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Abridgment

Theories of Highway Safety

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The highway safety record in the United States is unfortunate, where some 50 000 people lose their lives every year and some 2 000 000 more are involved in serious accidents. This phenomenon has evoked a response from the social science community: try to and find the causes and hence the cures. The difficulty, however, is that all such attempts have been marred by a major flaw: the belief that whatever else is the cause of the problem, one thing is not responsible—the current institutional arrangements, whereby road and street safety is the responsibility of the public sector. This view is challenged, and an alternative scenario of private road ownership is presented. Based on this model, several attempted explanations of, and implicit cures for, highway fatalities and accidents are discussed. Specifically, an analysis is undertaken of the claim that a major portion of the responsibility can be leveled at the manufacturers of road vehicles. One fallacy committed by this argument includes ignoring the fact that the private highway inspection industry has been in effect nationalized. The criticisms by the Naderites of the NHTSA are considered, and the policy recommendations based on this analysis are rejected.

Current interest in deregulation and privatization is being manifested in the social sciences. So far, this interest has pertained to airline deregulation and to the replacement of municipal sanitation services with private alternatives.

A more ambitious undertaking in this direction involves the substitution of private or market-place-oriented road and highway ownership and man-

agement for the current institutional arrangements under which such tasks, rights, and responsibilities are accorded to the public sector.

[Note: The substitution of private for public road ownership and management should be distinguished from another theoretical position—one that advocates that the current public-sector highway managers introduce peak-load or other pricing schemes usually associated with the marketplace. There is a vast difference between these two proposals. In the former case, the highways would be turned over to private entrepreneurs, and the new owners would themselves decide what kind of charging mechanism to institute (1,2). In the latter case, the various road authorities would continue their overall management but would merely introduce some type of marginal-cost pricing system for road use (3).]

In this paper, only one argument in favor of such a change is implicitly considered: that such a substitution would improve the safety standards under which the system of roads and streets currently operates. [See Block (1,2) for other arguments and for a defense of the proposition that this scheme

would be feasible.] This is accomplished by considering a theory of highway safety regarding vehicle malfunction from a point of view that holds private road ownership as a feasible alternative to the current system.

The thesis of this paper is that the dismal highway safety record is due to the absence of a free marketplace in the provision for, and management of, highways. Under the status quo, there is no competition, i.e., no financial incentives to urge managers to control accidents. (Bureaucrats do not lose money when the death rate rises, nor is the road manager rewarded, as in private enterprise, if a decline in accidents occurs.)

This lack of incentives has not gone completely unnoticed by the highway establishment. For example, Kreml (4, p. 2), a member of the President's Task Force on Highway Safety, calls for the government to

Establish an incentive system that will relate federal aid to some overall measure of safety improvement. Under such a system, each state could be eligible to receive from federal funds incentive payments for reduction in deaths...accidents...etc.

Although in one sense this would be an improvement compared with the current system, it is paradoxically a step in the wrong direction. For what we need is not a superficial improvement of the government system, but a basic revamping. It is true that Kreml's suggestion may have some beneficial effects, but it depends on, and would further entrench, the management system that brought us to the current crisis. Further, it is replete with problems.

First and most important, it would not be an incentive system commensurate with the one provided by the market. The financial rewards and penalties would not be automatic as a result of an ongoing market process. Rather, Congress would have to act and would presumably delegate this responsibility to yet another government bureau. A new core of bureaucrats would thus be born, whose job would be to hand out the actual incentive payments to the states that show the most improvement.

Second, the consumer is not involved in the process. There is not even a hint in this plan that the purchaser of road services could, through his or her consumption decisions, affect plans of the highway managers. In the Kreml plan, the incentive payment goes to the state government, not to individuals. But can the prospect of the state government receiving the extra millions of dollars raise the morale and support of those employees charged with highway safety to the degree necessary to make serious inroads on the death statistics?

Third, why should the plan reward a reduction in the accident rate? Kreml specifically calls for a relation of incentive payments to safety improvement. This is far from the pattern that usually takes place in the market.

The basic problem with the thinking of the road authorities is the approach that they have taken. They ignore the possibility of employing the usual profit-and-loss business incentives to minimize highway accidents, and instead have an overwhelming concern with objective considerations. Unwilling to look at entrepreneurial potential because they see only government institutions as viable for highway management, the professionals in the safety field concentrate on the physical means through which death rates can be lowered and not on the subjective elements necessary to mobilize objective factors for this purpose.

A brief survey of the literature shows that these objective conditions are usually listed under three headings: the vehicle, the driver, and the road. For example, Campbell (5, p. 210) cites the driver, the road, and the vehicle as causes of accidents and implores that we "move on all three fronts." Oi states the following (6, p. 22):

In the accident research literature, accident "causes" are typically classified under three headings: the host, the accident agent, and the environment. Injuries on the ski slope are "caused" by (1) the reckless actions and physical condition of the skier, (2) the design and condition of the ski equipment, and (3) the characteristics of the slope and the snow.

Here the host and skier are readily seen as the driver; the accident agent or ski equipment as the vehicle; and the environment or slope as the road.

It must be stressed that there is nothing wrong with this division--if it is used as an organizing tool--provided that the essential nature of the problem (entrepreneurial incentive) is not obliterated. The difficulty with the division of highway safety into driver, vehicle, and road is that it ignores and masks the true solution. Unless the physical elements, along with the financial incentives, motives, and purposes, are analyzed through a perspective that makes entrepreneurship (7) its primary focus, a solution to the problem will not be found. The chief drawback to the safety literature is that there is simply no room in the analysis for the only institutional arrangement that makes entrepreneurship its centerpiece--the free market. Only government solutions fall within the realm of this analysis.

One manifestation of this mind-set is the division of the profession into "vehicleists," "driverists," and "roadists," where each faction urges that its realm is the most important and the key to the solution of the safety problem.

Nader, perhaps the best known of the "vehicleists," states the following (8, pp. xvi,xvii):

For decades the conventional explanation preferred by the traffic safety establishment and insinuated into laws, with the backing of the auto industry and its allies, was that most accidents are caused by wayward drivers who ipso facto cause most injuries and deaths...Not only was their approach unscientific regarding drivers, but it conveniently drew attention away from the already available or easily realizable innovations that could be incorporated into vehicle and highway design to minimize the likelihood of a crash and to reduce the severity of injuries if a crash should occur.

One problem that particularly concerns Nader is the presence of dangerous hood ornaments on automobiles (8, pp. xxviii, xxix). Even more vexing to him is the lack of NHTSA action to alleviate this problem in the late 1960s and early 1970s.

Another vehicle-related problem is the lack of conformity of truck cab dimensions to the variations in human body size. It is charged that by using assembly-line techniques, arm and leg room can be built to only one set of specifications. But this means that the tallest and shortest drivers will be uncomfortable and unable to react to road conditions in an optimally safe manner. McFarland (9, p. 671) states:

Clearances were frequently inadequate; in one model the shortest 40% of drivers could get the

knee under the steering wheel when raising the foot to the brake pedal. In another, this clearance was so small and the gear shift so close to the steering wheel that the tallest 15% of drivers could not raise the foot to the brake pedal, by angling the knee out to the side of the wheel, without first shifting the gear level away.

Inferior truck tires have been allowed on the nation's roads and have contributed to the accident toll. Sherril (10, p. 99) claims:

Tire failure and brake failure are the top killers in truck accidents caused by mechanical failure, and two-thirds of the tire failures are blowouts on the front. Even with new tires, the heavier front load presents an extra risk of blowouts. With retreads the risk becomes much greater; but the Federal transportation bureaucracy, despite repeated pleas from drivers to come up with a ruling, has not outlawed retreads on the steering axle.

Another aspect of the vehicle that might contribute to safety, but all too often does not, is the license plate. Were it to be constructed out of reflectorized material (11, p. 229), it might reduce the likelihood of rear-end collisions at night.

Therefore, how is it that private companies, such as General Motors (hood ornaments), private trucking firms (retread tires), and truck builders (improper cab dimensions), have been responsible for contributing to the accident rate? The only item mentioned above that is not the fault of the market is nonreflecting license plates, which are clearly the responsibility of state authorities, not private companies.

Let us stipulate for the sake of argument that all of these charges are factually correct. The case for the market is not ruined if some, many, or even all participants have made mistakes. Any real example of a free market in action will have to consist exclusively of fallible human beings. As such, the surprise is not that mistakes are made, but how few there are compared to the limitless human potential for error. The market can still be justified in terms of minimizing error, not eradicating it, in the tire retread and truck cab specification cases when compared with alternative methods of control.

But what of the public agencies responsible for the malfeasance? If it is assumed that the above-quoted charges are substantially correct, then public agencies (e.g., NHTSA) must also be held responsible. And here the explanation of human frailty will not suffice. For regulatory bureaus are without the safety net of market competition. If one falters, no others need arise to take its place.

Nader's hood-ornament charge, however, cannot be answered in this manner. Again, on the assumption that these decorations are actually harmful to pedestrians, it cannot be assumed that the market forces will engender a tendency toward their removal. This is because, by definition, the ornaments will not harm the purchaser of the automobile, the driver, or his family; they can, at most, prove detrimental to outsiders, i.e., pedestrians.

However, it cannot be concluded that the market is incapable of registering the desires of pedestrians, i.e., third parties to the purchase of a car. [For a fuller discussion of the externalities issue, see Block (12).] It appears incapable of doing so, but this is because public highway ownership has foreclosed a vital part of the market--street ownership.

The owner of a shopping center (this is the closest current analogue to private streets) must

ask: "Can I earn more money by permitting entrance to automobiles with possible dangerous hood ornaments, or can profits be maximized by forbidding them? If I forbid them, I shall be boycotted, to a degree, by owners of the offending cars, but patronized, perhaps to a greater degree, by those who fear these protuberances. If I allow them, the reactions will be identical, but in the opposite direction."

In the market, the (perhaps different) decisions of thousands of street and road owners will determine whether hood ornaments stay or go. If the overwhelming decision is that ornaments are a significant danger, then the owners of private roads will either charge more for their use or else forbid them entirely. In either case, it will be to the advantage of the automobile manufacturers to discard them. [It can perhaps be concluded from the nonexistence of any prohibition of hood ornaments by private sources (parking lots, shopping centers, and so on) that they are not as dangerous as Nader believes. But even if the hood ornament is not a good example of an actual danger, the same analysis can be used to show how, under full market conditions, safety implementation can still take place.]

But many accidents are caused in relation to other vehicles. Hood ornaments are but one example of this phenomenon. Other examples of one vehicle involving others in accidents are when the high beam from one automobile interferes with the vision of the driver of another; when the rear of one automobile is inadequately lighted so that the driver of another cannot see it in time; and when a blowout or a brake failure or a swerve of one automobile results in a crash with another.

Only the road manager, not the original manufacturer of the automobile, is in a position to alleviate problems of this sort. But the government, by seizing a monopoly on highway management, has not adequately assured the public that vehicles allowed on the road will meet minimal safety standards.

Austrian economists have long taught that capital, far from being a homogeneous entity, where any bit could fit in equally well with any other, is actually highly differentiated and heterogeneous. In order to work efficiently, capital must fit together in a delicate latticework, where each piece is in a position to support and make effective all other pieces (13,14).

But labor, too, fits the same principle. The automobile safety establishment has failed to realize that a whole profession, complementary to automobile manufacturing, has been prohibited.

The area that is complementary to automobile manufacturing in terms of certifying and upgrading vehicle safety is the private enterprise of vehicle inspecting. But there is no such private industry. It has been in effect nationalized--in part and parcel of public control of all aspects of road management.

The public enterprise of vehicle inspection has been sadly remiss in its self-claimed monopoly responsibilities. According to a report from the former Department of Health, Education, and Welfare (15, p. 21):

In the realm of government jurisdiction over traffic safety, matters at first fell to revenue collection agencies on the one hand and to law enforcement agencies on the other. Vehicles were initially licensed solely for the purpose of collecting revenue, and not for many years did the notion appear of vehicle inspection for safety purposes. (Fourteen States still do not have inspection laws.)

By government admission, then, there were many years during which there was no concern with vehicle

inspection for safety purposes. This is only believable of a governmental institution, i.e., one that suffers no monetary or any other reversal for failure to carry out its self-appointed tasks. And as late as 1968, 14 states did not even carry out this task to the extent of passing inspection laws.

The overriding problem with NHTSA, and with all similar government systems that are supposed to guard the public against vehicle defects, is that no competition is permitted. If market certification was allowed, there might be several or perhaps many competing private agencies; in real life, there are only a few commercial testing laboratories. [For a sympathetic analysis of what might be termed the private safety certification industry, see Friedman (16, Chapter 9).]

Perhaps the above discussion explains some of the shortcomings Nader has charged against NHTSA (8, p. xxvii):

Since February 1969, no new regulations have been added to the meager data informing the consumer of differences between vehicles, thus reinforcing the absence of quality competition in the auto market.

Written in 1972, this translates into a 3-year hiatus during which consumers learned nothing about the quality difference between competing brands of automobiles. One could scarcely imagine a similar occurrence in a private industry, or even on the part of one single firm, such as Consumers' Union, dedicated to providing information on automobiles. If such a thing were to occur, there is no doubt that other profit-seeking competitors would move in to exploit such an opening. They would take advantage of this lack of knowledge by providing the missing product.

Another difficulty with NHTSA, as with other regulatory agencies, is the tendency of bureaucrats to become "too friendly" with the regulated companies. Cecil Mackey, Assistant Secretary of Transportation (8, p. xxxi) states:

As the more obvious regulatory actions are taken; as the process becomes more institutionalized; as new leaders on both sides replace ones who were so personally involved as adversaries in the initial phases; those who regulate will gradually come to reflect, in large measure, points of view similar to those whom they regulate.

[For a more extreme viewpoint on this phenomenon, one that contends that such commonalities have existed throughout American history, see Kolko (17).]

It cannot be contended that the free market is completely without such problems. It must be admitted that all institutions, whether public or private, are susceptible to this danger. Free enterprise, however, has certain safeguards that are absent in the public sector.

This phenomenon can be better understood by comparing what happens to people involved in public and private institutions when a problem is discovered. For the owner of a private commercial testing laboratory, when an employee is discovered accepting bribes for rendering favorable opinions, the results are truly catastrophic.

But this would not be the case for employees of the government. Barring jail sentences, the worst

that is likely to happen is that the single bureaucrat caught will be fired. And even that is by no means certain if he is protected by civil service regulations.

In addition to competing on the basis of their main mission (laboratory testing, checking, and certifying), private certification agencies also compete in terms of preventing defections on the part of their employees. And this job is second in importance only to their main mission.

Therefore, it can be concluded that, at least as far as the vehicle malfunction and maldesign theory of highway accidents is concerned, no barriers to private road ownership have been found. If the Naderites were consistent, they would call for a radical alteration in the institutional arrangements provided for highway safety. As it is, they are reduced to advocating what can only be considered marginal improvements.

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