

Editor's Note: The following paper is presented as a non-technical commentary on a current issue of national importance. The current gasoline shortage has brought much debate on the question of maximum road speeds. Some value reflections appear to be in order.

A Better Road Speed Maximum

REX REW

Atascadero, California

ABSTRACT

As developing technology enabled people to move faster over the roads they went farther, accumulating miles traveled in direct proportion to the speeds made possible for them. Distances between places of interest and importance to the individual expanded. The increase in miles traveled negated much of the benefit that should have accrued from the increased speeds attainable. While little true value has come from high speeds, some important negative results have been a great increase in fuel use, pollution, danger of accident, and lessened pleasure in travel. A national maximum speed of 35 miles per hour for all vehicles on roads is advocated. This radical move would result in the evolution of more efficient and cleaner personal vehicles and safer and more exciting travel, while the much more efficient and less polluting transport of persons and freight by rail would be enhanced beyond our dreams, to huge ecological benefit.

I asked a young lady how far it is to LA and she said, "Oh, about four hours." Many people nowadays measure distances in terms of time—five minutes to the grocery store, ten minutes to the movies, etc. We cover a lot of ground in so little time, too. Speed limits of 70 are becoming common.

Surely, if the speed limit was doubled and cars quickly evolved to make 140 mph possible, people would soon travel twice as far each month as they do today with no increase in travel-time. Many would find that they could live twice as far from their work and still get to their destination quickly enough. People would soon discover and drive to recreation twice as far from their homes as they do today. Places of business would spring up farther out in miles but not in time. Distances between points of interest for each of us would increase until we were again spending as much time getting to them as we are today.

My point is that it is not the miles we cover that consume us in traveling. In self-propelled vehicles we only know of those miles through our intellect, and in our thoughts miles can grow or shrink in significance, without limit depending

upon how we come to regard them. Rather, it is the effort expended, the emotional experience, and the time involved that touch the organism more directly and satisfy the travel urge. Principally it is the hours that we spend in the auto that determine when we shall say that we have had enough.

When people used animals for transportation, or walked, they were fully satisfied with 50 miles a month! In the future, if it is made possible to go there quickly and cheaply enough, humans will go to the moon on weekends—238,000 miles one way! It does not help us to simply increase the speed that we can go; we merely adjust to it and are back where we started.

The emotional needs of young persons fairly scream for excitement and challenge. Youths used to run as fast as they could until they were exhausted, or ride a horse with the same enthusiasm, and find satisfaction. Now, “that very same youngster,” cushioned in a powerful car on a road which is safe at 70, must exceed 100 mph to experience sufficient danger and demand upon his wits and reflexes in order to accomplish the same satisfaction. There is no end to this with increasing speed limits and the straightening of roads. For that matter, even the old and the sedate become bored if they don’t travel at a speed fitting the car and the road.

What if, instead of doubling the speed limit, the federal government cut it in halves to, say, *a national maximum of 35 miles per hour* in all states without exception, and all traffic on the roads including buses and trucks came under this limit? What would be the result? It is my belief that the effect would be as follows:

The Highway Patrol would issue a lot of tickets for a time.

Those in heavy, powerful cars would become frustrated trying to observe the new speed limit.

Shipment by truck would be slower and more expensive, and fragile, quickly perishable produce would spoil enroute.

Those who live far from their work would move closer or change their place of employment.

People would travel many more hours at first than they do today to get to their familiar destinations. But gradually their destinations would change to those closer to home until they again would be traveling only the same number of hours and half as far as they do today. Joe and Mary would be visited less often or forgotten, as they live too far away, and the time formerly spent with them would now be used generating new attachments closer to home. Our children would range and locate, get jobs, at a lesser distance from us than they do now.

Freeway noise, bothersome to people living near them, would be greatly lessened.

Those with heavy, powerful cars would trade them in for something much more useful and appropriate.

Increased Use of the Rails

In the interest of speed and economy, long distance freight shipments by truck would return to the rails where no governmentally legislated speed limit is imposed. *Freight by rail* is highly efficient in terms of fuel usage and ecologically much preferable to transport by trucks.

As a result of this radically low ceiling on all speeds on roads, the more efficient and less polluting *rapid transit* would realize a rebirth of un hoped-for proportions, achieving overnight a reverence in the minds of the people who will always prefer the higher speeds. There would be a continual clamor for its services and many years before the public demand upon rapid transit could be met. As a result of such an undiminishing flood of interest and money, rapid transit would enjoy improved design and development not dreamed of now, and would become a means of heretofore unimagined convenience, speed, and economy, all to great ecological advantage.

In the cities people would wisely choose rapid transit for speedy movement to work, forsaking their slower cars for this purpose. Highly developed rapid transit would also entice workers in industrial areas to relocate their homes to outlying areas at more comfortable distances from industry. The 7:30 AM and 5 PM horror (the great traffic swell on the roads leading to industry) would vanish. Think of trains as giant, super car-pools!

Long distance rail passenger service would grow and develop like a tropical flower under the stimulus of the 35 mph maximum speed on roads and it would siphon off nearly all the long distance travel in automobiles from the freeways.

As long distance and high speed freight shipment returned to the rails most trucks would disappear from the roads.

The freeways, long crowded, dangerous, and inadequate, would take on a welcome new face.

Between 60 and 70 per cent of the smog that we suffer is produced by vehicles. Because the distance people travel is determined by the speed at which they are permitted to travel, cutting their speed on the roads in half would soon cut smog production there in half as well. It follows that fuel consumption there would also be reduced to one-half of what it is now. Then further large reductions in the total smog production and total fuel use would result, as the more efficient rails were chosen as an alternate means for movement.

New Car Design

With reduced speeds the car itself would be greatly altered, becoming more efficient and producing much less smog *per mile traveled!* Detroit could not justify building autos that cruise ideally at speeds higher than 35 or 40 miles per hour. Whereas today 300 or 400 horsepower may be required to pass safely at top lawful speeds, "tomorrow" with speeds only cut in half, a mere 25

horsepower would be more than adequate for safe passing (truly one-tenth the present horsepower or less).

A change in design and much work would be created for Detroit because America's own mass-produced huge, heavy, powerful work of art, unequaled the world over (and of which we are all proud), "Detroit's Monster," would no longer be appropriate or have a place in our society. America's auto would have to undergo a rapid, radical, thoroughgoing, logical transformation over a period of about ten years.

Seat belts would no longer be necessary and airbags would certainly not be needed. All the heavy, expensive, complex safety devices recently proposed in an attitude of emergency and desperation for our safety would be unnecessary. Thus, the auto would become simpler instead of more complicated.

The heavy, complex, troublesome and expensive engine of today would be gone, being replaced by a light, simple, trouble-free motor that would be easily removed and lifted to a bench to be worked on. The whole chassis would be lighter, along with the transmission, differential, axles and springing. Wheels would be lighter still. Tire design and development would take a new direction, with tires becoming smaller in cross section, lighter, harder, more efficient and free running, resulting in considerable fuel savings.

The long hood that has excited all of us with its promise of power would be obsolete and it might even come to be regarded in its true light as evidence of an engineering shortcoming. Engineers could not possibly make an engine small, light and simple and at the same time powerful enough for the high speeds sought after. We were forced to accept that long hood, that was hard to look over and see the ground in front of, as REQUIRED, in order to accommodate the large, heavy motor. Too, the car was necessarily *heavily built* to carry that motor. Although we never realized it, this amounted to *sacrifices to speed*.

The long, low, streamlined look of the *total car* that was so fascinating to all would no longer be necessary; and we might even come to recognize it for what it really was, another sacrifice to speed. We have been crouching down and pouring ourselves into cars that are less than comfortable to get in and out of, sitting too low, peeking over the aforementioned hood because we were compelled to by the necessity of having the low center of gravity required for high speeds.

It used to be fun to ride with the top down and "inhale" the great out-of-doors. Later, becoming "wiser," people discerned that after all, convertibles are really more *uncomfortable* than they are fun and few convertibles are manufactured now. People were not aware that the convertibles' demise was another sacrifice to speed. Convertibles were a pleasure at the lower speeds.

Much of the "flair and sportiness" of the cars of forty and more years ago is absent in the cars of today (smooth the streamlined skin). While we now feel that many of the general dimensions and shapes of the cars of yesteryear were simply forsaken because they were inferior to the new, we might change our

minds in years to come. With the courageous road-speed reduction we would see a pouring forth from the fertile minds of the designers the dream cars that are appropriate to a top cruising of 35 mph, appropriate to the body dimensions, posture, movements and spirit of the people who are to drive them. When we would see the general dimensions and shapes of the yesteryear auto returning, in however bright and shiny a package, we might realize the truth: worthy as they were, they had been sacrificed to speed!

Cars designed for and driven at slower speeds *can* be more fun. They *can* seat you better. They *can* get you closer to nature. You *can* stop and look at flowers, put the top down, put the windshield down. . . . After all, what are you out there for? Just to get where you are going? Don't you like the traveling itself? If you opt for thorough encapsulation, straight as an arrow down the utter desolation of a "no stopping at any time" modern freeway in the smog created by yourself, I guess you don't.

Increased Safety

Real flesh and blood sacrifice to speed occurs daily, which is aptly described by a phrase familiar to us all, "Carnage on the highways." "Human failure" is another well known phrase and we must accept humanness. Machines can be made more reliable but we have to contend with the humans operating them. However, think of this: with highway speeds cut in half, human reaction time as it relates to the incident would be effectively doubled in rapidity.

When a dear old relative promises to come and visit you, in their failing car, you fear for their very life on the freeways of today. It could be different. The roads, the thoroughfares, should be safely open to nearly all people, the young and the old, the absent minded, those with bad eyes, bad ears, the retired, the fifteen-year-old. It could be done with a 35 mph ceiling on all road travel. Humans have all the frailties and failings imaginable and these are always found on the highways at any time of day or night. It is an interesting question whether it is best for the multitude on the freeways (us) to be trusted with 70 mph. The results are apparent. The deaths on the highways far exceed the deaths in the wars. Let's leave the very high speeds to rail transport facilities with their highly organized safety measures, superior to any individual's as he tools down the road gabbing to his friends. He and his friends ought to be safe as well as carefree. Let's protect them (and others from them) with a new top speed! Let's open the roads to all again, safely!

Conclusion

COEXISTENCE:

With a ceiling of 35 mph on all vehicles on the road, all traffic there, with the exception of a herd of sheep, would become compatible. Detroit would have

quickly produced small cars with light, hummy motors, and large, luxury cars with light, hummy motors. Electric automobiles would be a natural at 35 top. Little, light, three wheeled automobiles would appear. The very very light motorcycles and motorscooters that are so phenomenally economical (and with such potential for comparatively clean exhaust) but prohibited now by sign on every freeway, would appear everywhere because people would no longer be afraid of being killed for going slowly, and reasons for prohibiting them from the main roads would no longer exist. Bicyclists would appear from everywhere too, and would derive their physical, emotional, and economic benefits while not contributing any smog whatever, finding themselves for the first time in many years fully at ease with the traffic and the traffic with them. Bicycling is urgently needed now for pressing ecological reasons and would be thoroughly encouraged by this condition of *compatibility of diverse vehicles on the road*. Bicycle paths with their attendant problems would be found absolutely unnecessary.

With everyone else going half as fast and half as far on the roads as they did formerly, and real distances between points of interest shrinking, the "speed" attainable on a bicycle would effectively double, and far more people would be persuaded to ride them.

The signs that say, "no stopping at any time" that have been placed at many scenic spots along the roadways, and rightly too, in the interest of avoiding tragic high speed accidents, would be taken down as of no further use. The dangers of stopping along a roadside would be greatly lessened and rarely would autos be prohibited from stopping. People would stop and take pictures when they wished, stop to look at a view, stop to take a rest.

If someone on the roadside needed help and you were about to pass him, he would be in your vision and awareness twice as long before you passed, and you would be more likely than you are now to stop and help him. If you were the one in trouble someone would be more likely to stop and help you. There are many reasons for the development of impersonalization and psychic distance between persons in this modern world, and speed in passing when we are out of our houses and moving about on wheels, believe it or not, may well be one of them!

If, hopefully, this courageous road speed reduction is undertaken, to avoid unnecessary disruption, the maximum should be brought down gradually, that is, immediately to 55 mph, then two years later to 45, and two years after that to 35 mph. A national limitation only to 55, or even to 45, would be to effect only a partial solution with very little actual result, while the ceiling of 35 mph seems to be adequate to produce all the results as described above while allowing us sufficient speed for exciting and fulfilling useful travel.