on the front door of her house. It is a short drive from the Lorillard plant where high speed, computerized machines are making thousands of cigarettes per minute. "I know what they'll be saying about me, but I don't care," says a soft-spoken, gray haired Eunice Robbins. "I put it up and there it's going to stay. The men have to earn a living, but I always felt there's another way. What I really feel is they are profiting from killing people. They're getting rich off of other people's suffering. I see all these young girls and boys smoking and I just have to shake my head. If only they knew."

TABLES TURNING

Similarly, a quiet skirmish was waged by Charlotte Williams, from her home in Kernersville, a suburb of Winston-Salem. There the names of Reynolds and Winston adorn theaters, parks, and schools. It is the headquarters of the RJ Reynolds Tobacco Co, which employs nearly 16% of the county work force. The company's influence is far from waning, as it completes a \$2 billion, 2 million square foot cigarette factory that will produce 7,000 to 8,000 cigarettes per minute. Some RJ Reynolds employees are neighbors of Williams. Nevertheless, last year she wrote Reynolds about its advertising campaign calling for an open debate about smoking. She felt compelled to inform the company "of one more death to add to your list of murders." Her father-inlaw had died of lung cancer caused by smoking. "This company does not regard itself as being in any way responsible," responded David Fischel, director of public relations for Reynolds. "We firmly believe that cigarettes have been unfairly blamed as the cause of human disease."

The Winston-Salem/Forsyth County School Board isn't debating anymore. Last year, amid efforts to extend smoking privileges to younger high school students, the board banned smoking for all high school students. Other North Carolina school boards are considering similar policies. In Greensboro, junior high school students have volunteered to be "peer" teachers in classroom instruction on the health effects of smoking. This in a state where, not long ago, children were excused from school to help harvest the leaf.

Lawrence Spohn

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In September 1984 the News & Record published an eight-part series "The Tobacco Story," written by Mr Spohn and fellow staff writers Stan Swofford, Greta Tilley, and Beth McLeod. Mr Spohn's article in the Journal is based in part on that series, which has received top honors in three national business journalism competitions and was a runner-up for a Pulitzer Prize in 1985.

Automobile racing: slaughter on tobacco road

"Gentlemen, start your coffins." Jim Murray Los Angeles Times

Much compelling material has been published in recent years concerning boxing-related injuries and deaths. The British Medical Association, the American Medical Association, the Canadian Medical Association, and the World Medical Association have all called for the abolition of boxing, as has the Medical Society of the State of New York. The last is significant because the state is the veritable home of boxing, is home to the greatest number of fighters, and has been the site of many championship events in this country.

Indeed, even ardent supporters of the art of self defense have difficulty defending a sport that rewards a participant for striking his opponent in the head and face. The debate over proof of delayed neurologic sequelae due to blows to the head seems unlikely to end in the exoneration of boxing.

One argument often made in defense of boxing is that it is a popular spectator activity among lower income groups and a means of constructive activity and upward social mobility for ghetto youngsters. Many people also believe that boxers are among the best-conditioned athletes in the world.

One indication of boxing's self-destruction is the absence of head guards at the professional level, a measure doubtless resisted in an effort to retain an ever-dwindling number of spectators.

No such hope exists for another violent activity that makes boxing look as safe as a church social. Euphemistically called "motor sports," automobile and motorcycle racing have grown in popularity, notwithstanding (or perhaps because of) what may be the highest fatality rate of any human endeavor.

INSIDIOUS HARM

In contrast to widespread attention given to criticism of boxing and calls for its abolition, little has been written about the ongoing lethality and destructiveness of motor vehicle racing. To the contrary (and in contrast to box-

ing), the amount of coverage given to this activity in the mass media has grown by leaps and bounds. No weekend goes by without a televised showing of an automobile, motorcycle, or powerboat race on either CBS, ABC, NBC, or ESPN. Motorcycle and dirt bike racing are also attracting an increasing number of teenagers and even children. Segments of motor racing are actively directed at children. The June 1985 issue of National Geographic World (a magazine for children published by the National Geographic Society) featured a four-page article about pocket bike racing-30 pound 20 inch high motorcycles that reach speeds of 35 miles an hour. Racing of these vehicles has drawn thousands of participants in Japan and the United States, many of whom are aged 8 to 11.

The insidious harm of such activities as pocket bike racing may be to socialize children to extreme risk-taking behavior under the guise of healthy competition and achievement. Although promoters claim that there have been few injuries among these children, this is not the case with motorcycle and



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automobile racing as a whole. When the statistics on auto racing have been compiled and analyzed, they offer a sobering picture seldom reported in the mass media.

According to the Metropolitan Life Insurance Company, among motor vehicle racing drivers (approximately 364,000 racers in 1976-probably a high estimate since some compete in more than one category) there were 67 fatalities (Statistical Bulletin 1976: 57:2-4). This information was compiled from newspaper reports, sports agencies, and racing clubs because there is no central register of racing fatalities. Compounding the problem was that apart from Vermont, Connecticut, and New Jersey, all states coded racing deaths under "miscellaneous fatalities."

Since 1918 more than 400 deaths among boxers have been reported. The highest number in one year was 23 in 1953. In the four-year period between 1975 and 1978, 10 deaths occurred in boxers, according to the Metropolitan Life Insurance Company (*Statistical Bulletin* 1979; 60:2-5). The company reported that there were 5,500 boxers in the US in 1978, when four deaths occurred.

In contrast, in just the nine-year period between 1967 and 1976 there were 436 known fatalities among motor vehicle racing drivers (*Statistical Bulletin* 1976; 57:2-4). The large number of racers that is reported is misleading, since many drivers compete in different categories (and are thus counted several times) and many others may enter only one or two races. The lack of official records makes it difficult to learn whether the same individual entering different races is recorded as a different entry.

DEADLY INDY

The situation becomes even more compelling when one considers the fatalities at the Indianapolis 500, the pinnacle of auto racing. As race tracks go, the two-mile oval in Indianapolis is considered one of the "safest" in the world. Yet since the annual Memorial Day event began, 16 drivers have been killed in the race, and 23 other drivers have been killed in qualifying events or in practice. The fatality rate of drivers competing in the Indianapolis 500 between 1955 and 1970 was 35.4/1.000/ year (Statistical Bulletin 1972; 53:8-9). According to Metropolitan Life this figure understates the hazard to which

these racing drivers are exposed. For one thing, most of the fatalities among drivers who race at Indianapolis occur on other race tracks and often in a different type of vehicle from the championship car class driven in the Indianapolis 500. For another, the exposure to the risk of death is overstated, "inasmuch as all drivers whose racing careers have not been terminated either by death or announced retirement have been included in the exposure to the end of the period of observation even though they may have ceased to be active in racing because of age, injuries, or a switch to other sports" (Statistical Bulletin 1972; 53:8-9).

In any case, the fatality rate of 35.4 per 1,000 per year is more than 10 times the estimated mortality rate for men of the same age in the general population of the United States (3.0 per 1,000). The *Statistical Bulletin* likens the order of magnitude of death rate among drivers racing at Indianapolis to that of the Marine Corps in the Vietnam War at the height of the battle.

In addition to the 39 racing drivers who have been killed in Indianapolis, 14 mechanics, one guard, and nine spectators have been killed during the race or in practice laps.

BLOOD AND/OR GUTS

On the prurient level, there is no mystery why so few questions are raised in the mass media about the continuation of motor vehicle racing. Quite simply, some spectators are waiting for the crashes, and the more spectacular the better. The results of these accidents are deaths of the most horrifying kind: decapitation, incineration, dismemberment, asphyxiation, exsanguination. Injuries from the high-velocity impact include severe brain damage, severed spinal cords, shattered bones, rupture of the heart or aorta, avulsion of the lungs, and severe hemorrhage at the site of closed fractures of major limbs (Practitioner 1975; 215:178-187). Only a handful of articles have appeared in the medical literature that review the types of deaths and injuries in automobile racing, and no author appears to have called for the curtailment or abolition of this activity. At the annual meeting of the Medical Society of the State of New York in 1984, the violence of automobile racing was touched on in the debate at the reference committee on public health over whether to call for the abolition of boxing. The analogy was dismissed with the argument that automobile racing is a contest of "man versus machine" and does not have *as its object* the knocking down of one human being by another.

Rarely, a sports writer will include a brief comment questioning the purpose or direction of automobile racing. Writing in 1982 about the increasing danger to drivers of Formula One cars (singleseat, open-wheel racing vehicles built to specification-the "formula"-of size, weight, and engine capacity, such cars race in the Grand Prix of Monte Carlo), Australian sports commentator Chris de Fraga noted, "While money continues to pour into Formula One racing, the whiff of the Roman arenas grows stronger. In this case, the gladiators are strapped into 580-kilogram projectiles and hurled around the circuit at dizzying speeds." (The Age (Melbourne), June 19, 1982).

The mystery of why this destructive activity has had virtual immunity from serious criticism by sports commentators and the mass media in general becomes clear when one considers that the sponsors of motor racing-of the drivers, the vehicles, the individual events, the race tracks, the administration of racing itself, and, indirectly, the sportswriters themselves-are the largest and most aggressive advertisers in the mass media: tobacco companies, breweries, and automobile manufacturers. To question whether motor racing should exist is to threaten the sales of cigarettes, beer, and cars. Arguments by some writers and spectators that all of life has dangers and risks are not dissimilar to arguments that "everything causes cancer" and "you have to die of something." Thus with impunity newspapers accept ads describing racing as "an orgy of speed" or the race course as a "high speed playground." At least one American newspaper, the Los Angeles Times (owner of New York's Newsday) has become a major co-sponsor of road races and blends coverage of the event with advertising for it. In 1984 a death occurred during the six hour Grand Prix of Endurance, co-sponsored by the LA Times and Datsun, a Japanese automobile company. The Times coverage of the race included this description: "[Rolf Stommelen] died of cardiac arrest from the impact of his Porsche 935 knocking over two two-ton concrete barriers and then cartwheeling a hundred yards down the track."

SPEEDING COMMERCIALS Television has catapulted auto racing



Automobile racing and cigarette brands: belabored fantasy of life in the fast lane. (Advertisements from popular magazines in Germany, Spain, Argentina, and the United Kingdom.)

into big-time sport status. In its threehour, tape-delayed, prime-time coverage of the Indianapolis 500, ABC employs over 200 personnel, including seven announcers, and uses 26 cameras, including several mounted on the rollbars of the vehicles. The TV formula hardly varies: unusual camera angles to highlight the Doppler effect; instant replays of crashes and out-of-control cars; admiring profiles of the drivers; frequent mentions of the sponsors (in addition to the sponsors' commercials); interviews with physicians at the hospital who express hope that the injuries were not fatal to the driver; constant shots of anxious wives, girlfriends, and mothers; and even more shots of the even more anxious pit crew wearing the sponsors' logos.

The networks are hard-pressed to

find variety because there is none. What one is watching are, in the words of one advertising agency, "200 mile per hour billboards." An advertisement in a financial newspaper seeking sponsors for the Australian Grand Prix noted that the race would provide eight hours of live national television, an audience of millions, and other multi-media coverage before and after the event. Sponsors can advertise on the car, the driver, a sign around the track, or supporting events. "The short-term benefits are considerable," noted the ad, "Long term potential is enormous." Television advertising of cigarettes is banned in Australia, but among the leading auto racing partnerships in recent years has been that of General Motors and Marlboro (Philip Morris).

In 1981, Advertising Age, the maga-

zine of the marketing field, described the attraction of television automobile racing and other sports for certain sponsors: "'When an advertiser gets involved in sponsorship, the company usually wants a fixed audience in a situation it can control,' a tobacco industry analyst said. That usually comes in the form of a marathon or a stock car race or a rodeo. Tobacco companies each spend millions of dollars sponsoring sporting events" (*Advertising Age*, Jan 19, 1981).

If there is any doubt that automobile racing is little more than a pure commercial, one has only to consider the comments of the 1985 Indianapolis winner, Danny Sullivan, who speaks of a goal to become a spokesman for Miller Beer, made by his sponsor, Philip Morris (*Advertising Age*, May 23,



Through its Camel and Winston cigarette brands, RJ Reynolds has become the principal sponsor of automobile and motorcycle racing in the United States. Advertisements for several other Reynolds products help reinforce the social acceptability of motor racing—and, by association, cigarette smoking.



1985). The sponsorship costs are staggering (and are therefore limited to a handful of sponsors, usually of mass consumer products): \$10 million to field a race car team; \$5 million to buy the advertising space on the car; \$1 million a year to keep the team going; and \$300,000 for the ad space on the helmet. The driver can sell his chest, back, and shoulders, and the higher the logo on the driver's clothing, the more money the sponsor pays. On May 27, 1985 the front page of The New York Times featured a photograph of the Indianapolis 500 winner Sullivan with his Marlboro and Miller chest patches. Photographs of such racers make their way into bicycle-racing magazines aimed at young boys, many of whom now don fast-selling replicas of the billboard-like jackets worn by motorcycle racers and race car drivers.

BEYOND TRANSPORTATION

Ironically, in 1955 automobile companies agreed not to promote the speed and horsepower of automobiles or to support automobile racing, out of concern for public safety. Almost immediately this rule was violated, so that by the mid-1960s some companies were putting up \$30-\$40 million a year (*The*

Car Culture, Cambridge, MIT Press, 1975, p 215). Indianapolis News sports editor Wayne Fuson confirms that the companies made such a pact."They did, but they cheated on it behind their back," he told the Journal. "Now they're in with both feet." Indeed, the theme of increasing numbers of automobile commercials is likening the performance of the family car to that of the race car. The use of the automobile as a means of transportation plays little part in commercials. A different kind of risk-taking associated with automobile racing has occurred in the past decade with the influx of cigarette and alcohol sponsors. The move occurred shortly after the ban on television advertising of cigarettes. This has upset Joseph G. Barkey, MD, an anaesthesiologist in Findlay, Ohio and one of the few physicians to have driven race cars professionally. "I talked to [a top executive of] RJ Reynolds at the Mid-Ohio Sports Car Course," Barkey told the Journal, "and I asked him why they were sponsoring the races. He said we cannot buy space on TV but we can have our name on an entire car and the wall, and we're covered by Wide World of Sports, so we get our ads on TV." Barkey added that "there's no way in God's green earth that Budweiser could afford to

buy the exposure it gets," citing the use of such drivers as Paul Newman who have worn the beer company logo. He also cited Burt Reynolds' Skoal Bandit (United States Tobacco) race car. "Some of these guys don't smoke or drink," noted Barkey, "but the kids don't know that." And racing has become popular among children. Several toymakers, including Mattel, manufacture racing cars with Marlboro decals (Med J Aust 1983; 1:238). One video arcade game, "Pole Position" has featured race cars with Marlboro logos (Med J Aust 1983; 1:242).

In 1975, Brown & Williamson Tobacco Company began sponsoring a race car-the Viceroy Special-with the same colors as a package of Viceroy cigarettes (Advertising Age, Jan 6, 1975). Drivers such as Mario Andretti and Al Unser were dressed in the Viceroy colors. The cigarette company backed up its racing efforts with advertising in male-oriented magazines and auto racing books. One of the advertisements featured a race car driver standing by the Viceroy special and the caption: "After going 212 miles per hour, he's not about to smoke a boring cigarette. Viceroy. Where excitement is now a taste."

Since 1975 RJ Reynolds and Philip

Morris have provided a large share of the sponsorship of automobile racing. Reynolds sponsors several entire categories of racing under the title of the Winston Cup and Camel GT. The race tracks often are painted in the colors of the respective brand of cigarettes. Almost all of Reynolds' products have been tied in to the theme of auto racing (Fig), including Hawaiian Punch, Canada Dry, Kentucky Fried Chicken, Del Monte, and the cigarette brands Sterling, Vantage, Camel, and Winston. Advertising for Hawaiian Punch race car toys has appeared in the comic strips of Sunday newspapers.

DYING LEGENDS

No sportswriter or TV commentator (and few civic organizations) has raised questions about the mixed message of alcohol product logos emblazoned on the clothing of speeding, risk-taking drivers (eg, Bobby Allison and Danny Sullivan for Philip Morris' Miller Beer, Al Hobert for Philip Morris' Lowen-

brau, and others for Coors, Strohs, and Budweiser). And only in Australia has some progress been made in challenging the use of cigarette logos on race cars in televised events. A hopeful sign in that country is the dropping of a cigarette company by a race driver. Unfortunately, in the United States auto racing is being promoted at an increasing clip. In the past five years, civic leaders in Dallas, Detroit, and Miami, and most recently New York City have permitted Grand Prix promoters to hold races in once-peaceful parks or on public thoroughfares. Physicians and all others who care about preserving the remaining safety, serenity, and beauty of their communities would do well to oppose the use of public property for automobile racing.

Television networks have been challenged to reduce the amount of violence. Nowhere could they do better than to phase out automobile racing and the obsession with car chases on such programs as the *Dukes of Hazzard* and *Miami Vice*. (Auto races sponsored by cigarette makers and breweries have even been shown on early morning television, pre-empting a children's program [NY State J Med 1984; 84:60].)

If a ban on auto racing from the airwaves cannot be realistically hoped for in the near future from the networks, then the networks should be challenged by the Federal Communications Commission and the Federal Trade Commission to respond to the violation of the Public Health Cigarette Smoking Act that precludes the advertising of cigarettes on TV. The time is long overdue for the House Subcommittee on Health to hold hearings on the flaunting of the law by television networks and their cigarette advertisers.

As for the future of automobile racing itself, it is tragic that this activity has become a model of risk-taking behavior. It is no exaggeration to suggest that adolescent afficionados of automobile racing believe that they are only as powerful as their gas pedal foot.

Alan Blum, MD

