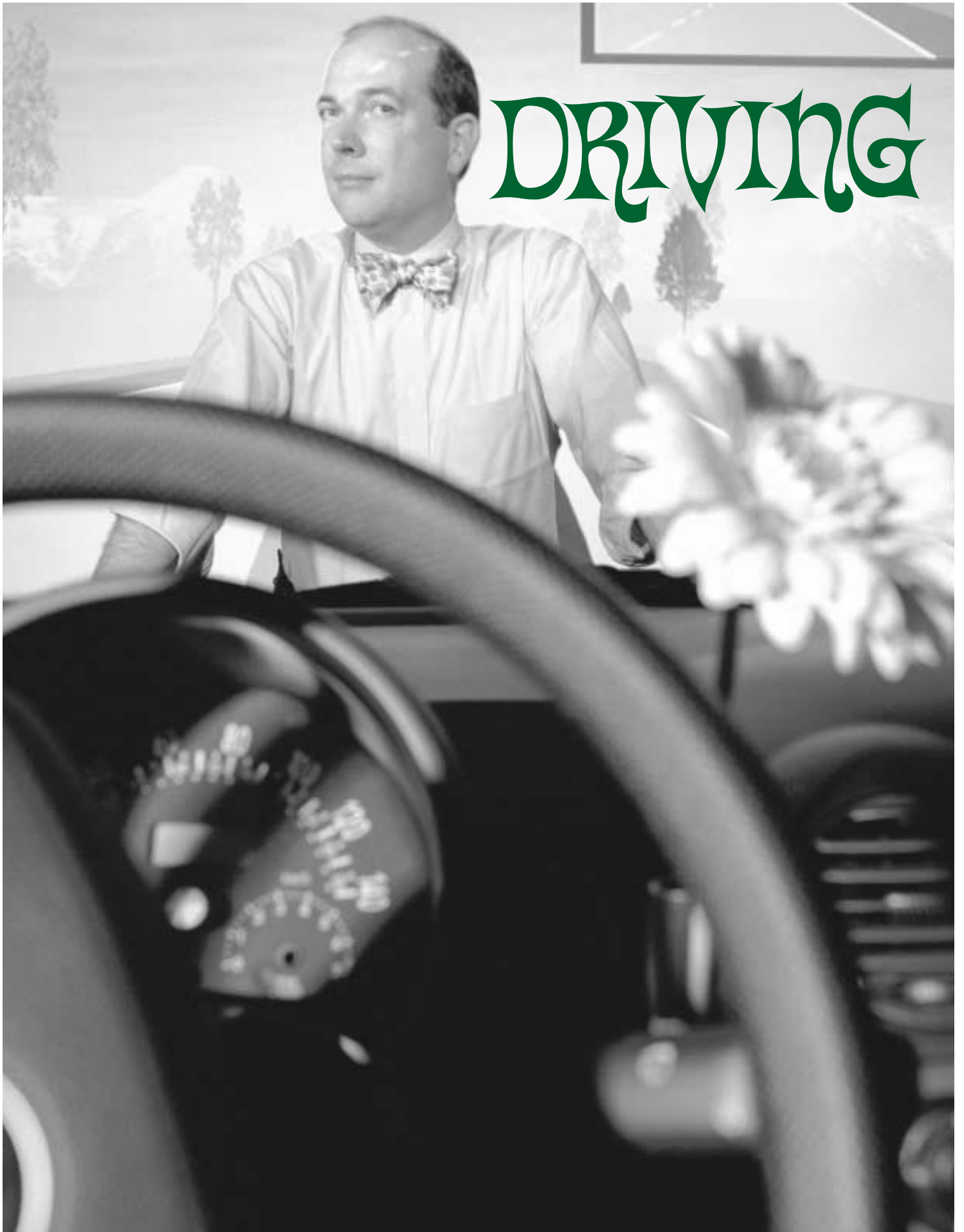


# DRIVING



# 'MISS DAISY'

## to a better future

by Michele Reed

Every seven seconds a Baby Boomer turns 50. To **Joe Coughlin '82** that statistic presents a major public policy problem – and a great opportunity.

As the director of the AgeLab at Massachusetts Institute of Technology, Dr. Coughlin leads a team working to develop policy and products that will help older people live life to the fullest.

“Technology has gotten us to live longer, now we need to think about how to make us live longer better,” he says.

While the upcoming population of elder Baby Boomers makes thinking about the quality of aging very trendy, it's a question “as old as life itself,” according to Coughlin. The difference is, we used to think of aging as a personal matter. Now with 78 million Boomers graying up, it is a big issue for public policy makers.

Coughlin calls it the longevity paradox. “Now that we are living older, now that we have seen a 30-year longevity dividend, now that we have spent money and thought [to make life longer], we have not given one ounce of thought to how will we live tomorrow,” he says. “How will we live, work, play, learn, etc.?”

The three-year-old AgeLab, founded by Coughlin, is working on a number of projects to make getting around, being at home and working and learning better as people age.

### Driving ambition

One thing intrinsic to quality of life in America is transportation, according to Coughlin. “As we age, if you can't drive and can't get out, you can't fully participate in life,” he says. And for most Americans,

We are living longer now. But will we live better?  
Joe Coughlin '82 and his team at MIT  
are working to come up with some answers.

transportation *does* equal driving. Coughlin is fond of saying that driving connects us to family, friends, health care, shopping, all the “little things that, put together, are life.”

He recognizes, too, that driving is much more than getting from Point A to Point B. To Americans, driving is wrapped up with a person's identity.

For elderly drivers, having to face the thought of giving up the car keys because their vision is going or they are less flexible or have slower reflexes, is scary, to say the least. When they are isolated by not being able to take the car to socialize with others, depression can set in.

So Coughlin and his colleagues are trying to figure out ways to make driving easier and safer for older motorists.

Enter Miss Daisy. She's a bright red Volkswagen Beetle that Coughlin and his researchers have fitted out with the latest in technology — infrared screens to help night vision, heads-up display so elder drivers don't have to strain muscles looking for the information they need, even warning beeps for approaching obstacles.

Technology is helpful, but another thing the AgeLab researchers are studying is: When is it too much of a good thing? Soon we will be able to receive e-mail, even stock reports, in our cars. “How do we integrate the e-mail, phone, stereo, grandchildren, spouse and harmonize them into one safe package?” he asks.

Coughlin foresees the time when cars will come with a blank dashboard, with the display to be customized to the preferences of the driver.

Then there comes the day when the elder driver really does have to give up the keys. Society needs to plan improved public policy for transportation, Coughlin says. Since most people live in suburban or rural areas, the current public transportation model doesn't work.

Coughlin envisions smaller, easy access vans, rather than buses, that would come when called to pick up an individual and hold about a half dozen riders. There will be handheld devices, like cell phones, so people could track the location of the van and how long it will take to get to where they are.



The personal advisor can be taken along on a shopping trip to help users plan for their dietary needs.

“Real life is about being able to come and go as you please and where you please,” says Coughlin.

### Home, healthy home

Making home a safer, healthier place for elder Americans to be is another project on the AgeLab agenda.

“How do we bring a whole new generation of services into the home that will enable older adults to stay in their homes as long as they want to?” asks Coughlin.

He envisions the day when a home health station, that could monitor a senior’s vital signs, would be as common a home appliance as a microwave. “How could we revolutionize health if we could facilitate a checkup a day?” he muses.

The preventative services provided by the little device would make the home “a platform for healthy living, not just a place to keep the rain off,” according to Coughlin.

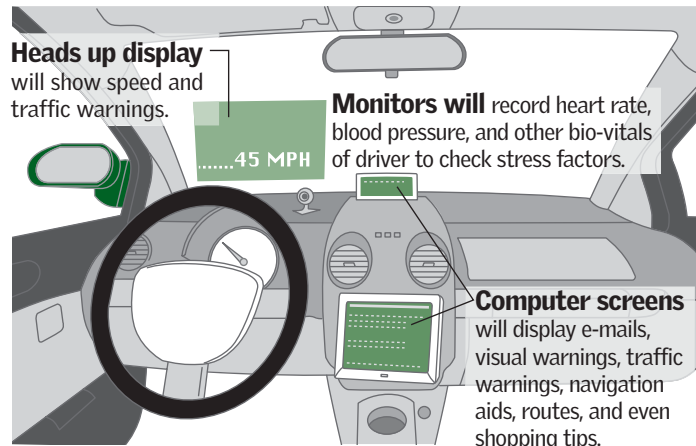
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Planning to bring services into the home to help elders cope with daily living is another necessity, he says. “Your 75-year-old father may be in good health, but would you want him shoveling snow off the roof?” Coughlin asks. Attention to such services is “not just a nice social need, but good public policy,” he explains.

Making available the things seniors need to keep healthy, and getting them to

## Driving Miss Daisy digitally

The information and services that are available today in a vehicle are nearly without limit. So researchers at MIT are intentionally installing a large amount of technology into a simulator—a VW Beetle—to find a threshold a driver can experience or handle safely while driving.



**Data** will be used for optimal design and placement of instruments, such as whether they should provide audio, visual, or vibration signals.

SOURCE: MIT Center for Transportation Studies, AgeLab

GLOBE STAFF GRAPHIC/ALEJANDRO GONZALEZ

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use them are two very different things. To encourage elders to take their medication, Coughlin and his team have come up with a furry little device they call the “Pill Pet.” The fuzzy device is based on popular electronic children’s toys of a few years ago that had to be “fed” or “cared for,” by pushing buttons at a certain time, or they “died.” Pill Pet lets older people know when it’s time to take their meds, and relies on feedback that the prescription has been taken or the Pill Pet will “die.”

The hope is that elderly users will grow attached to the furry toy and be faithful about taking their medication to insure the pet continued to “live.”

“They respond more to that emotional tug than someone saying, ‘Mom, did

you take your pill?’” Coughlin says.

Another “healthy home” gadget is the personal advisor, a small device that can sit on a countertop or be taken along on a shopping trip. It can read bar codes on food containers and reconcile the product with the user’s personal dietary needs.

When shopping for or preparing a meal, the device would help the elderly person manage intake of things like sodium, cholesterol and fat. What’s more, it’s dynamic, so if people have exercised more, they can cheat a little and eat a bit more of something restricted.

An aerospace engineer, who is part of the AgeLab team, has been working on suits for the NASA mission to Mars. The suits can control the progress of osteoporosis, a

big problem in a zero-gravity environment. AgeLab is adapting these suits into “digital Danskins®,” stylish undergarments that could increase strength, and reduce the chance of falling and breaking bones.

“We’ve taken the best thinking literally in the world — or in this case the universe, with the trip to Mars — and have it benefit Mom or Dad or, as Baby Boomers look in the mirrors, ourselves,” says Coughlin.

Joe Coughlin’s new book, *Stuck Between Freedom and Safety: The Politics of Older Drivers*, with co-author Roger Cobb, is due out soon from Johns Hopkins University Press. He is also working on another book, *The New Business of Old Age*, about how business and technology will converge to reinvent the aging process.

### The graying workforce

There’s a brand new area AgeLab is working on and Coughlin’s voice crackles with excitement to tell of it. Horace Deets, former executive director of AARP has just come on board to develop a whole new agenda on the older worker and lifelong learning.

Retirement, for those coming into it in the near future, will be very different, as Coughlin sees it. For one thing, it will last longer. “Even if you like playing golf, retiring and then playing another 10, 20, 30 years . . .” He trails off in contemplation of it.

Since older workers will be staying in the workforce longer, either out of a need for income or to avoid boredom, business then faces the question of how to manage a workplace with two, three or even four generations under one roof.

Add to that the question of lifelong learning, because of a need to keep up with technology and changing trends. “If you graduate today the half-life of your education is very short as you consider the velocity of technological change,” says Coughlin.

## From SA to MIT

Public policy is Joe Coughlin’s forte. A political science major at Oswego, the 1982 graduate cut his policymaking teeth in Student Association leadership.

“In SA we used to say we were children playing government,” he says. He realizes the strategies he used in SA are very similar to those he used while he worked on Capitol Hill or for the White House.

The important thing, according to Coughlin, was learning that policymaking, whether it is a small group of students or a large group of professionals, “is not just a field of study, but a way of understanding human behavior and organization. That was invaluable to me in business and now as a researcher and teacher.”

Also important in shaping his future were two Oswego professors. “As one goes through life, you hope to have at least one mentor. At Oswego I was blessed — I had two, more than some people have in a lifetime.”

The teachers who made such an impact on his life were Dr. Mab Huang and Dr. Faiz Abu-Jaber, both now retired.

“One really taught me the love of research, the other taught me the love of teaching, though both were excellent in both,” he says.

“They took an incredible amount of time with me personally. They taught me not to believe everything you read, but to have a critical eye on everything.”

After earning his master’s degree in public policy from Brown University, Coughlin landed a job with EG & G, now called Perk and Elmer.

It was the mid-’80s and terrorism was on the public agenda. Coughlin’s master’s thesis was on

counter terrorism, especially how terrorism is viewed in media.

He did an analysis of terrorism in the United Kingdom over a 10-year period. “The media is not just a mirror, but may have an impact on how they (the terrorists) will plan their next event,” says Coughlin.

That was a summer job, which lasted the better part of 13 years. Coughlin worked in Washington and Boston, and did consulting with the auto industry, Department of Defense, Department of Transportation and the White House. He met the woman who was to become his wife, Emily, and attended Boston University part-time. He earned his doctorate there in public policy.

One of his last projects at EG & G, done in the mid-1990s, was with the White House Office of Science and Technology Policy, working on transportation needs of older adults. And so the wheels were put in motion, so to speak, for Miss Daisy and AgeLab.

Among the first AgeLab projects, for Hartford Insurance Co., Coughlin did work on Alzheimer’s disease and driving.

“How do families approach their mother, father and spouses to put the keys away?” he says. “The thing that was really a joy was to translate research into action — the project produced a booklet advising the public about how to talk to mom or dad [about the issue].”

“Research for research’s sake is interesting for the researchers but not exactly making an impact on society. But when you can translate that research into improving the everyday lives of people, then that’s a real contribution.”





The "Pill Pet" encourages elders to take their medications by tugging at the seniors' emotions.

Even more essential is the need to look at how older adults learn as compared with younger folk.

"How do we integrate this into industry and public policy?" Coughlin asks. He's convinced that's where change will come from. "Business will see this in their interest and contributes to their competitive strategy as much as it is the right thing to do."

"We've taken the best thinking literally in the world — or in this case the universe — and have it benefit Mom or Dad or, as Baby Boomers look in the mirrors, ourselves."

### Partners with business

An interdisciplinary approach and the involvement of business and industry sponsors are key to AgeLab's success.

The effort includes five research staff ranging in disciplines from psychology and consumer behavior to industrial engineering and electrical engineering.

On staff are PhDs and part-time staff, medical doctors and geriatricians.

The wide cast of characters includes researchers from Harvard Medical School, aerospace engineering faculty from MIT and professors from the MIT Sloan School of Business.

Eleven graduate students and a couple of undergrads round out the lab, which by MIT standards is not very large, Coughlin says.

Corporate sponsors are a big part of the picture, since they fund the research and hope to develop products that they can market to the growing elderly population.

Hartford Insurance Co. and AARP are among the sponsors.

"Funny, but the aging issue has captured the minds of industry in a large way," says Coughlin. "Just about every car company is a sponsor."

M & M Mars just came on as a sponsor, which is not as farfetched as it would seem. They are concerned about how Baby Boomers will think about health in the future.

Proctor and Gamble is a sponsor, too. Elders will use everything from the toilet paper to drink products they sell.

That all-pervasive quality is part of what makes the question of aging so intriguing to Coughlin.

"Aging touches every possible aspect of humankind, and needless to say it impacts every kind of industry," he says.

It impacts all of our lives, too.

Just think, in the time it has taken you to read this article, another 69 Baby Boomers have turned 50. ●



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