

Why American Roads All Go to Pot

*When it comes to
building highways,
Europe is kicking our asphalt*

by Betsy Dance

Driving down New York City's hubcap-strewn FDR Drive is a little like bungee-jumping, that masochistic sport that requires you to tie yourself to a huge rubber band, jump off a high bridge, and pray furiously until you ricochet back up. Only bungee-jumping is more controlled. The FDR's drivers don't always have the benefit of knowing when they're going to plummet. They can't always brace before the car plunges into the abyss, but they usually know what hit them. Or actually, what *they* hit: a pothole.

Funny thing, though—millions of local, state, and federal dollars were poured into the FDR in the eighties. It's been closed for major improvements twice in the past five years. But like the rest of New York's roads, the FDR Drive somehow just keeps falling apart. In fact, in the next decade, state officials say, more roads will be closed for restoration than will be open.

Unfortunately, flooring it out of state won't help. Despite an annual outlay of nearly \$80 billion, the federal government now classifies *one third* of America's roads as deteriorated. Washington, D.C.'s roads are in such a sorry state that, despite a repair budget that's quadrupled in the past decade, the city still boasts an astonishing \$1.6 million backlog in street repair projects. And the cost of bad highways doesn't stop there. Traffic congestion, caused and aggravated by endless road repairs, costs this country \$30 billion each year. That's *\$30,000,000,000*. And those same people who can't get to work on time are stuck in cars belching noxious gases that are poisoning our air.

Our roads are allowed to get rocky by a remarkable web of disincentives for American road builders—in fact, federal policy virtually drives roads to ruin. Here's how it works . . . or doesn't.

Betsy Dance is a Washington writer. Research assistance was provided by Coates Lear and Elizabeth Pitofsky.

When roads need to be built or substantially repaired, states contract the jobs out to industry bidders. But here's the catch: The best bidder never wins, just the cheapest. Let's say Sid mixes his cement with durable, non-porous polymers—the best in tarmac technology. His materials cost a little more, but his roads endure decades of stress and salt and ice. Meanwhile, Mack mixes his cement with run-of-the-mill, crack-prone, porous aggregate. Mack's cement is cheaper, at least before maintenance costs kick in, so he is awarded the multimillion dollar road contract. But if the road falls apart—hell, if it kills a dozen drivers while caving in—there's nothing the government can do. The way the federal law reads now, states are *forbidden* to have Mack guarantee his work.

In other words, the system's rigged so that if Mack's road starts looking like the surface of the moon, Mack won't care. That's why you should. Over the past decade, as federal highway expenditures actually decreased, no one seemed to be calculating the hidden costs of poorly built roads or overlooked repairs. According to the Office of Technology Assessment, delays and road repair expenditures often *double* the total expense of a road. We don't pay now. We pay big later. What's worse is that we don't have to.

Roads scholars

This multifold, billion-dollar damage is brought to us thanks in large part to a very simple scientific fact, a fact most seven-year-olds readily comprehend: When water freezes, it expands. When water seeps into the cement on a road's surface and freezes, the cement cracks. When no one fixes it, that's a pothole or a rut—or, if you're driving over it, an annoyance. In chilly Sweden or Alpine Germany, where winter is a way of life, you'd think such rough riding would be inevitable. But, mysteriously—or rather, not mysteriously—Northern European roads are usually as smooth as silk.

No one but the French would adorn the industrial-strength Autoroute from Nancy to Nice with miles and miles of flowers. Yet a driver can afford to sit back and enjoy the foliage, because he never has to worry about hitting a pothole. Despite a higher percentage of trucks (with heavier payloads than permitted in the U.S.), despite millions of travelers annually, there are virtually no crevices in the Autoroute—or, in fact, in most of France's major roads.

The reason is that France, like the rest of Europe, has over the past few decades made a concerted effort to build roads with an eye to the long haul—to spend early to avoid spending more later. They mix

their asphalt with additives—rubber, carbon, polyethylene—to a far greater extent than Americans do. And they make wide use of new technologies like Novophalt, a polymer-modified asphalt binder that gives cement more flexibility and thus increases the pavement's service life. Novophalt, which Europeans began using enthusiastically in 1976, costs between 4 and 8 percent more than traditional asphalt, but it lengthens the pavement's life between 50–100 percent. Does this daring approach work? Don't take our word for it. Last year, visitors to Europe from the Federal Highway Administration (FHWA) reported, "The extreme forms of distress that are evident in many parts of the United States—rutting, raveling, cracking, and potholes—were, simply, rarely seen."

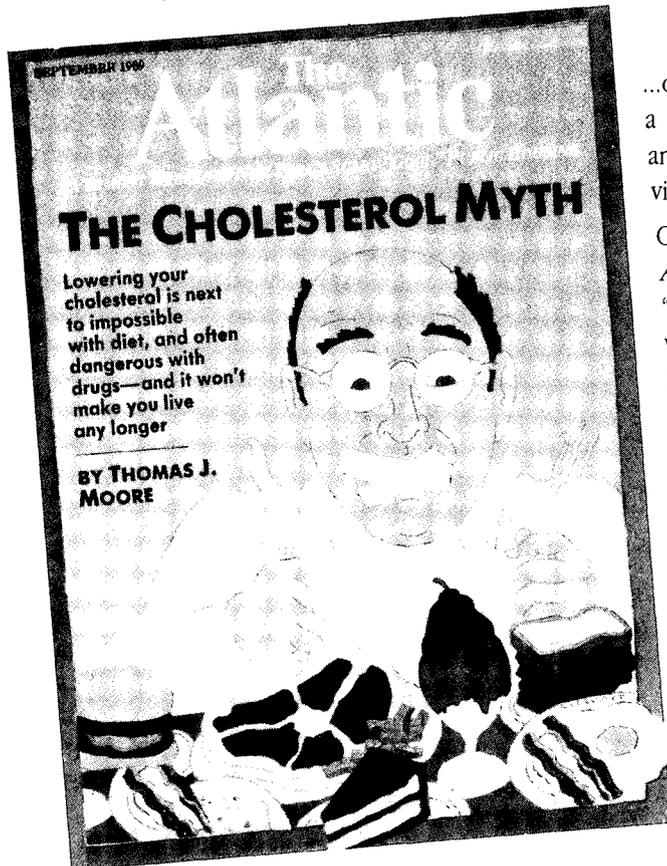
The reason for the continental difference is no mystery. First, European nations invest directly in road surface research to a much greater extent than we do. And, more importantly, they've managed to get the private sector to carry the weight. In Great Britain, for instance, a 40-year-life-cycle cost analysis is required for all pavement designs. In France and Italy, the government's contract specifications explicitly encourage contractors to make use of new, more durable materials—and the contract-award scheme freely permits an initial increase in costs for long-term gain. And third, contractors in virtually all European countries must guarantee their work for up to five years after completion. When they screw it up, they fix it up—a concept positively foreign to the builders of American roads.

Holier than thou

In the U.S., everything from federal specs to contractors' legal obligations conspire to ensure not just that today's roads are unnecessarily rocky, but that tomorrow's roads will look exactly like today's. Take Novophalt again. Thanks to stunning inaction among highway officials, it wasn't even sold in this country until 10 years after the Europeans started rolling it across the Continent. Now that we have it, we barely use it.

And it's not just Novophalt we're neglecting. In fact, as Europe forged ahead on road technology, America in the eighties actually slipped backward. Owens-Corning Fiberglass Corporation withdrew from highway and transportation research altogether. The research budget at the Portland Cement Association hit a 20-year low, as did the Asphalt Institute's R&D expenditures. Goodyear Tire & Rubber Company laid off more than 100 researchers; Chevron Corporation, a major asphalt supplier, cut its research staff too. The consensus among these private corporations is clear: Trying to transfer their technology to

Write to the point



...of the way you live and think. *The Atlantic* is a magazine for people with intense curiosity and diverse interests...people who have a 360° view of the world.

On the cutting edge of issues and events, *The Atlantic* gives you the “whys” behind the “whats” in the news. Read by the men and women who shape those events, it helps set the national agenda in foreign affairs, public policy and the arts. It introduces bright new fiction and humor as well as the work of the leading journalists and essayists of our time.

The Atlantic speaks to every aspect of your life, with wide-ranging travel articles that point you to the most exotic escapes, and illuminating essays on music, film, books, home design and sports.

Sharpen your perspective. Subscribe to *The Atlantic* today. ***The Atlantic*. It's all you expect. It's what you deserve.**

To subscribe to ^{The}Atlantic

Just fill in this coupon and mail to: *The Atlantic* • Box 51044 • Boulder, CO 80321-1044

Yes, send me *The Atlantic*. Please enter my subscription at the low price of just \$9.95 for 12 issues (1 year). That's only 83¢ an issue and a 72% savings off the single-copy price.

Payment enclosed Bill me later

Name (please print)

Address

City/State/Zip

Money Back Guarantee: If at any time you decide *The Atlantic* is not for you, simply notify us and we'll refund your money on all unmailed issues, no questions asked.

Basic rate - one year \$15.94. Cover price \$2.95.

91942

the public sector takes far too much time, money, and energy, thanks to the absurd way the system is rigged.

In the U.S., private contractors bid to build roads based on state-mandated design and materials specifications. Therein lies the problem: State departments of transportation aren't known for bold, innovative methods, for perfectly logical reasons. A state *can't* consider the cost-effectiveness of new pavement technologies or equipment even if it wants to. To get federal money to build new roads, it must by law choose the lowest bidder. Needless to say, that low bidder's costs aren't going to be so low if he incorporates state-of-the-art materials or construction processes into his bid. And why should he shoot for finessed workmanship or product longevity if he doesn't have to guarantee his work?

Anyone who doesn't commute daily via the FDR Drive might make the disposable-road argument: Build it cheap, and if it breaks, fix it again. Problem is, thanks again to the federal funding process, that doesn't happen. The federal government provides money only for new construction. After that, the states and various localities therein are responsible for road maintenance. And upkeep is not a political priority—it's not as dramatic as a brand new road, no one pulls out the ticker tape, so no one wants to sink money into it. Despite the appalling condition of New York's roads, the state dedicates only a tenth of its transportation budget to repair them.

The structural disincentives are so real that even officials at the FHWA are beginning to get the picture. "Right now, [contractors] have no freedom to be innovative," acknowledges Doug Bernard, director of FHWA's office of technology applications. "If you're going to hold them accountable, then you're going to have to give them a role to play. We want them to be involved in the design and the construction, and in the selection of materials. We want to foster an environment for innovation." Unfortunately, that's not what American road builders want. And in the current political hierarchy, the millions of frustrated American drivers can't hold a candle to the powerful road-builders' lobby.

Highway robbery

One rare step toward better roads almost made it to the floor of the House this fall as part of the 1991 Surface Transportation Act: a provision that would allow states, for the first time, to require builders to guarantee their roads. The idea quickly won the support of the FHWA and the Department of Transportation. Also behind it were dozens of

state officials and national advocacy groups. But the provision was excised in committee, thanks in large part to the vociferous objection of the Association of General Contractors (AGC) and the American Road and Transportation Builders Association (ARTBA).

Nick Yaksich, director of AGC's highway division, bluntly explains his opposition: He doesn't want to design roads, he just wants to lay them. "You get quality specs from the state and you build to those specs. That's that."

"I'm not sure it would be worth the effort," concurs T. Peter Ruane, president and CEO of ARTBA, adding, amazingly, "The current system, as far as we know, indicates that there are no problems." Last month, when California Rep. Anthony C. Beilenson repropoed a guarantee and warranty amendment, ARTBA whipped a letter off to Congress. "This concept is totally unrealistic," the letter read, arguing that if contractors guaranteed their work, they would suddenly become liable "for problems caused by faulty design or material specifications and other factors." And given today's rigid (that is, with regard to materials, *not* performance) state specifications, that's a legitimate concern. But hardly an unsolvable one—another lesson that can be learned abroad. In return for guaranteed work, virtually all the European governments have long made their design requirements flexible, freeing the contractor to use the best materials and the best design.

Smart federal policy would start by passing the Beilenson amendment and then encouraging states to loosen up their specs. But that's just a start. Real reform requires doing what the British do: Ditching low-bid requirements for long-term cost-benefit analysis. Those three changes would give road builders and pavement corporations real incentives to investigate new methods and techniques instead of just slapping down the cheapest stuff they've got. Would it pay off? According to the Strategic Highway Research Program, one of the few federally supported pavement research institutes, simply encouraging widespread use of chemical binders in asphalt—what the Europeans have been doing for years—could save \$270 billion a year.

Smooth, black Ameri-Autobahns are possible *and* affordable, once we straighten out the twisted federal incentive system. We have the technology—or at least we can import it. We have the European model to learn from. All that is required now is political will. But we have a plan for building that too: a mandatory field trip down the FDR Drive for every single member of Congress. □



WHO'S WHO

Is **James Baker** still going to bat for his Texas oil buddies? It seemed so last month when Baker, on a trip to the Soviet Union, sprinted from St. Petersburg to the oil-rich central Soviet Asian republic of Kazakhstan, three time zones away, to meet for a few hours with President **Nursultan Nazarbaev**, who is working on a deal with Chevron to drill off the Caspian Sea. Baker was accompanied by another notable Texan with friends in the oil business, **Robert Strauss**, the new U.S. ambassador to the Soviet Union. Baker aides heatedly denied the 12-hour stop was intended to boost Chevron's fortunes. . . .

Senators who are also presidential candidates tend to be noticed when they let campaign activities interfere with legislative duties. Who's Who has already been tipped to votes that two aspirants have missed. **Bob Kerrey** skipped the close Senate vote against eliminating \$3.2 billion from the B-2 budget, and **Tom Harkin** missed an important vote on extending unemployment benefits. . . .

Benjamin F. Schemmer of *Armed Forces Journal International* raises an interesting question about **Colin Powell**. If **Michael Dugan** deserved to be dismissed from his position as Air Force chief of staff last year for an indiscreet disclosure to the press, what should have been done about all the confidences that Powell shared with **Bob Woodward** during the Persian Gulf crisis that later appeared in Woodward's book, *The Commanders*? . . .

Woodward's colleagues at *The Washington Post*, executive editor **Len Downie** and managing editor **Bob Kaiser**, are the subjects of speculation by *Post* insiders. Will their longtime rivalry continue? It has occasioned at least two newsroom shouting matches in the past. The straightforward Downie is said to be the staff's favorite and, perhaps more significantly, **Donald Graham's** as well. But Kaiser is gifted at getting under Downie's skin with subtle put-downs that exacerbate Downie's sensitivity about his non-Ivy League background. . . .

The White House has settled on **William Barr** to fill **Dick Thornburgh's** job at the Justice Department, but not before it checked out some hardy perennials. Aides said former California Governor **George Deukmejian** was too ambivalent about the job and U.S. Trade Representative **Carla Hills**, another leading candidate, was too busy with the GATT trade negotiations. . . .

Why did the White House reject **John Danforth's** proposal on the civil rights bill? Here was a respected Republican senator trying to make a reasonable compromise with the Democrats on an important national issue only to have his efforts dismissed by the White House without discussion. Danforth was asked if those responsible included **John Sununu**. He replied, "That's possible." . . .

George Bush's nuclear disarmament initiative was applauded by almost everyone here. But veteran observers were troubled by the small number of people he consult-

ed in reaching the decision. As with the Gulf war, much of the decisionmaking was by just Bush and **Brent Scowcroft**. At its maximum, the decision group included only six other officials: **Dick Cheney**, Baker, **Dan Quayle**, **Robert Gates**, Sununu, and Powell. Similarly small groups have in the past produced such triumphs as the Bay of Pigs. . . .

How does a defense contractor react when its big ticket is in trouble? Well, one step Northrop took as its B-2 bomber was coming under attack was to add three new members to its board of directors: a prominent Democrat, **Joseph Califano**; a prominent Republican, **Jack Edwards**, formerly of the defense subcommittee of the House Appropriations Committee; and a prominent retired Air Force general, **John Chain**, who was head of the Strategic Air Command.

If you think adding a few fellows to the board is a pretty inexpensive way to acquire influence, consider **Jack Valenti's**. He gets his phone calls returned simply by providing influential Washingtonians with a free dinner and a preview of a new movie at the posh headquarters of the Motion Picture Association of America. . . .

Now that congressional honoraria are being phased out on Capitol Hill, the free trip has become, next to a substantial campaign contribution, corporate America's favorite way of currying favor with congressmen. According to Public Citizen, the leading beneficiaries in 1989-90 were (the number of corporate-financed trips each took is in parenthesis): **Norman Mineta** (26), **Norman Lent** (26), **Michael Oxley** (28), **Matthew Rinaldo** (28), **Bill Richardson** (29), **W.J. Tauzin** (31), **Jim Bunning** (32), **Dan Rostenkowski** (48), and **Charles Stenholm** (50). . . .

A press release from the Department of Labor about the marriage of **Lynn Martin's** daughter **Julia** contained, under the heading "Fun Facts About the Wedding," such items as: "**George**, the chef from Peking Duck (the president's favorite oriental restaurant), will be at the reception to personally prepare his version of peking duck," and "A photograph of Julia in her gown is being used for a fall advertising campaign by **Scassi**." . . .

In—White House: Personnel Director—**Constance Horner**. Special Assistant and Executive Secretary to the Economic Council—**L. French Hill**. State: U.S. Ambassador to Zimbabwe—**E. Gibson Lanpher**. *Federal Reserve Board:* Member—**Susan Phillips**.

Out—White House: Personnel Director—**Charles (Chase) Untermeyer**. Deputy Director for the Office of Administration—**Hector F. Irastorza Jr.** Education: Undersecretary and Chief Financial Officer—**John T. (Ted) Sanders**.

—Susan Threadgill