

SAFETY

Youth Is a Killer

Deadliest Drivers Are Boys Just Old Enough to Vote, Yet They Are Also the Most Skillful Car Operators

By DR. FRANK THONE

DEATH behind the driver's wheel, in the terrible annual auto accident toll, is not a grim, old, bearded man with a scythe. He wears the beardless face of a boy. Flaming youth at the wheel is the deadliest foe of today's highway-using public.

Remorseless statistics, presented before the American Association for the Advancement of Science by a critically analytic scholar, prove the indictment beyond possibility of denial. Dr. Harry M. Johnson, who led the study under the auspices of the Highway Research Board, sums up the case briefly and dramatically:

"If we pick the same number of drivers in each age-group, and count the fatal accidents that each group has, we find that those who are 45 to 50 years old kill the fewest persons in a year. While they are killing 66, the 16-year-olds are killing 201, the 17-year-olds 186, the 18-year-olds 148, and those between 19 and 21 are killing about 215 persons for each 100,000 drivers on the road.

Second Dangerous Age

"The drivers older than 45 tend to become more deadly each year, reaching the average rate for the whole population about age 64 to 65, whereupon the rate suddenly falls. This decline may be due to the older drivers driving less and less, instead of better and better."

Dr. Johnson and his associates in the study found most of their material for analysis in the records of one state, Connecticut. It is one of two in the entire Union where really careful track is kept of all reported accidents, the other being its neighbor, Rhode Island.

Connecticut makes an excellent sample of present-day American population. Though not large in area or total number of inhabitants, it contains some rather typical middle-sized cities as well as considerable stretches of strictly rural regions, and it has upon its western boundary the largest metropolitan area in the Western Hemisphere. Its people include all gradations from poor to rich, from ignorant to well-educated, from newest immigrants to oldest Colonial

stock. A better cross-section could hardly be found.

Connecticut's motor laws require reporting of every accident that involves death or injury to any person, or property damage in excess of \$25. The Commissioner of Motor Vehicles makes a special effort to see that these laws are enforced.

Dr. Johnson, however, is a realist about the probabilities of having all accidents reported. He says: "It is not to be supposed that all the non-personal accidents reportable by law are actually reported: perhaps half of them are. Probably nearly all the fatal accidents are reported, and a very large proportion of the non-fatal accidents which involve serious personal injury."

Bad at Outset

Since the study was based only on accidents actually reported, it really makes no difference how many went unreported, so far as Dr. Johnson's figures are concerned.

One might reasonably expect a high accident rate from boys and girls who have just learned to drive and are trusted alone in a car for the first time. Such proves to be the case.

Sixteen years is the minimum age for drivers' registration in Connecticut. For every 100,000 licensed 16-year-old drivers, 200.6 were involved in fatal accidents a year. The average for the entire driving population of all ages is only 113.9 per 100,000.

With a year or two added to his age, Young America becomes slightly less deadly on the road. The rate per hundred thousand goes down to 186.4 at 17 and to 148.3 at 18. Just why, Dr. Johnson does not undertake even to guess, especially in the light of what follows.

For why, after such improvement, should the approach of legal maturity signal a slump so sudden and so bad? During the ages 19, 20, and 21, the youth of our land are veritable devils on wheels. Per 100,000 drivers of those ages, the number involved in fatal crashes stands very close to 220 for all three years. This is very nearly three times the rate (bad as it is!) for their

parents in the conservative forties and fifties, who have about 75 killers on the road per 100,000 drivers.

Middle-aged Saul may slay his thousands, but youthful David slays his triads of thousands.

Better by 25

After Young Hopeless has cast his first vote he again suddenly improves. By the time he is 23 he is not much more lethal than he was at 18, and by his twenty-fifth birthday he is distinctly less so. In his thirties, married and settled down, he continues to improve, and by the time he is 45, with Junior getting his first driving lessons (and first safety homilies—which he will of course disregard just as Dad did) the "old man" reaches his all-time low as a road menace.

After early middle life, Dr. Johnson finds, drivers again begin to become more unsafe, and in their sixties the rate appears to go up sharply. However, the smaller number of older drivers involved in accidents, especially in fatal accidents, makes the last part of his curve somewhat less dependable than the first. The more so, since a good many elderly persons hang onto their drivers' licenses without using them much, perhaps through unwillingness to admit, even to themselves, that they are no longer really fit to be trusted with a car.

Youth Crashes Hard

The figures for fatal accidents, just outlined, are paralleled fairly closely by those for non-fatal personal accidents and for damage to property. With this interesting divergence: that youthful drivers' excess in fatal accidents over their elders' is greater than their excess in non-fatal injuries, and also in accidents involving property damage only. In other words, young people are not only involved in more accidents than are their elders, but on the whole they are involved in worse accidents as well. When youth crashes, it crashes plenty hard.

There is a hint as to the possible cause for this in some traffic figures which Dr. Johnson obtained in the District of Columbia. During the first five months of 1936, Washington police authorities suspended the licenses of all



convicted speeders. The rate of suspensions among drivers from 16 to 20 years old was 2.3 times as high as the rate for the whole population. The rate for drivers in the next higher five-year age group was nearly as high, and in the 26-30 year group it was still nearly 1.3 times the average. This tends to confirm in cold figures the general popular impression, that young people are most addicted to speed, as well as to getting into accidents.

However, cautions Dr. Johnson, "This does not prove that the killers are speeders and that the speeders are killers. Indeed, taken alone, it does not prove that any speeder is also a killer. But we do know that in many situations the speed of the car determines whether it will crash or not; and in the fact that the worst speeders and the worst accident-makers belong to the same age-group one finds good reason for inquiring more closely how these persons drive."

Skilled Deadliness

One very discouraging fact about the whole business is that these young hellions who as a class get into the most and worst accidents are also the most skilled, if any of the drivers' tests now in vogue mean anything.

We are all familiar by now with the batteries of impressive apparatus that are in use in a number of places. They test your keenness and quickness of sight, your ability to tell a red light when you see one, your quickness of reaction. They put you in the driver's seat of a dummy car and let you try to keep out of bad traffic situations un-

rolled on a screen panorama before your eyes. All this is supposed to show how good you are as a driver.

Well, the kids score highest on these tests, hands down. And then go out and score highest also in breaking necks—their own and yours, too, if you happen to be around at the time.

Regardless whether the tests really tell anything about real driving skill, it is probable that young drivers do have greatest skill in handling cars under road conditions. It may be that it is their judgment rather than their skill that fails them when accident-conditions impend.

"Perhaps it is not so much a question how skillfully a person can drive as whether he will wrongly estimate the skills he has," suggests Dr. Johnson.

Women Not so "Dumb"

Inevitably the question of woman's alleged "dumbness" as a driver came up in discussion, when Dr. Johnson presented his paper. But apparently the female of the species is less deadly than the male, in the matter of auto accidents. However, it is hard to make the figures mean anything, because the average woman driver spends less time at the wheel than the average man and drives at more favorable times of the day.

Another point on which data are quite lacking is the emotional state of the drivers involved in accidents. The youth of 21 is legally a man, but in emotional reactions he may still be a child, it was suggested. "Don't know," answered Dr. Johnson, "Haven't any figures."

Again: some psychiatrists thought that women in the late twenties and the late thirties ought to show critical rates; and again it could only be reported that the women involved were so few that any attempt at statistical handling would be quite undependable.

In response to another question, however, Dr. Johnson could report that he had access to real figures, and that they enabled him to give a rather good bill of health to one much-berated group of drivers: taxicab operators. Their apparent recklessness would seem to be in reality assurance born of a knowledge of their own skill. What the raw youth at the wheel *guesses* he can do with his skill, the taximan *knows*; or he doesn't take the chance. After all, it doesn't take many accidents to spoil his record—and put him on the blacklist. He's just plain got to keep himself out of accidents.

Summing up at the end, Dr. Johnson said: "If the age-relations which we have found among these driver-populations hold nation-wide, then some 3,085 persons were killed on our highways last year because the operators from 16 to 20 years old drove worse than their elders, and some 7,787 persons were killed because operators not older than 25 years drove worse than their elders. "Let the experts find a remedy—if they can."

This article was edited from manuscript prepared by Science Service for use in illustrated newspaper magazines. Copyright, 1938, by Every-Week Magazine and Science Service.

Science News Letter, March 5, 1938

GEOLOGY

Modern Prospecting Methods Locate New Oil in Illinois

OIL WELLS in places regarded as impossible before 1930, located by systematic use of modern scientific prospecting methods, have led to the discovery of eight new oil pools in southern Illinois and the increase of the state's known oil reserves by at least 100,000,000 barrels, it was reported by Dr. M. M. Leighton, Illinois State Geologist.

Found as a result of a planned search, these new oil pools are in an area regarded as barren before 1930. Realizing, as a result of intensive field work, that there should be domes within the great Illinois Basin, the state geologist's forces, with some private companies, began an intensive search for such oil traps, located a number of probable traps by geophysical methods, and proved the correctness of their findings by bringing in producing wells on eight of them.

Modern prospecting methods have cut drilling losses more than fifty per cent. Wildcat drilling (drilling in areas where there are no producing wells) resulted in bringing in oil only once in every ten attempts during 1937 when the well was sunk only on a "hunch." When the suspected area was first gone over by geologists with modern methods, the score was one producing well for every four wildcat drillings.

With Illinois oil production already tripled by these new fields, 150 or more geologists working for oil companies are now at work endeavoring to locate new oil pools, declares Dr. Leighton.

Science News Letter, March 5, 1938

Luminous signs shaped like deer have been placed along some of Germany's country highways to prevent motorists from striking wild deer that may dart across these roads at night.