were quite rationally utilizing the highway's maximum capacity, thus making life better for everyone. In their view, the other group's attempts toward politeness and fairness were actually detrimental to all.It got more complicated. Some argued that late merges caused more accidents. Some said the system worked much better in Germany, and hinted that my dilemma perhaps revealed some national failing in the American character. Some said they were afraid of not being "let in" at the last moment; some said they would actively try to block someone from merging, the way truckers often do. So what was going on here? Are we not all driving the same road, did we not all pass the same driving tests? What was puzzling was not just the variety of responses but the sense of moral righteousness each person attributed to his or her highway behavior, and the vitriol each person reserved for those holding the opposite view. For the most part, people were not citing traffic laws or actual evidence but their own personal sense of what was right.I even found someone claiming to have had a conversion experience exactly the opposite of mine. "Until very recently, I was a 'late merger,' " wrote the author, an executive with a software company, in a business magazine. Why had he become a born-again early merger? "Because I came to realize that traffic flowed faster the sooner people merged." He used this as a metaphor for successful team building in corporate America, in which "late mergers" were those who consistently put their own opinions and motives above the greater company. "Early mergers," he wrote, could help push companies to their "maximum communal speed." But did traffic flow faster when people merged sooner? Or did it just seem more noble to think that it did?. . .You may suspect that getting people to merge in a timely fashion, and without killing one another, is less of a traffic problem and more of a human problem. The road, more than simply a system of regulations and designs, is a place where many millions of us, with only loose parameters for how to behave, are thrown together daily in a kind of massive petri dish in which all kinds of uncharted, little-understood dynamics are at work. There is no other place where so many people from different walks of life--different ages, races, classes, religions, genders, political preferences, lifestyle choices, levels of psychological stability--mingle so freely.What do we really know about how it all works? Why do we act the way we do on the road, and what might that say about us? Are certain people predisposed to drive certain ways? Do women behave differently than men? And if, as conventional wisdom has it, drivers have become progressively less civil over the past several decades, why is that so? Is the road a microcosm of society, or its own place with its own set of rules? I have a friend, an otherwise timorous Latin

teacher, who once told me how, in a modest Toyota Corolla, he had defiantly "stuck it" to the driver of an eighteen-wheeler who he felt was hogging the road. Some mysterious force had turned this gentle suburban scholar into the Travis Bickle of the turnpike. (Are you tailgatin' me?) Was it traffic, or had the beast always been lurking within?The more you think about it--or, rather, the more time you spend in traffic with time to think about it--the more these sorts of puzzling questions swim to the surface. Why can one sit in traffic jams that seem to have no source? Why does a ten-minute "incident" create one hundred minutes of gridlock? Do people really take longer to vacate a parking spot when someone else is waiting, or does it just seem so? Do the car-pool lanes on highways help fight congestion or cause more of it? Just how dangerous are large trucks? How does what we drive, where we drive, and with whom we drive affect the way we drive? Why do so many New Yorkers jaywalk, while hardly anyone in Copenhagen does? Is New Delhi's traffic as chaotic as it seems, or does a beautiful order lurk beneath the frenzied surface?Like me, you may have wondered: What could traffic tell us, if someone would just stop to listen?The first thing you hear is the word itself. Traffic. What did you think of when you read that word? In all likelihood you pictured a crowded highway, filled with people obstructing your progress. It was not a pleasant thought. This is interesting, because for most of its long life the word traffic has had rather positive connotations. It originally referred (and still does) to trade and the movement of goods. That meaning slowly expanded to include the people engaging in that trade and the dealings among people themselves--Shakespeare's prologue to Romeo and Juliet describes the "traffic of our stage." It then came to signify the movement itself, as in the "traffic on this road." At some point, people and things became interchangeable. The movement of goods and people were intertwined in a single enterprise; after all, if one was going somewhere, it was most likely in pursuit of commerce. This is still true today, as most traffic problems occur during the times we are all going to work, but we seem less likely to think of traffic in terms of motion and mobility, as a great river of opportunity, than as something that makes our lives miserable.Now, like then, we think of traffic as an abstraction, a grouping of things rather than a collection of individuals. We talk about "beating the traffic" or "getting stuck in traffic," but we never talk--in polite company, at least--about "beating people" or "getting stuck in people." The news lumps together "traffic and weather" as if they were both passive forces largely outside our control, even though whenever we complain about it, we do so because we're part of the traffic. (To be fair, I suppose we are now part of the weather as well, thanks to the atmospheric emissions of that same driving.) We say there is "too much traffic" without exactly knowing what we mean. Are we saying there are too many people? Or that there are not enough roads for the people who are there? Or that there is too much affluence, which has enabled too many people to own cars?One routinely hears of "traffic problems." But what is a traffic problem? To a traffic engineer, a "traffic problem" might mean that a street is running below capacity. For a parent living on that street, the "traffic problem" could be too many cars, or cars going too fast. For the store owner on that same street, a "traffic problem" might mean there is not enough traffic. Blaise Pascal, the renowned seventeenth-century French scientist and philosopher, had perhaps the only foolproof remedy for traffic: Stay home. "I have discovered that all the unhappiness of men arises from one single fact," he wrote. "That they cannot stay quietly in their own chamber." Pascal, as it happens, is credited with inventing history's first urban bus service. He died a mere five months later. Was Parisian traffic his undoing?Whatever "traffic problem" means to you, it may give you some comfort to know that traffic problems of all variety are as old as traffic itself. Ever since humans began to propel themselves artificially, society has struggled to catch up with the implications of mobility, to sort out technical and social responses to the new demands. Visitors to the ruins of Pompeii, for example, will see rutted streets marked by the tracks of chariot wheels. But many are wide enough for only one set of wheels. The tourist wonders: Was it a one-way street? Did a lowly commoner have to reverse himself out of the way when a member of the imperial legions came trotting along in the other direction? If two chariots arrived at an intersection simultaneously, who went first? These questions were neglected for years, but recent work by the American traffic archaeologist Eric Poehler has provided some answers.By studying the wear patterns on curbstones at corners, as well as the stepping stones set up for pedestrians to cross the "rutways," Poehler was able to discern not just the direction of traffic but the direction of turns onto two-way streets at intersections. It seems, based on the "directionally diagnostic wear patterns" on the curbstones, that Pompeii drivers drove on the right side of the street (part of a larger cultural preference for righthanded activities), used primarily a system of one-way streets, and were banned from driving on certain streets altogether. There seemed to be no traffic signs or street signs. It may please the reader to know, however, that Pompeii did suffer from its share of road construction and detours (as when the building of baths forced the reversal

of the Vico di Mercurio).In ancient Rome, the chariot traffic grew so intense that Caesar, the self-proclaimed curator viarum, or "director of the great roads," declared a daytime ban on carts and chariots, "except to transport construction materials for the temples of the gods or for other great public works or to take away demolition materials." Carts could enter the city only after three p.m. And yet, as one so often finds in the world of traffic, there is very rarely an action without an equal and opposite reaction. By making it easier for the average Roman to move around during the day, Caesar made it harder for them to sleep at night. The poet Juvenal, sounding like a second-century version of a contemporary Roman complaining about scooter traffic, lamented, "Only if one has a lot of money can one sleep in Rome. The source of the problem lies in the carts passing through the bottlenecks of the curved streets, and the flocks that stop and make so much noise they would prevent . . . even a devil-fish from sleeping."By the time we get to medieval England, we can see that traffic was still a problem in search of a solution. Towns tried to limit, through laws or tolls, where and when traveling merchants could sell things. Magistrates restricted the entry of "shod carts" into towns because they damaged bridges and roads. In one town, horses were forbidden to drink at the river, as children were often found playing nearby. Speeding became a social problem. The Liber Albus, the rule book of fifteenth-century London, forbade a driver to "drive his cart more quickly when it is unloaded than when it is loaded" (if he did, he would be looking at a forty-pence speeding ticket or, more drastically, "having his body committed to prison at the will of the Mayor").In 1720, traffic fatalities from "furiously driven" carts and coaches were named the leading cause of death in London (eclipsing fire and "immoderate quaffing"), while commentators decried the "Controversies, Quarreling, and Disturbances" caused by drivers "contesting for the way." Meanwhile, in the New York of 1867, horses were killing an average of four pedestrians a week (a bit higher than today's rate of traffic fatalities, although there were far fewer people and far fewer vehicles). Spooked runaways trampled pedestrians underfoot, "reckless drivers" paid little heed to the 5-mile-an-hour speed limit, and there was little concept of right-of-way. "As matters now stand," the New York Times wrote in 1888, "drivers seem to be legally justified in ignoring crossings and causing [pedestrians] to run or dodge over vehicles when they wish to pass over."The larger the cities grew, and the more ways people devised to get around those cities, the more complicated traffic became, and the more difficult to manage. Take, for instance, the scene that occurred on lower Broadway in New York City on the afternoon of December 23, 1879, an "extraordinary and unprecedented blockade of traffic" that lasted five hours. Who was in this "nondescript jam," as the New York Times called it? The list is staggering: "single and double teams, double teams with a tandem leader, and four-horse teams; hacks, coupes, trucks, drays, butcher carts, passenger stages, express wagons, grocers' and hucksters' wagons, two-wheeled 'dog carts,' furniture carts and piano trucks, and jewelers' and fancy goods dealers' light delivery wagons, and two or three advertising vans, with flimsy transparent canvas sides to show illumination at night."Just when it seemed as if things could not get more complicated on the road, along came a novel and controversial machine, the first new form of personal transportation since the days of Caesar's Rome, a newfangled contrivance that upset the fragile balance of traffic. I am talking, of course, about the bicycle. After a couple of false starts, the "bicycle boom" of the late nineteenth century created a social furor. Bicycles were too fast. They threatened their riders with strange ailments, like kyphosis bicyclistarum, or "bicycle stoop." They spooked horses and caused accidents. Fisticuffs were exchanged between cyclists and noncyclists. Cities tried to ban them outright. They were restricted from streets because they were not coaches, and restricted from sidewalks because they were not pedestrians. The bicycle activists of today who argue that cars should not be allowed in places like Brooklyn's Prospect Park were preceded, over a hundred years ago, by "wheelmen" fighting for the right for bicycles to be allowed in that same park. New bicycle etiquette questions were broached: Should men yield the right-of-way to women?There is a pattern here, from the chariot in Pompeii to the Segway in Seattle. Once humans decided to do anything but walk, once they became "traffic," they had to learn a whole new way of getting around and getting along. What is the road for? Who is the road for? How will these streams of traffic flow together? Before the dust kicked up by the bicycles had even settled, the whole order was toppled again by the automobile, which was beginning to careen down those same "good roads" the cyclists themselves, in a bit of tragic irony, had helped create.When driving began, it was like a juggernaut, and we have rarely had time to pause and reflect upon the new kind of life that was being made. When the first electric car debuted in mid-nineteenth-century England, the speed limit was hastily set at 4 miles per hour--the speed at which a man carrying a red flag could run ahead of a car entering a town, an event that was still a quite rare occurrence. That man with the red flag racing the car was like a metaphor of traffic itself. It was probably also the last time the automobile

existed at anything like human speed or scale. The car was soon to create a world of its own, a world in which humans, separated from everything outside the car but still somehow connected, would move at speeds beyond anything for which their evolutionary history had prepared them.At first, cars simply joined the chaotic traffic already in the street, where the only real rule of the road in most North American cities was "keep to the right." In 1902, William Phelps Eno, a "well-known yachtsman, clubman, and Yale graduate" who would become known as "the first traffic technician of the whole world," set about untangling the strangling miasma that was New York City's streets. (Deaths by automobile were already, according to the New York Times, "every-day occurrences" with little "news value" unless they involved persons of "exceptional social or business prominence.") Eno was every bit the WASP patrician as social reformer, a familiar character then in New York. He thundered at "the stupidity of drivers, pedestrians and police" and bluntly wielded his favorite maxim: "It is easy to control a trained army but next to impossible to regulate a mob." Eno proposed a series of "radical ordinances" to rein in New York's traffic, a plan that seems hopelessly quaint now, with its instructions on the "right way to turn a corner" and its audacious demands that cars go in only one direction around Columbus Circle. But Eno, who became a global celebrity of sorts, boating off to Paris and So Paulo to solve local traffic problems, was as much a social engineer as a traffic engineer, teaching vast numbers of people to act and communicate in new ways, often against their will.In the beginning this language was more Tower of Babel than Esperanto. In one town, the blast of a policeman's whistle might mean stop, in another go. A red light indicated one thing here, another thing there.The first stop signs were yellow, even though many people thought they should be red. As one traffic engineer summed up early-twentieth-century traffic control, "there was a great wave of arrow lenses, purple lenses, lenses with crosses, etc., all giving special instructions to the motorist, who, as a rule, hadn't the faintest idea of what these special indications meant." The systems we take for granted today required years of evolution, and were often steeped in controversy. The first traffic lights had two indications, one for stop and one for go. Then someone proposed a third light, today's "amber phase," so cars would have time to clear the intersection. Some engineers resisted this, on the grounds that vehicles were "amber rushing," or trying to beat the light, which actually made things more dangerous. Others wanted the yellow light shown before the signal was changing to red and before it was changing from red back to green (which one sees today in Denmark, among other places, but nowhere in North America). There were strange regional one-offs that never caught on; for example, a signal at the corner of Wilshire and Western in Los Angeles had a small clock whose hand revealed to the approaching driverhow much "green" or "red" time remained.Were red and green even the right colors? In 1923 it was pointed out that approximately one in ten people saw only gray when looking at a traffic signal, because of color blindness. Might not blue and yellow, which almost everyone could see, be better? Or would that create catastrophic confusion among all those who had already learned red and green? Despite all the uncertainty, traffic engineering soon hoisted itself onto a wobbly pedestal of authority, even if, as the transportation historian Jeffrey Brown argues, engineers' neutral-sounding Progressive scientific ideology, which compared "curing" congestion to fighting typhoid, reflected the desires of a narrow band of urban elites (i.e., car owners). Thus it was quickly established that the prime objective of a street was simply to move as many cars as quickly as possible--an idea that obscured, as it does to this day, the many other roles of city streets.After more than a century of tinkering with traffic, plus years of tradition and scientific research, one would think all these issues would have been smoothed out. And they have been, largely. We drive in a landscape that looks virtually the same wherever we go: A red light in Morocco means the same thing as it does in Montana. A walk "man" that moves us across a street in Berlin does the same in Boston, even if the "man" looks a bit different. (The beloved jaunty, hat-clad Ampelmnnchen of the former German Democratic Republic has survived the collapse of the Berlin Wall.) We drive on highways that have been so perfectly engineered we forget we are moving at high speeds--indeed, we are sometimes barely aware of moving at all.For all this standardized sameness, though, there is much that is still simply not known about how to manage the flows of all those people in traffic--drivers, walkers, cyclists, and others--in the safest and most efficient manner. For example, you may have seen, in some cities, a "countdown signal" that indicates, in seconds, exactly how much time you have before the "Walk" signal will change to "Don't Walk." Some people in the traffic world think this innovation has made things better for pedestrians, but it is just as easy to find others who think it offers no improvement at all. Some people think that marked bicycle lanes on streets are the ideal for cyclists, while others prefer separated lanes; still others suggest that maybe having no bicycle lanes at all would be best for bike riders. For a time it was thought that highway traffic would flow better and more safely if trucks were forced to

obey a slower speed limit than cars. But "differential speed limits" just seemed to swap out one kind of crash risk for another, with no overall safety benefit, so the "DSLs" were gradually rolled back.Henry Barnes, the legendary traffic commissioner of New York City in the 1960s, reflecting on his long career in his charmingly titled memoir The Man with the Red and Green Eyes, observed that "traffic was as much an emotional problem as it was a physical and mechanical one." People, he concluded, were tougher to crack than cars. "As time goes on the technical problems become more automatic, while the people problems become more surrealistic."That "surrealistic" side of traffic will be the focus of this book. I began my research with the intention of stopping to take a look around at an environment that has become so familiar we no longer see it; I wanted to slow down for a moment and think about what's going on out there as we drive, walk, cycle, or find some other way to get around. (Look out for the SKATEBOARD ROUTE signs the next time you're in Portland, Oregon.) My aim was to learn to read between the dotted lines on the highway, sift through the strange patterns that traffic contains, interpret the small feints, dodges, parries, and thrusts between vehicles. I would study not only the traffic signals we obey but also the traffic signals we send.Many of us, myself included, seem to take driving a car fairly lightly, perhaps holding on to some simple myths of independence and power, but it is actually an incredibly complex and demanding task: We are navigating through a legal system, we are becoming social actors in a spontaneous setting, we are processing a bewildering amount of information, we are constantly making predictions and calculations and on-the-fly judgments of risk and reward, and we're engaging in a huge amount of sensory and cognitive activity--the full scope of which scientists are just beginning to understand.Much of our mobile life is still shrouded in mystery and murk. We welcome into our vehicles new technologies like cell phones, in-car navigation systems, and "radio display system" radios (which show song titles) before we have had time to understand the complicated effects those devices might have on our driving. Opinion is often divided on the most fundamental aspects of how we should do things. Should hands be at ten a.m. and two p.m. on the steering wheel, as we were once taught--or have air bags made that a dangerous proposition? When changing lanes, is it sufficient to simply signal and check the mirrors? Or should you turn your head and glance over your shoulder? Relying on mirrors alone leaves one open to blind spots, which engineers say can exist on any car (indeed, they almost seemed designed to occur at the most inconvenient and dangerous place, the area just behind and to the left of the driver). But turning your head means not looking forward, perhaps for that vital second. "Head checks are one of the most dangerous things you can do," says the research director of a highway safety agency.So what do we do? If these issues aren't complicated enough, consider the right side-view mirror itself. In the United States, the driver will notice that their passenger side-view mirror is convex; it usually carries a warning such as "Objects in mirror are closer than they appear." The driver's side mirror is not. In Europe, both mirrors are convex. "What you have today is this clearly pretty wrong situation," says Michael Flannagan, a researcher at the University of Michigan who specializes in driver vision. "It's wrong in the sense that Europe does one thing, the U.S. does another. They can't both be optimal. These are both entrenched traditions, neither of which is fully based on rational, explicit argument." The mirror, as with so many things in traffic, is more complicated than it might appear.And so we drive around with vague ideas of how things work. Every last one of us is a "traffic expert," but our vision is skewed. We see things only through our own windshields. It is a repeated truism, borne out by insurance company surveys, for example, that most accidents happen very close to home. On first glance, it makes statistical sense: You're likely to take more trips, and spend more time in the car, in your immediate surroundings. But could there be something deeper at work? Habits, psychologists suggest, provide a way to reduce the amount of mental energy that must be expended on routine tasks. Habits also form a mind-set, which gives us cues on how to behave in certain settings. So when we enter a familiar setting, like the streets around our house, habitual behavior takes over. On the one hand, this is efficient: It frees us from having to gather all sorts of new information, from getting sidetracked. Yet on the other hand, because we are expending less energy on analyzing what is around us, we may be letting our mental guard down. If in three years there has never been a car coming out of the Joneses' driveway in the morning, what happens on the first day of the fourth year, when suddenly there is? Will we see it in time? Will we see it at all? Our feeling of safety and control is also a weakness. A study by a group of Israeli researchers found that drivers committed more traffic violations on familiar routes than on unfamiliar routes.Surely you have had a moment when you were driving down the road and suddenly found yourself "awake at the wheel," unable to remember the last few minutes. In a way, much of the time we spend in traffic is like that, a kind of gauzy dream state of automatic muscle movements and half-remembered images. Traffic is an in-between time in

which we are more likely to think about where we are going than where we are at the moment. Time and space are skewed in traffic; our vision is fragmented and often unclear, and we take in and then almost immediately forget hundreds, perhaps thousands of images and impressions. Every minute we are surrounded by a different group of people, people we will share space with but never talk to, never meet. Considering that many of us may spend more time in traffic than we do eating meals with our family, going on vacation, or having sex, it seems worth probing a bit deeper into the experience. As an American in the early twenty-first century, I live in the most auto-dependent, caradapted, mileage-happy society in the history of the planet. We spend more on driving than on food or health care. As of the last census, there were more cars than citizens. In 1960, hardly any household had three vehicles, and most had only one. Now more own three than own one. Even as the size of the average North American family has fallen over the past several decades, the number of homes with multicar garages has almost doubled--one in five new homes has a three-car garage.To pay for all that extra space, commute times have also been expanding. One of the fastest-growing categories in the last "commuting census" in the United States was that of "extreme commuters," people who spend upward of two hours a day in traffic (moving or otherwise). Many of these are people pushed farther out by higher home prices, past the billboards that beckon "If you lived here, you'd be home by now," in a phenomenon real estate agents call "drive till you qualify"--in other words, trading miles for mortgage. The average American, as of 2005, spent thirty-eight hours annually stuck in traffic. In 1969, nearly half of American children walked or biked to school; now just 16 percent do. From 1977 to 1995, the number of trips people made on foot dropped by nearly half. This has given rise to a joke: In America, a pedestrian is someone who has just parked their car.Traffic has become a way of life. The expanding car cup holder, which became fully realized standard equipment only in the 1980s, is now the vital enabler of dashboard dining, a "food and beverage venue" hosting such products as Campbell's Soup at Hand and Yoplait's Go-Gurt. In 2001, there were 134 food products that featured the word go on the label or in ads; by 2004, there were 504. Accordingly, the number of what the industry calls "on-the-go eating occasions" in the United States and Europe combined is predicted to rise from 73.2 billion in 2003 to 84.4 billion in 2008. Fast-food restaurants now clock as much as 70 percent of their sales at drive-through windows. (Early in our romance with the car, we used to go to "drive-in" restaurants, but those now seem relics of a gentler, slower age.) An estimated 22 percent of all restaurant meals are ordered through a car window in America, but other places, like Northern Ireland--where one in eight people are said to eat in the car at least once per week--are getting into the act too. McDonald's has added a second lane to hundreds of its restaurants in the United States in order to speed traffic, and at its new drive-throughs in China, dubbed De Lai Su (for "Come and Get It Fast"), the company is pitching retooled regional offerings like "rice burgers" to its burgeoning drive-through customers. Starbucks, which initially resisted the drive-through for its fast-food connotations, now has drive-throughs at more than half of its new company-owned stores. The "third place" that Starbucks espouses, the place for community and leisure between home and work, is, arguably, the car.Traffic has even shaped the food we eat. "One-handed convenience" is the mantra, with forkless foods like Taco Bell's hexagonal Crunchwrap Supreme, designed "to handle well in the car." I spent an afternoon in Los Angeles with an advertising executive who had, at the behest of that same restaurant chain, conducted a test, in actual traffic, of which foods were easiest to eat while driving. The main barometer of success or failure was the number of napkins used. But if food does spill, one can simply reach for Tide to Go, a penlike device for "portable stain removal," which can be purchased at one of the more than twelve hundred (and growing) CVS drugstores that feature a drive-through window. The "audiobook," virtually unheard of before the 1980s, represents a business worth $871 million a year, and wouldn't you know it, "traffic congestion" gets prominent mention in sales reports from the Audio Publishers Association. Car commuting is so entrenched in daily life that National Public Radio refers to its most popular segments as "driveway moments," meaning the listener is so riveted to a story they cannot leave their car. In Los Angeles, some synagogues have been forced to change the time of their evening services from eight p.m. to six p.m. in order to capture commuters on their way home, as going home and then returning to services is too much to bear in L.A. traffic. So much time is spent in cars in the United States, studies show, that drivers (particularly men) have higher rates of skin cancer on their left sides--look for the opposite effect in countries where people drive on the left.Americans have long been fabled for their love of mobility. The nineteenth-century French visitor Alexis de Tocqueville wrote of millions "marching at once toward the same horizon," a phrase that springs to mind today when I'm flying over any large city and look at the parallel strings of red and white lights, draped like glittering necklaces over the landscape.But this is not just

a book about North America. While the United States may still have the world's most thoroughgoing car culture, traffic has become a universal condition, inflected with regional accents. In Moscow, the old images of Russians waiting in line have been replaced by images of idling cars stuck in heavy congestion. Ireland has seen its car-ownership rates double since 1990. The once tranquil Tibetan capital of Lhasa now has jams and underground parking garages. In Caracas, Venezuela, traffic is currently ranked "among the world's worst," thanks in part to an oil-fueled economic boom--and in part to cheap gas (as low as seven cents a gallon). In So Paulo, the wealthy shuttle between the city's more than three hundred helipads rather than brave the legendary traffic. In Jakarta, desperate Indonesians work as "car jockeys," hitchhikers of a sort who are paid to help drivers meet the passenger quota for the faster car-pool lanes. Another traffic-related job has emerged outside Shanghai and other Chinese cities, according to Jian Shou Wang, the head of Kijiji (the eBay of China). There, one can find a new type of worker: Zhiye dailu, or professional road guides, who for a small fee will jump into one's car and provide directions in the unfamiliar city--a human "nav system." But with opportunity comes cost. In China, the number of people being killed on the road every year is now greater than the total number of vehicles the country was manufacturing annually as recently as 1970. By 2020, the World Health Organization predicts, road fatalities will be the world's third-leading cause of death.We are all traveling the same road, if each in our own peculiar way. I invite you to join me on that road as I try, over the din of passing cars, to hear what traffic has to say.From the Hardcover edition.