

PUBLIC SAFETY

Safety on Highway Trips

Stop-over points, geography of country and sight-seeing visits all affect your chances of survival on highway trips, three scientists suggest to Highway Research Board.

► THE WAY you plan your next big automobile trip may save your life or may get you killed.

Your planned first-day destination, the geography of the country you will be crossing, the sight-seeing points you want to take in, the places you want to eat—all these may play a big role in determining whether you will be involved in an automobile accident.

They were some of the factors reported to the Highway Research Board meeting in Washington by three University of California scientists.

Drs. Heinz Haber, Robert Brenner and Slade Hulbert, all of the University's Institute of Transportation and Traffic Engineering, said they began thinking out these causes when it became apparent that speed, liquor, fatigue, road hypnosis and "altitude-sickness" could not explain many auto crashes on the nation's highways.

Although no experimental data have been obtained to back up the ideas of the scientists, they believe their conclusions are sufficiently accurate to warrant immediate action by state highway departments and automobile clubs.

Accidents seem to have many causes. These causes often result from combinations of ordinary driving conditions, the scientists reported.

If the first day's destination is too far away, the motorist is likely to speed up unwisely. This can happen in particular to commuters who regularly travel a given span of road. These motorists, aware of the time it usually takes them to travel the stretch, sometimes take wild chances to make up time when a delay besets them.

Motoring safety also seems bound up with the driver's sense of touch. When his tactile sense has been dulled by a long drive, the motorist is less likely to respond to skids, the men pointed out. A driver seems to detect a skid with his body before he does with his eyes.

The sense of touch also can affect the driver's safety in traffic. When he has been numbed by long hours at the wheel, he seems to respond to quick stops in traffic much more slowly.

Using a 160-mile strip of U. S. Highway 66 as an accident focal point, the three scientists analyzed some of the possible causes of the 900 major accidents that occurred between the New Mexico-Arizona border and Albuquerque during 1952.

They theorized that some accidents could have resulted when motorists coming from Los Angeles made their first-day destination of Flagstaff ahead of schedule. These motorists may then have decided to drive to

the next logical stopping place, Albuquerque, unaware that fatigue was creeping over them.

The psychological explanation of this is that the motorists' success in reaching their destination ahead of time spurred them to try an even greater accomplishment. The drivers probably underestimated the time and effort necessary for them to make Albuquerque.

Reluctance to change plans when trip situations are altered, or an injudicious change of plans to meet new conditions were cited as other possible causes of highway tragedies.

Setting your goals too high or too low, and performance letdown toward your destination probably affect highway safety.

Road hypnosis, induced by monotonous driving, may cause the driver to see non-existent "emergencies" on the highway. These emergencies usually require drastic action on the part of the driver. This may be partly responsible for accidents.

Hypoxia, the effect of decreased oxygen at high altitudes, also may desensitize the

driver so that he does not respond properly to highway conditions.

The three scientists recommended that motorists planning trips be advised on the psychology of their journeys. Warnings also should be posted near imminent psychological hazards, such as spots where hypnosis is most likely to occur. Continual roadside reminders should be present as the motorist passes through the hazardous areas.

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TECHNOLOGY

Develop Experimental Gas Turbine Automobile

See Front Cover

► SUCCESSFUL TESTING of an experimental gas turbine automobile, the XP-21 Firebird, has been announced by General Motors in Detroit.

Constructed to study future possibilities of the gas turbine for commercial uses, the XP-21 has undergone preliminary tests since last October.

The rear view of the Firebird, on the cover of this week's SCIENCE NEWS LETTER, shows its vertical tail fin and swept-back delta wings. On the trailing edges of the wings are brake flaps to supplement the car's wheel braking system. The huge tailcone is necessary with a gas turbine engine because of the large volume of air it needs to operate.

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JUNIOR ANTI-CANCER ACCELERATOR—Six-million-volt electron "bullets" will be fired at cancer from this glass-enclosed "gun" being tested by Donald H. Janney, a graduate student at Stanford University. It is part of a junior-size linear accelerator being made for cancer therapy and industrial inspection.