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Car Culture: Driving Ourselves Crazy

By Andrew Kimbrell

THE NATIONAL death watch has begun again. Memorial Day weekend this year saw 590 dead and some 18,000 injured on America's roads. The National Safety Council estimates that before the 78 hours of Labor Day weekend are over, as many as 650 people will be killed and perhaps 21,000 will suffer disabling injuries.

Automobile accidents have slain far more Americans in this century than all our wars combined. And that's not counting deaths from the many toxic byproducts of mass motorization. A recent University of California study found that ground-level air pollution from cars is responsible for 30,000 deaths each year, primarily through respiratory problems. Moreover, cars are a major contributor to the double threat of global warming and ozone-layer depletion, as well as a persistent hazard to crops and wildlife, and a debilitating drain on government expenditures.

These facts have been familiar to scientists, planners and politicians for years. Yet the car habit is so deeply ingrained in Western society that we seem to be locked into an irreversible slide toward ever-greater dependence.

Worse yet, auto mania is sweeping the globe. In 1950 the United States owned 75 percent of the world's 50 million automobiles. Now, we have only about 35 percent of 400 million. When commercial vehicles are included, almost a half-billion motor vehicles are being driven on the world's roads—a ten-fold increase since 1950. And more are on the way. Current automobile production is at a record 38 million units per year, and is expected to

rise to about 60 million by the year 2000. The greatest growth is in the industrializing areas of Asia.

This year—the centennial of the invention of the internal-combustion auto—is an apt time to acknowledge that the car has become one of the principal menaces to life on the planet. Yet our autos have been driving us for so many decades that it is doubtful if we can ever regain control.

World On Wheels

The American dream of a car in every garage has largely been realized: We have more than 135 million privately owned cars and trucks. About 36 percent of American households have one car, 35 percent have two and almost 20 percent have three or more. American drivers put in the equivalent of 10, 40-hour weeks behind the wheel each year, for a total of more than 1.25 trillion miles.

That outcome has been achieved at enormous cost. To date, American firms have spent more than \$40 billion to advertise automobiles (GM alone lays out \$1 billion a year). But that's a trivial sum compared with the \$300 billion that federal, state and local governments spend annually to subsidize automobile use in the form of road building and maintenance, municipal services, tax losses from land lost to highways, and health care services. The Worldwatch Institute has estimated that each passenger car is subsidized at about \$2,400, not including the untold environmental costs. Additionally, the average household spends about one out of every five dollars earned to support automobility—not counting parking.

The private car is the over-

whelming transportation of choice of Americans. Men average 11 hours a week in total travel time, according to a recent University of Maryland study, and women average nine. About 80 percent of all trips are made by car, 13 percent by air and 7 percent by all other forms of transport. Since 1976, we have seen a 30 percent increase in U.S. car travel (Japan's is more than 45 percent). This increase in auto use, especially in the post-war period, has taken place at the expense of public transport. In 1950, the nation's transit systems provided more than 17 billion rides. That total had shrunk to 8.3 billion rides by 1987, a number about equal to the number of rides provided in 1900 (see box).

In the United States, the automobile had cost its first million dead by 1952, its second million by 1975 and the third million is likely by 1994. Along the way, some 90 million Americans have sustained disabling injuries in auto accidents. In all, the more than 2.5 million Americans who have died violent deaths on our highways represent more than four times the 641,691 Americans killed in World I, World War II, Korea and Vietnam combined. In fact, the 1.8 million Americans who sustained disabling injuries in traffic accidents during the single year of 1987 represents more than a half-million more injuries than the number sustained by Americans in all 20th-century wars.

And it's not getting better. In 1988, 46,644 people were killed in traffic accidents—an increase of 13,000 from 1987.

Automotive carnage is by no means merely an American phenomena. In Europe, close to 60,000 people are killed each year in car accidents, and 2 million injured. And auto fatalities have become a

major cause of death in Third World countries, many of which have fatality-per-mile-traveled rates 20 times higher than those of industrialized nations. This led to the estimate that more than 350,000 people are being killed each year worldwide in automobile accidents, with more than 10 million suffering disabling injuries. (These figures may be too low: In most countries, motor-vehicle death reports do not include fatalities that occur several days after accidents or off-road).

Driving also takes a terrific toll on non-humans. It is conservatively estimated by The Humane Society of the United States that a million animals die each day on U.S. roads, making road kills second only to the meat industry in total animal deaths. States routinely record more deer killed by cars than by hunters.

Steering Toward Disaster

Then there is the cost to the environment. In the United States, transportation sources are responsible for 69 percent of lead, 70 percent of carbon monoxide, 45 percent of nitrous oxides and 35 percent of hydrocarbons released into the air. Those emissions cause tens of thousands of deaths a year by contributing to lung cancer, emphysema and various respiratory and pulmonary disorders. The gases also harm terrestrial and aquatic ecosystems. The U.S. National Crop Loss Assessment Program found that damage caused by car emissions resulted in annual yield losses of \$1.9 to \$4.5 billion for only four crops—wheat, corn, soybeans and peanuts.

The situation is no better abroad. In Mexico City, children start out to school late in order to avoid the suffocating morning air. Athens, where smog kills an estimated six people a day, has dramatically restricted the number of cars entering the city. In Singapore, drivers are sold daily permits to enter the central area during rush hour.

Carbon dioxide is a major component of the global-warming threat. In the United States, cars and light trucks are the largest single contributing sector to CO₂ buildup, responsible for 33 percent of all emissions. Each one emits an average of five tons of CO₂ into the atmosphere every year—a total of about 600 million tons a year for U.S. cars alone.

Automobiles also contribute to the destruction of the ozone layer. While ozone at the ground level—created primarily by car pollution—can kill us, ozone in the upper atmosphere provides a vital shield that prevents hazardous ultraviolet radiation from reaching the earth. Increasingly, release of chlorofluorocarbons (CFCs) is destroying that layer of ozone protection as well as contributing to the greenhouse effect.

Various industrial processes— notably refrigeration—employ CFCs. But the largest single source in the United States is automobile air conditioners. There are approximately 95 million auto air conditioners in use in the United States. The installation of each one releases some 2.5 pounds of CFC; annual recharges add another pound. It is thought that CFCs can remain in the atmosphere for more than 100 years. Several states and localities have begun to act on CFCs and their use in car air conditioners. For example, in a bill passed this year, Hawaii banned the emission of CFCs. The bill specifically calls for recycling of CFCs used in car air conditioners and forbids over-the-counter sales of CFC replacement parts.

Additionally, auto companies themselves, concerned about potential legislation, have begun to act on the CFC problem. Last month General Motors announced that by 1991 it would require its 10,000 dealers to recycle CFCs from car air conditioners undergoing service. At the same time Nissan Motor Company announced that it would halt the use of CFCs entirely in its air conditioners by 1993. While these are laudable first steps, far more needs to be done if destruction of the fragile ozone layer is to be averted.

Breaking the Habit

After a century of use, the gasoline automobile has proven itself to be incompatible with human survival and the well-being of the planet. But overthrowing auto-craze won't be easy. The car's unique position in our culture, and increasingly in cultures throughout the world, is reinforced by government policies, a growing complex of highway infrastructure that encourages car use and not public transportation, and an inundation of media advertising. Further, the car is entrenched in the world's economies: In the United States, approx-

imately one out of every six workers is employed in an auto-related industry.

Consequently, any significant change will entail drastic—if not Draconian—measures.

To date, most initiatives have centered on encouraging voluntary reductions in auto use, such as car-pooling. And even a modest improvement could have dramatic effects. More than 80 percent of Americans commute to work in automobiles. In the United States alone, we could save 33 million gallons of gasoline each day and significantly reduce car air pollution if the average commuter passenger load were increased by one person. We can also greatly reduce or eliminate the use of car air conditioners. The environmental impacts of driving can also be reduced through the use of highly fuel-efficient vehicles. European prototypes of such vehicles are getting more than 80 miles per gallon on highways. Unfortunately, relatively low oil prices are discouraging the production and use of such vehicles in the United States, where big-engined "muscle cars" are regaining popularity.

In addition, even environmentally-minded individuals often have very little flexibility in altering their use of automobiles. Where mass-transit systems exist, they usually feed core urban areas. Yet the fastest-growing segment of commuter traffic is travel from one suburb to another. Moreover, past social policies—including highway construction, depletion of mass transit and burgeoning suburbanization—have made public transit, biking or walking unrealistic options for most Americans. (Ironically, those citizens most likely to comprehend the environmental consequences of the car are those who drive the most: Travel hours per week increase with income and education.)

Therefore, the chief responsibility for averting driving disaster falls on local, state and federal officials. What can they do? First, they should stop subsidizing the auto and make drivers pay the real costs of their addiction. The Worldwatch Institute has estimated that if government subsidies to the auto were passed along in gas prices, as happens in many other countries, the cost of a gallon of gas would be \$4.50. Added to this should be a significant environmental tax assessed on automobiles to help meet the mounting cost of environmental clean-up and research.

Further, governments around the world should set a goal of eliminating the gasoline-powered automobile. Research on solar cars, which proponents say could be a viable option in five to 10 years, and electric cars running on renewable fuels should be a top priority. Additionally, the policy initiated in the 1982 Surface Transportation Act of earmarking gas tax money for public transit capitalization should be massively expanded. Federal mass-transit funding—which dropped 30 percent from 1981 to 1988—should be significantly increased. Finally, serious consideration should be given to restricting automobile advertisements as was done with cigarette ads in 1971 after the human health costs of smoking became apparent. With the future of the planet in the balance, driving gasoline-powered cars is, even more than drugs or smoking, our most dangerous addiction.

Sick Transit

IT HAS NOW BEEN a full century since the German engineer Gottlieb Daimler invented the two-cylinder engine and launched the gasoline automobile age. In 1992 the Duryea brothers introduced the "horseless carriage" into the United States and one year later Henry Ford produced his first car. In 1900 there were 8,000 registered autos in the United States, 150 miles of paved roads and fewer than 100 motor vehicle deaths. By 1910 there were more than 500,000 autos on the road; in 1950, there were more than 40 million passenger cars. Then in 1956, the Federal Highway Act was enacted, committing the nation to decades of highway construction at the cost of tens of billions of dollars. By the mid-'80s, we were driving more than 135 million cars on 3,600,000 miles of paved roads. From 1900 to 1984, U.S. factories produced 846,198,000 cars, trucks and buses—more than 650 million of which now lie in landfills.

One reason for this phenomenal growth is that the auto industry and its allies have relentlessly and successfully lobbied for legislation promoting car use—and undermining public transit. Sometimes they took more direct steps. For example, when the nation's trolley systems disappeared in the 1940s and '50s, most people thought it was simply a sign of progress. Not at all. From 1936 to 1945, a newly formed holding company called National City Lines (consisting of General Motors, Firestone Tire, Standard Oil and Mack Truck) cozied up to city officials across the nation and conspired to buy up and destroy street car systems. Trolley systems were dismantled in more than 45 municipalities. By 1955 almost 90 percent of street cars were gone from our cities. In 1947 the conspirators were brought to trial. After lengthy litigation the defendants were found guilty. To the surprise and chagrin of prosecutors, the judge decided that the individual defendants were to be fined \$1 each, the corporate defendants \$5,000.

Now, ironically, 19 gridlock-plagued American cities are planning on spending hundreds of millions to rebuild their trolley systems—in several cases, along virtually the same routes taken by the streetcars half a century ago.

—Andrew Kimbrell