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# THE POLITICAL ROOT OF ROAD ACCIDENTS

by

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# THE ROOT OF ROAD ACCIDENTS\*

The increase of fatal road accidents during the war (from about 6,600 p.a. to about 8,600 p.a. in the first year and then to 10,000 p.a.) is both an absolute increase and an increase per vehicle in use. It is almost certainly also an increase per vehicle mile.

This is an ugly retrogression. The time of war stress has brought into grim prominence what has long been feared, though scarcely in such deplorable degree, by a few dispassionate observers. These fatalities are the outcome of an ill-judged and weak-kneed policy on roads and road traffic that has been persisted in for over 30 years—with a solitary exception.\*

The uninterrupted upward trend of the yearly totals of fatal road accidents from the earliest days up to 1930 is shown in a graph (Fig. 1) which carries the record up to the year 1936.

In 1930 something happened. An Act of Parliament was applied that abolished the general speed limit that had been enforced hitherto, and introduced the Highway Code and other sane procedures. Improvement followed at once. The curve ceased to climb upwards. It descended. In the first year the fatal accidents were less by 500. It was not an isolated betterment. It continued. The number of vehicles registered did not decline. It increased at the rate of about 50,000 a year average during the four years of no speed limit. Through that period, and longer, the total of fatal accidents remained reduced. The saner methods continued this good influence.

So much for the one exceptional legislative Act. I draw no conclusions—yet.

## A Bridge with no Parapet.

Motorists have been used as scapegoats for others. They have, of course, deserved some share of the reproaches, for *humanum est errare*. But they have a right to rebel. The official failure to regulate other road users has made their task impossible. The one-sidedness of the anti-motor campaign has slurred over such of the facts (established by official surveys) as exonerate the drivers. These data prove the threefold greater responsibility of other persons.

For instance, the 1935 enquiry showed that only 25 per cent. of accidents were ascribable to motor drivers, as against 75 per cent. ascribed to others. No indignant Minister of Transport thumped the table about it. He reserves that for motor users. Why?

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\* Of the mass of motor legislation passed in 30 years the first Act that was attended by a reduction of the ever-rising curve of fatal road accidents in which a motor was involved was Herbert Morrison's Act, which abolished in 1930 the general (20 m.p.h.) speed limit and introduced the Highway Code. These accidents fell from 6,222 per annum to 5,628 and remained reduced throughout the entire four-year period of no speed limits. The fatal accidents, not being subject to arbitrary changes in the method of counting, must be relied on to gauge the accident position. The non-fatal accidents were at this date made to appear more numerous by the introduction of a new mode of recording based on the self-reporting by motorists alone of their accidents, however insignificant, under grave penalties. Cyclists' accidents are not thus "self-reported."

Of those other causers of accidents—pedestrians, including little children under five, weakly or deaf old people, invalids, persons greatly preoccupied or distressed, individuals on foot urgently hurrying, etc., and also some walkers with no such excuses, were found to be the responsible causers of many *more* fatal accidents than any other category of road user. It is true and sad that pedestrians suffer more, but they cause more. They deserve our commiseration and help. They are not blameworthy. They have the right to be protected even if it be from their own impulses. They have not been helped. They die. If a river bridge were not guarded by a parapet, the slackness of the defaulting authority deserves the blame, not the people who fall in.

No greater disservice can be done to pedestrians and cyclists than to ascribe the bulk of road accidents to an erroneous cause. This baulks the quest for true remedies. Out of a hundred fatal accidents the shares of responsibility of walkers, cyclists and “nondescript causes” were found to be respectively 49, 16 and 10—the drivers caused 25 per cent.

#### **No Action Against Those Chiefly Responsible.**

On this background of officially collected data it seems incredible that none of the regulations, threats, restrictive measures, insults, police prosecutions, traffic lights, beacon regulations, point-duty police, etc., none of the attendant battery of 2,000 penal rules, none of all these things—no regulations whatever have been directed to guide, assist or control the *chief* causers of accidents. On the other hand, all these things, with speed traps, registrations, licensings, etc., are directed against those to whom only one quarter of the trouble is ascribable (and mostly without blame), namely, the motor vehicle drivers.

We are told the police have neither time nor personnel to shepherd or warn the pedestrians. Yet the time spent in court on 500,000 summonses p.a. against drivers largely on technical points, gave them no difficulty!

Such an attitude almost invites the question: Do the two Ministries concerned wish to reduce accidents more earnestly than they wish to court popularity by persecuting the one category of transport to which an undeserved ill-repute has been attached.

If this question cannot be answered with full proofs one is left with a sense of something sinister in the persecution of a body that is weak politically in favour of the loudly expressed statements of more numerous groups with more votes, although the official world knows that those who are let off are three times more often responsible for the crash.

This is no protest against all rules; rather is it to deplore the fact that no single rule for forming safe *habits* has been evolved for the purpose of educating the pedestrians (who so often fail and suffer) into taking instinctively the safe action—in moments of stress as well as in normal times. Only the subconscious reaction that a *habit* can produce will ever steer them safely at those times when the public mind is gravely absorbed by such preoccupations as the war induces.

Very simple habits are in question; among them would be to take always the safe side of the footway or of the carriageway or the safe line in crossing the

road, in the best way, at the safe place or time. Pedestrians have not even a rule to cause them to make themselves discernible by wearing a white sash after dark, and so to help drivers to foresee and counter their unregulated movements. There is no rule to make a bicycle carry a brake, or an identification plate, or (in peace) a rear light, or to utilise cycle tracks. How should the public develop safe habits in the chaos of misrule that road traffic struggles with?

## A Persecution.

In the absence of regulations that are clearly essential, albeit politically inconvenient, a persecution (which only escapes the accusation of being malignant because those who wield it misunderstand the whole position) has inspired the regulations which have been concentrated against motor drivers. They have been persisted in and occasionally intensified—but never sanely reformed. Some self-righteous people, in their ignorance of the problem, actually call for always punishing the driver whenever *involved* in any accident! “That would soon larn them!” these deluded people say!

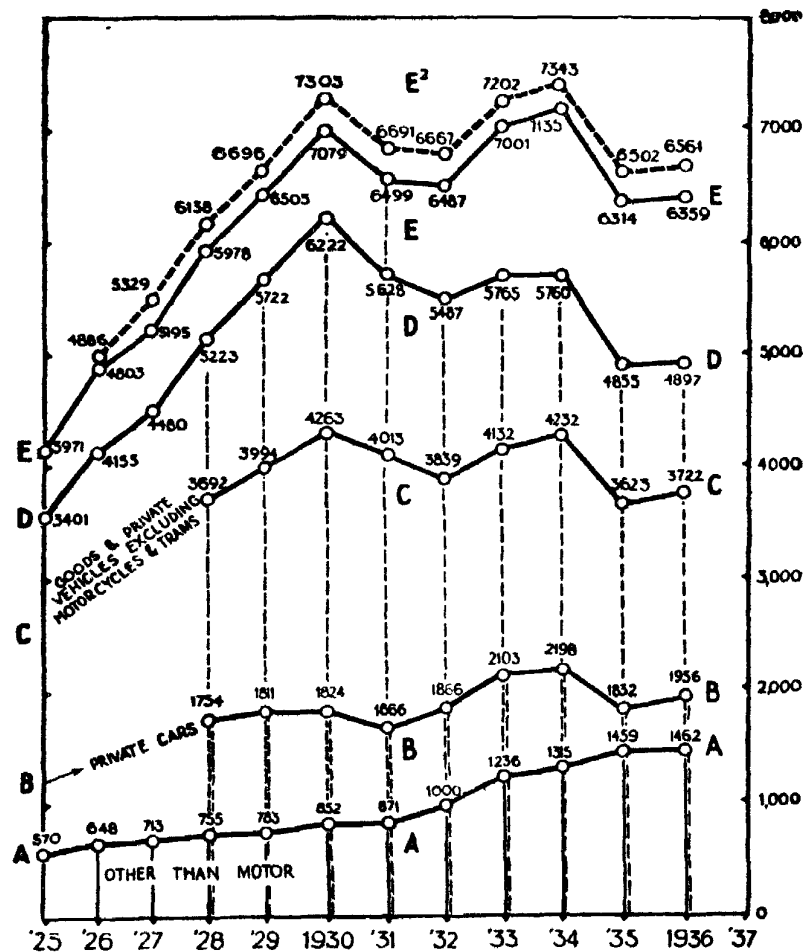
One misapprehension is in part responsible for this kind of attitude. It is the threefold confusion that has been introduced in the heat of controversy, between “being involved in . . .” “being responsible for . . .” and “being the blameworthy causer of . . .” an accident. An example illustrates these three phrases:

A child of five runs into the carriageway after a ball from the open door of a cottage. A driver is thereon *involved* in a fatal accident. The child pedestrian was the *responsible* causer and is so counted in the official lists, but no one could sanely call so young a child the *blameworthy* causer of the death. Analogously, the swerve of a cyclist or the absence of his hand signal (due to any one of several quite legitimate reasons) may put him in the same category as the child—viz., that of being a *responsible* causer but not a *blameworthy* one. The legitimate swerve of one motor vehicle may also cause some other driver to be involved in and “responsible” for an accident without being *blameworthy*. All these are counted by the public as *motor accidents*!

## “Some Thing, Some Person, Some Circumstance.”

In countless instances (approximately, in my estimate, 360,000,000 instances of emergencies per annum), some thing, some person, or some circumstance on the road (or sometimes not on the road,) bids fair to be the responsible causer of an accident.

Behind each of these potential visible causes, and perhaps away from the road altogether, may be the real prime causer who escapes detection—the blameworthy causer—e.g., an inattentive parent, an unwise type of advertisement, our unreformed road layout, our official failure to impose visibility on cyclists, or to make pedestrians keep to the proper side of the footway, etc. To these must be added the inept character of the “rule of the road” and of other regulations imposed on the drivers themselves.



**Fig. I. Police attribution of all road accidents (atal) analysed between 5 groups**

The lowest curve A, A, shows the steady rise of non-motoring accidents, viz., those attributed to bicycles, pedestrians, horsed vehicles, tramways, etc.

Curve C, C, shows the sum of those attributed to both private and commercial vehicles, but excludes accidents attributed to tramcars and motor cycles.

The second curve B, B, shows the accident attributed to private cars (not cycles).

Curve D, D, includes those of curve C and super adds those ascribed to motor cycles. Note that after rising since 1922, these motor-involved accidents decrease from 1930, when the general speed limit was abolished.

Curve E, E, adds to curve D the non-motor attributed accidents, which by their steeper rise after 1930, obliterate the improvement in the accidents attributed to motor vehicles between 1930 and 1936.

Curve E2, gives the fatalities as distinct from the fatal accidents, because one accident sometimes results in more than one fatality.

Erratum:—In graph B, B, above substitute for 1665, the number 1813

### The Duties of Authority.

It is an elementary function of authority (local or central) to protect life. It is their bounden duty to eliminate accidents and, therefore, to remove their causes. This duty imperatively requires that they shall first seek out the causes. Except for the researches of the Oxfordshire surveyor, they have never tried; they have only guessed. They call each guess "obvious."

A single year of scientific research into the causes could without doubt disclose most of them. No scientific research has ever been made by the Minister of Transport to find them out. No one seeks to discover what is the traffic density of maximum accident incidence, or the effect of the present driving seat position or of the plan of our street junctions, or of our very faulty rule of the road\*\* and of the footway, etc., etc.

Vehicles have persistently been regulated on the strength of guesses and assertions. The guesses are made by men of good will devoid of science. Their surmises are applied untested. Heterogeneous rules are imposed one on the top of another. None is supported by test, by reason or by proof. Each overlapping rule disguises the true effect of accidents of the preceding one. But all the rules remain in force, good or bad, and we learn nothing.

The recommendation of the present writer for a scientific research into accident causation on lines analogous to the research that had successfully solved accident problems for aircraft was turned down by the Minister concerned with a haughty: "We have no need of your laboratory scientists! "\*\*

The Minister who spoke those words was under a misapprehension. He had not realised that for discovering the cause of any one accident or of traffic accidents in general there was something better to be provided by modern science than the surmises of coroners, of policemen and of the witnesses in court trials. All these people are giving opinions, not data.

The coroner's view, however emphatic his talk, is irregular. His official function is solely to find the *cause of the death*. His verdict can find that it is due to an accident. He is not officially in a position to research scientifically or otherwise into the primary *cause of the accident*. He has the same quality as the next man to pontificate about accident causation in general, but that is a job for which neither his authority, his procedure, his equipment or his experience especially fits him.

### True Research into Causes.

Similarly the policeman's function is to enforce the law. That entitles him to seek out if anyone has broken the law. He is prone, and perhaps rightly

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\*\* There is no law to drive on the left side of any road in England! The law only envisages the case of meeting or overtaking. When that happens we are enjoined so to move that we overtake left hand to the right hand of the overtaken. When vehicles meet they must drive right hand to right hand.

\* Right Hon. L. Hore-Belisha, M.P.:

The present writer was Chairman for over 20 years of the Air Ministry's Research Sub-Committee for Investigating the Causes of Aircraft Accidents, above alluded to

prone, to interpret as his duty the discovery of who, among those involved in an accident is to blame. But this very tendency to assume that someone in the collision is to *blame* (even if he is to blame) is far removed indeed from the coldly neutral scientific viewpoint, without which no enquiry into the primary causation of accidents will ever be reliable or fruitful. A true research into causes must be able to go behind what might be seen where the colliding occurred or argued by those involved, and include all relevant data.\*\*

For example, neither the police officer nor the coroner has any quality, as such, to say whether the general road plan tends to intrude "through" traffic unnecessarily on to "service" traffic, or whether the road itself complies with the Transport Minister's own recommendations "483" or the like, yet both these have been shown to be frequent causes of accident—up to some 75 per cent. of the total.

A proper research must *inter alia* imperatively seek out whether the laws, rules, and circumstances within which our traffic moves do in fact provide or fail to provide the bare minimum condition to make *possible* for any group of human beings the safe driving or walking required by our modern economy. They most emphatically do not make it possible, as we shall see. Indeed, one Minister's blaming of the "human factor" of *all* road users is, in fact, an admission that it is impossible, to the whole British nation.

In no realm of movement—air, sea, road, rivers, lakes or canals—can traffic movement be co-ordinated or collisions eliminated by the regulation of one category only of the moving elements while others move at random. The thing is elementary. Safety lies in *all* units making their movements foreseeable to the others. Moreover, these movements must all be made to accord to some preordained code and that code must be well known to all. That principle need curtail no one's free travel from anywhere to anywhere else—indeed, it has been fully enforced for controlling all units moving on the sea or in the air. It has secured safety. It can be introduced on the roads. It may be awkward politically. It has been shirked. This shirking is a grave offence, with grave consequences.

The present great wartime increase of accidents is no more than a corroboration (elicited by the displacement of millions to new neighbourhoods where the local hazards are not so well known, and by the accentuation of general nervous tension by the war) that there is something fundamentally wrong underlying the traffic control methods we have relied on from the beginning.

#### A Faulty Theory.

These methods have remained incorrect because they have been the expression of a faulty theory—the *speed hog* theory. This may have seemed tenable 40 years ago, but the administration wrongly perseveres in regulations based on it. They have been enforced with the utmost rigour. They have been

\*\* Proof will be found in the painstaking investigations submitted to the Lords Select Committee 1938-39 by Mr. Bennett, County Surveyor of Oxfordshire; he enquired on the spot into the effect of road layout on a great number of accidents.



obeyed very widely and they have been attended by an uninterrupted series of ever-increasing failures. This official persistence is partly explained because the bad theory looks cheap to local authorities and to the Treasury. It does not involve road expenditure. It is also partly explained because it deals in accusations eminently suited to clap-trap politics. It may even be that these false imputations of blame against the motor users pander to a petty sense of jealousy among those (and they are a majority) who have no cars. However that may be, it has failed dismally. None the less, each downward fluctuation of the accident curve, be it but due to weather conditions, has been claimed as a success for the evil policy.

Incidentally to the official enquiries it has been possible to test the notion that the drivers' carelessness is the dominant cause. Among official enquiries the 1935 investigation (quoted above) has proved the ascription of road accidents to drivers' carelessness to be wrong.

That famous and erroneous theory takes the form: that the overwhelming cause of road accidents—the cause that must be legislated against to protect the walkers (who are supposed to cause no accidents because of their physical fragility) is the *carelessness of drivers each controlling a lethal weapon and rashly using speed when it is excessive*. This intemperate statement has been so sedulously promulgated and repeated that it has taken position as an established verity and is accepted by superficial people of all classes, including some unthinking motorists. Let us first examine the matter of care versus carelessness.

For this we cannot do better than compare man for man, or mile for mile, the relative carefulness of motor drivers (so far as it is shown by the records of fatalities) in contrast with, say, the best known and trusted among all other drivers regarding whom there exist official data. Locomotive drivers will readily be accepted as reasonably careful from their long training, their strict supervision and generally responsible behaviour. We have, of course, to remember that the difference of conditions, notably the more crowded highways and the relative numbers of vehicles on the roads and rails, precludes any absolute assessment.

It is found that the total of persons killed in one year (solely by the movement of locomotives and excluding trespassers and suicides) per locomotive was *nine times\** more than the number killed per motor vehicle in the same year. Considering the precautions with which the railroad tracks are fenced and guarded from intruders, with only tested employés allowed on the lines, in contrast with the *olla podrida* of vehicles, cattle, children, bicyclists and adult pedestrians (for the last of whom it is openly claimed that they have no duties and all rights to enter and to move as how and when they wish over the carriageway), this comparison is notably favourable to a deduction that motor drivers exercise a remarkable carefulness.

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\* The B.R.F. bulletin No. 25 gives 21,860 locomotives. They killed from movement alone 340 persons, or one for every 64 locomotives. The 2,938,485 automobiles killed one per 559 vehicles. The railway mileage run was 456 million. So that per million miles 0.7 persons were killed. The motoring mileage was 29,000 million giving per million miles four times less, viz., 0.18 persons.

The comparison would be favourable to them even if we disregarded the contrast between the crowding on the roads and the clearer railway lines.

If it be felt that it would be fairer not to limit our count to the number of drivers of vehicles but to incorporate the number of miles run in each case, this suggestion can be met. We have approximate data. The railway locomotives by their movement killed *four times* more than the motors per vehicle mile. Not only so, but the number killed by locomotive movement would be doubled if we included in the count against it (as is in effect included for motor vehicles on the road) suicides and trespassers.

These contrasted observations are not advanced as proofs. They are put forward as indications deserving of respect. None the less, the supposed "road hogs," or "speed hogs," have been so legislated against, on the strength of vague guesses, that the sting of the law's whip has fallen heavily and unfairly not on them only but on all the three millions of well-conducted British people who run our road transport.

The unsupported guesses about speed have been queried somewhere for we find that they were patiently enquired into for seven successive years by the Home Office (see fig 11). The data collected shattered the guesses. The latest police repudiation of the "road hog" theory was made in 1939 by the Home Office to the Select Committee of Lords on the Causation of Road Accidents, presided over by Lord Alness: "The road hog is an old bogey," said the Assistant Commissioner of Police. If that means anything it is that the *corpus vile* at which the scourging lash has been aimed for years is a will-o'-the-wisp. But the blows have been falling fast and furious, hurting everyone within range. They have not added to the sense of calm responsibility with which driving is undoubtedly performed by the steady minded average Englishman who would take endless trouble not to hurt a dog. They have obviously been totally ineffective in reducing accidents. Half that effort less spitefully and more thoughtfully directed against the real causes, would have achieved wonders.

#### **Dangers of "Movements in Spasms."**

Some rules, especially those that increase the total of emergencies encountered in any urban area (by augmenting the total of vehicle hours per day required to complete the day's distribution work in the day) have without doubt increased the general total of accidents, even when they have gained public favour by reducing them at the spots specially selected for protection. This aspect of enforcing unnecessary "hold-ups" on traffic (which results in both slow walking and slow—8 m.p.h. average—driving) has been strangely overlooked. Risks are also increased by the gratuitous accenting of movement in spasms, which constitute traps for pedestrians. They are also increased by the traffic retardation due to the slowness of road repair operations, for which it is rarely thought worth while to work overtime or on Saturdays or feast days.

#### **The Distribution of Accidents**

The published records of fatal accidents teach us more than to reject the

'road hog' supposition; they have shown that there is no cumulation whatever of these accidents upon the drivers who have had previous convictions or accidents (i.e., the persons who would presumably constitute the category "road hogs"). They have shown also that, even prior to the date when driving tests had been imposed, there was not any cumulation of accidents ascribable to inexperienced drivers. Indeed, if we define "inexperienced" as being persons who have been driving for less than six months in all, they were found to have had notably few, not 2 per cent. of the total. The reports have also shown that, thirdly the "drunk in charge" had an extremely small number.\*

All these numbers were so small that these three categories of accused drivers together were involved in less than a twentieth of the annual total—some-where about  $4\frac{1}{2}$  per cent. (and even these causers were not *blameworthy* causers save in a fraction of the instances for which they were "responsible"). The "accident prone" driver may exist, but he has never been proved to exist to any significant extent. Such a finding not only dissolves the "speed hog" and the "road hog" bogy into the nothingness of a vain imagining, but the mode of its dissolution dissipates any theory of a concentration of accidents among a selected group of supposed malignants. This is important. It is futile to rely on a continuous alertness greater than can be achieved by any human group of persons. Punishment certainly will not cure them of that for which they are not to blame.

It is only malignants who can be the proper addressees for punishments and persecutions! Under the present regime the accidents are inevitable by the large majority of those to whom they occur. What is inevitable by them involves them in no moral responsibility.

Let us next consider what is to be deduced from the fact that there is a distribution of these many accidents among the three million drivers. It was above suggested that by comparison with locomotive drivers the average motorist is extremely careful. How careful?

Year after year the official figures have disclosed that the extent to which the average motor driver has been involved in fatal accidents (we are not limiting the count to the blameworthy causers but including all to whom they were attributed, innocently or otherwise) is round about the astonishingly low rate of *one only per 400 years of driving*. (A year represents for each driver an average distance of about 12,000 miles.)

A similar calculation for the minor (or casualty) accidents shows that he is involved in a "casualty" only once in 13 years of driving. Such a proof of care is very creditable. The driving is the more praiseworthy that the conditions it is performed in are ultra severe. They mean that the driver has safely negotiated some 120 unforeseeable emergencies a year for 13 years with only one lapse, and these crises have been presented to him as an ever-varying hail of hazards. Let no one claim to be even an average safe driver till he has driven for 13 years, at 12,000 miles a year, with *no* minor accident.

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\* The term "drunk in charge" was quite unwarrantably extended to include a person who feeling himself overcome stopped his car by the road side in a safe place. Even if he then left the car with its occupants and moved away up to half a mile, he was and is still deemed to be "drunk in charge" of it.

### Some of the Hazards:—

Here are a few examples: Streets with pavements too narrow for their burden of pedestrians who unexpectedly overflow, footways blocked with shop-gazers or persons waiting for buses, people edged off the pavement or stepping off to overtake dawdlers or to catch buses or wandering diagonally among stopped vehicles in the carriageway, or stepping off the kerb with back turned to the nearest line of approaching vehicles, or crossing suddenly and blindly under the shelter of an umbrella in a wind, or pedestrians aggressively asserting their legal rights on the carriageway, or fatuous from the use of alcohol, or children under five suddenly toddling in with no responsible person in charge, other children dashing after a ball or skating or even playing set games on the carriageway, elders walking along roads without footways on the wrong side, others, having developed no habits of foreseeable (i.e., safe) procedure, drivers obliged to seek for unfindable street nameplates, or dazzled by lights which reasonable regulations could entirely remedy by polarisation, and, since the war, the distraction among all road users from nervous tension, especially understandable after siren warnings or due to being in new surroundings where the dangers are not expected, or because of sleepless nights, or under the shock of ruin or bereavement, etc., etc.

### Forty Million Roman Emperors at Large.

Underlying all this is the real vice of our road situation: utterly unthought-out and unco-ordinated regulations. If this vice had to be faced by those on the seas it would sink every ship that moves except only the last one that had nothing to collide with. It seems inconceivable that the movements of the overwhelming majority of those who use the road (viz., the pedestrians) have not been made determinate in forty years.

No habit has been inculcated that would allow the drivers to foresee what any pedestrian may suddenly do next or, indeed, at any moment whatever. The human walker, being a vertical animal, is the only traffic unit that neither moves in the direction of his length or in the way he faces. He needs help more than any other unit. There is no insuperable difficulty about devising a few rules of conduct that would eventually develop such habits in all walkers that they would be foreseen because they would be foreknown. . . . To-day, however, he meanders at will in total anarchy. He is the "complete Roman Emperor" with all rights, no duties and perpetual fears. It is often impossible to foresee whether he may go forward, stop, pivot, reverse, slow, stoop, zig-zag or run. Even when he knows his intention himself he guards the secret, to his own and others' peril.

For all that, the problem of road risks is not irreducible. There are two useful procedures: To improve the highway lay-out and to form the right habits in all highway users. (Both these have been discussed by the present writer in *The Autocar* of May 2nd and 9th, 1941.) Infallibility is not claimed for them. The first proposal is that we create, immediately after the war, not the 1937 Trunk roads scheme, but at a fraction of its cost) a backbone of motorways—some to circumscribe the larger towns and some to run in curves across country so as to

attract "through" motor traffic from the rest of the network. Continental records have shown a reduction of 83 per cent. of accidents for a given amount of transportation when taken by motorway. In addition to this, the removal of "through" vehicles from the ordinary network will restore to the other users of these roads a deal of space, safety and amenity.

The second safety instrument is more possible of application in wartime. It is to promulgate and explain by propaganda and subsequently to enforce certain regulations specifically designed to create a body of co-ordinated movement. This has been neglected though there are a few faulty rules of the kind for drivers only.

Pedestrians brought into the scheme would have no inconvenience to suffer, nothing to lose and an easy lesson to learn. No effort of memory is needed once a habit is formed and the habit is easy when all around practice it. It will not prevent their proceeding to any objective whatever, it will shorten the time of their urban journeys on foot. It will preclude walkers, (and also vehicles) from impeding and so retarding one another. The point gained will be that when all movements are foreseeable they will give rise to less emergencies and accidents. Walkers would be required to proceed on one particular side of any footway or carriageway without footway and to cross the streets in accordance with a simple formula now in the Highway Code (but not enforced in any way).

### The Rules of Safety at Sea

It is remarkable that no Transport Minister has ever suggested the thinking out of rules to which the categories of road users should respectively conform, not by a special remembering, but by mere habit so that each fell instinctively into a line of movement and procedure co-ordinated as between the various categories. When that has been arranged any beginning of a departure from the ordained line by anybody would be notable. Thereupon any departure being foreseen would not give rise to a traffic emergency. If in spite of this an emergency were to arise, the potential colliding units will each have, as a habit, a mode of evasion pre-known to his *vis a vis* so that they shall not take convergent paths.

All this is neither more nor less than the principle on which seagoing craft have avoided collisions for years. The reason they avoid each other is not that they have more space at sea, but because they have more orderly habits at sea.

The Transport Ministry is clearly aware of the usefulness of making movement foreseeable, for they have long ago stipulated that motor drivers shall employ a safety habit of that order, viz., hand signals. Since three million of His Majesty's lieges (the motor drivers) can without difficulty be ordered to form that simple habit for the sake of traffic safety, such an example disposes of the claim of the Ministry's spokesman (Colonel Llewellyn, M.P., Oct., 1941, in the House), that to order another group who are not an organised revolutionary body) to perform an even simpler act "*offers insuperable difficulties.*" The difficulty is entirely official. It may be asserted, without the possibility of controversion that unless and until appropriate and co-related habits are developed and imposed on all the units that move by road safe traffic cannot reasonably be expected. It *will not be obtained!*

From published figures it appears that the drivers in the streets of large towns (in most cases at the slow average speeds determined by congestion rather than by any legal limit) are those who, among drivers, are involved in most fatalities. This is neither because of the urban speed limits nor in spite of the speed limits. The majority of these accidents have been recorded to have occurred when the vehicles had not exceeded speeds much slower than the legal one. Their speeds had no doubt been slow because the whole crowded street full was moving slowly and hence no elaborate measurement has been required to ascertain the approximate rate.

Thus, in the London area the majority (58 per cent.) of fatal accidents were recorded at speeds which were undoubtedly between zero and 10 m.p.h. That is very informative. Even more instructive is the fact that between 39 per cent. and 21 per cent. of the total of fatal accidents were related to vehicle speeds that had not exceeded 5 miles an hour—say walking pace!—and walking pace is one about which police witnesses and other observers could scarcely be much mistaken. At the other end of the scale speeds of over 20 m.p.h. stand out differently. Not 4.5 per cent. of the fatal accidents were related to any of *all* the possible speeds from 20 m.p.h. upwards. These are the official records for seven years for the whole area of Greater London. Graphs of these Home Office records collected every year for the 7 years are analogous to one another year after year (see fig II).

This constancy of the trend of the graphs gives an irrefutable corroboration of the general integrity of this evidence (collected by the Police) as to speeds. Moreover, the slowness of the speeds is less surprising when we realise that the average speed across London is only about 8 m.p.h.

#### Who's to Blame?

If these data and the observations in the present article cause an inquirer to ask, "Who was it, then, that failed in his duty?" "Whose was the neglect that tolerated for 40 years conditions of traffic that are unreasonably unsafe?" Who failed to inculcate instinctive safe habits in the walking population among whom the average of motor driving is to be performed? He will arrive at a remarkable conclusion. The responsibility for these accidents must be shifted from the shoulders of the maligned motorists and from the "human factor" of all the road users, bicyclists, pedestrians, drivers, etc., in fact the whole nation. It falls heavily and unmistakably upon the very human failing of more exalted delinquents—none other than the Ministers of Transport concerned.

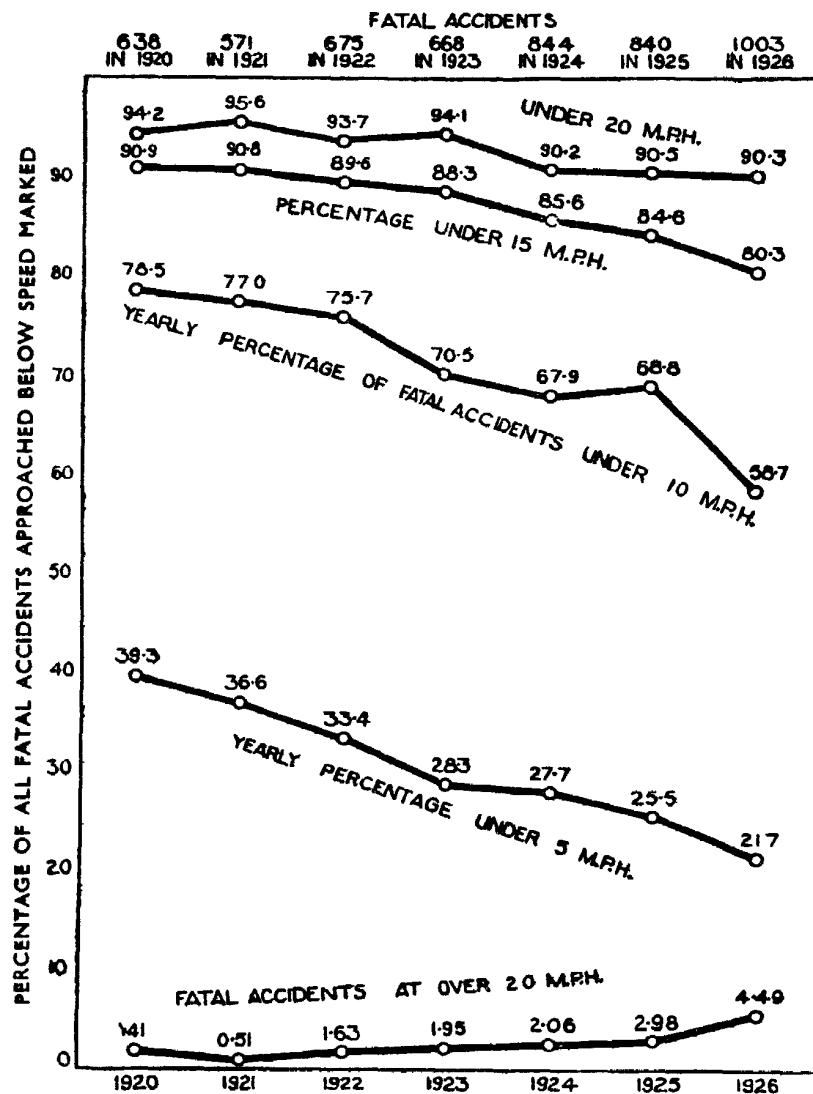
Of these Ministers we have had no less than 15 in 22 years. Their excuse is that they never stay in office long enough to learn their job! or to appreciate the ghastly effects of their own very human factor-weakness.

They are presumably aware of the anarchy that reigns on the road, for one of them publicly (and deplorably) reminded pedestrians of their time-honoured anarchy—their right to enter and move upon the carriageway as when, how and where they wished. Their right is undoubtedly time honoured. So is flattery and ineptitude among political climbers—more's the pity!

# SPEED OF VEHICLES (INCLUDING CYCLES) IN FATAL ACCIDENTS IN METROPOLITAN POLICE AREA, LONDON

Year	Total Fatalities in Year	1 to 5 miles p.h.		All under 5 m.p.h.		5 to 10 m.p.h.		All under 10 m.p.h.		10 to 15 m.p.h.		All under 15		15 to 20 m.p.h.		All under 20 m.p.h.		20 and over m.p.h.		Un- known		Stationary Vehicle	
		Fatalities in Year	Per cent of Year's Total	Fatalities in Year	Per cent of Year's Total	Fatalities in Year	Per cent of Year's Total	Fatalities in Year	Per cent of Year's Total	Fatalities in Year	Per cent of Year's Total	Fatalities in Year	Per cent of Year's Total	Fatalities in Year	Per cent of Year's Total	Fatalities in Year	Per cent of Year's Total	Fatalities in Year	Per cent of Year's Total	Fatalities in Year	Per cent of Year's Total	Fatalities in Year	Per cent of Year's Total
1920	638	246	38.87	250	39.19	78.53	79	12.38	90.91	21	3.29	94.20	9	1.41	28	3	0.47						
1921	571	204	35.73	231	40.45	77.06	79	13.83	90.89	27	4.73	95.62	3	0.53	22	5	0.88						
1922	675	219	32.44	285	42.22	75.70	94	13.93	89.63	28	4.15	93.78	11	1.63	31	7	1.04						
1923	668	185	27.69	282	42.22	70.51	119	17.81	88.32	39	5.84	94.16	13	1.95	26	4	0.60						
1924	844	227	26.90	339	40.17	67.90	150	17.77	85.67	39	4.62	90.29	17	2.01	65	7	0.83						
1925	840	206	24.53	364	43.33	68.88	132	15.72	84.60	50	5.96	90.56	25	2.98	57	6	0.72						
1926	1,003	208	20.74	366	36.49	58.23	221	22.03	80.26	98	9.77	90.03	45	4.49	55	10	1.00						

It was after a searching inquiry into the above records the London and Home Counties Traffic Committee under the Chairmanship of Sir Henry Maybury reported "A careful examination of the records of street fatalities during recent years clearly indicates that there is an intimate connection between street accidents and traffic congestion"



**Fig II.** Speeds at which vehicles involved in Greater London accidents have been travelling at the time, showing the fallacy of the "Road Hog" bogy.



The pedestrian's intended movement has been allowed to remain unforeseeable with the tacit consent of the authorities concerned (the Minister of Transport and the Home Secretary), and he is not even held to make his presence visible after dark when on the carriageway. Even to-day, with the black-out upon us, *no one* is obliged to wear a white sash when in unlighted roads!

The talks of various Ministers have shown that they are aware of this danger of the black-out, but they refrain from imposing the obvious and easy rule of safety. Why?\* Till war broke out the same weak-kneed policy applied to the bicyclist, who was allowed on the carriageway unregistered, without a brake and totally invisible in the dark to the overtaker. Why?

Even the use of hand signals is rarely if ever enforced on the bicyclist. In the latter case there is some reason. Hand signals are at times awkward for the bicyclist to perform and this may be an excuse for the fact that he often gives them at such a moment or in such a way as to be derisory. But no Minister intervenes to devise an easier signal for him. Nothing is done. Not one mile of the road in a thousand gives him the protection of a cycle track. Where there is a cycle track he is not required to utilise it. Yet he habitually overtakes vehicles on the wrong side at any traffic hold-up. If he causes a collision and cycles off, his name and address cannot legally be obtained by the persons he has imperilled or even by a policeman. No one intervenes. This is but one example of countless ineptitudes. A change from anarchy to order is what is wanted, not "take care" propaganda. Such propaganda is a *suggestio falsi*—a shelter for the responsible authorities with whom it is highly popular.

An intense publicity campaign will be urgently wanted to instill the new habits of foreseeable conduct, but till those new safe habits have been decided upon, and co-ordinated as between the traffic categories the present publicity ramp is little more than a device for instilling the notion that the blame lies with everybody but the authority responsible. It is bad. It pre-supposes that there is a remedy, in extra care, but it omits the one and only way in which extra care can be exercised—namely, ensuring the foreseeableness of all road users' movements through safe habits unconsciously practiced by all and pre-known to all. For this an Act of Parliament is urgently needed now.

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\* Colonel Llewellyn, M.P., for the Transport Ministry, told the House that the enforcement of such an order "would present insuperable difficulties." He made no suggestion of beginning with widespread propaganda. Nor indicated who would raise these difficulties! Was it in the Home Office? A sash is much better than an arm band because the arm band is above the beam of the regulations headlights—and moreover, is often obscured by a neighbouring walker. The sash has neither of these objections. The light coloured stockings of a woman are a help in so far as they reveal the pedestrians' direction of movement.

## SUMMARY

1. Roads and streets perennially congested (while most of their length is empty), a yearly growth of fatal accidents (gravely accelerated by the neurosis induced by the war), together suggest that neither the road plan nor our traffic laws fulfil their function.

2. No quest for the prime cause of accidents has ever been genuine. To-day it has got reduced to emphatic assertions unverified. Scientific research is required. Official self-sufficiency refuses such aid. Why?

3. Accidents are 87 per cent. collisions. Forty years ago the one novel factor (the speed of motorists) was surmised to be the chief cause of collisions. That seemed obvious at the time. It was an error; but what has once seemed obvious—like any other superstition—dies hard.

4. Hence traffic control and road plans have been dominated by the notion that speed is an evil to be prevented, instead of a service to be safely developed.

5. This early abuse of all motorists was later adjusted. The chief cause was next surmised to be "those who used speed where the circumstances might be presumed" (by the local policeman) to render such speed dangerous.

6. The police often found, however, that the danger could not be proved in court, especially in the cases where it did not exist. So the 20 m.p.h. general speed limit was activated in order (as the police told a Royal Commission) to *facilitate obtaining convictions*! Undoubtedly a measureable quantity like speed is easier to prove than danger, which is an evanescent condition of personal appreciation.

7. Thus convictions became an objective! The averting of danger was abandoned for the preventing of speed. In support of this the safest routes were chosen for police traps.

8. Such penalizing of innocuous transport called for an excuse. A new supposition was launched. It was that the chief causers of accidents were malignants called "road hog motorists." On this supposition the 20 mile speed limit was maintained as a means of catching them. They were an illusion; but the 20-mile limit lasted for over 30 years till 1930.

9. Trapping activities deflected attention from the necessity to cause all traffic units on the road to reveal in advance their intended next movement (in imitation of the effective rules for safe navigation at sea). Accidents continued to grow.

10. Police doubts as to the "road hog theory" arose. Analysis of fatal accidents records showed that the drivers involved in accidents were in 98 per cent. of cases, persons who were not road hogs, i.e., they had never had any previous accident or any conviction for any offence, technical or other, however small. The theory tottered.

11. There was, moreover, no cumulation of these accidents in any group. Those caused by "drunks in charge," those by "inexperienced" drivers (defined as having less than six months' driving), and those by "road hogs," so called, were separately counted. These were so few that all these categories together did not cause  $4\frac{1}{2}$  per cent. of the total.

12. The "road hog," or "speed hog," was officially repudiated as "an old boggy," but speed traps were kept going. The Nation's transport was needlessly bottle necked, but the police got convictions more easily.

13. The distributed incidence of accidents among three million drivers showed that one minor (casualty) accident befell the average driver only once in each 13 years of driving. (For a fatal accident the period would be 400 years.)

14. Considering the chaotic state of the roads (through the absence of any guiding regulations to co-ordinate the habits of the various categories of traffic) the above results proved that remarkable carefulness was being exercised by drivers. But speed traps continued and so did accidents.

15. The carefulness of drivers probably touches the limit of what is possible from concentrated care for any large body of human beings. No scientific inquiry to prove or disprove this vital datum is instituted.

16. There may be official reasons. If no road user category can plausibly be accused of carelessness, on whom could the onus of the "toll of the roads" fall other than the administration? The neglect to modernize the road plan might be shown up. The absence of any guidance for the proper conduct of the vast majority of road users (pedestrians) might be disclosed.

17. The difficulty was dodged. The Minister bethought him to blame the "human factor" of cyclists—in plain English, the carelessness of 10,000,000 pedal bicyclists. This numerous group of voters, however, reacted, refused to use cycle tracks or rear lights or to be registered, and nothing further has been heard even of obliging them to carry an effective brake. Another scapegoat had to be found.

18. Rightly or wrongly, pedestrians are supposed willing to die by the thousand rather than be induced to such simple safe habits as keeping to the left of the footway or wearing a white sash. Accordingly, the nimble Minister impunged "the human factor" (blessed euphemism) of all road users. He made one comprehensive charge against the whole Nation. In brief, all the regiment was out of step except only "our Leslie."

19. This accusation was pressed home: £5,000 was paid for "Take Care!" propaganda in bulk. No one knows how to "take care," but the cry sounds protective. Above all, it has the supreme merit of implying that the responsibility is everybody's but the Minister's.

20. Reforms of two kinds present themselves. (A) *Structural*: By a post-war road plan of motorways, while the myriad "danger" signs and congested places should be abolished by removing the dangers. (B) *Habits*: By the development of safe habits specific to each category of road users, co-related to those of all other road users and analogous to the usages of navigation at sea.

21. All moving units must be induced, first by propaganda, then by warnings and eventually by mandatory rules, to form such habits that their movements (and their next intended movement) are instinctively made and continuously disclosed to other nearby road users.

22. By such a scheme alone can the millions of unforeseeable emergencies that all categories of road users are called on to negotiate be reduced to tolerable numbers. By such habits will the startled pair who find themselves in danger

of impact instinctively re-act to a pre-ordained course which leads them apart and not into collision..

23. This is not impossible or indeed difficult. The large majority of men are of good-will; but with children and erratic or tipsy persons there will always remain an irreducible residue. Perfection is unattainable. But we require a courageous politician like Walter Long, who muzzled the dogs and extirpated hydrophobia. He will risk his popularity, but he will save most of 300,000 casualties a year—and history will bless him.

## SPEED AND ACCIDENTS

24. In towns, vehicles move at a slow average speed by reason of the traffic density, the hold-ups the accidents the traffic lights, the ill-placed central refuges, the pedestrian crossings, the erratic pedestrians, the lack of street name plates, the sharp pavement corners (which cause side-street traffic to intrude across the path of main traffic), the sluggish road repairs, and the general bad road lay-out.

25. Each of these increase the total period of unnecessary opportunities when pedestrians are exposed to the risk of collision and hence to more accidents.

26. The average London speed is about 8 m.p.h. The urban speed limit of 30 m.p.h. (and 20 m.p.h. in the blackout) chiefly affects streets that are clear of traffic and crowds. These speed limits have no influence on safety. The number of accidents has been found intimately related to the congestions (see Report, 61434-12) and not to the clearer streets or to the speeds therein.

27. Accidents go up when crowding increases, e.g., at the morning and evening crowded hours, that is when the speeds go down. Accidents decrease daily when the roads clear, i.e., when speeds are better.

28. Contrary to uninformed opinion (Hansard 21.10.1941), there are more accidents per square mile in the crowded City of London than in the London districts with clearer streets and better speed.

29. The large majority of the country's moving units are in towns; so also are the large majority of accidents; so also are the large majority of the population (85 per cent.), and of pedestrians and vehicles.

30. Official inquiry (1935) shows that the traffic category "pedestrian" provides the most numerous responsible causers of accidents, viz., double the number caused by drivers, and three times the number caused by cyclists.

31. It is not suggested that these "responsible causers" (officially so described) are usually *blameworthy* causers. They certainly are not the prime cause of their accidents. The onus is elsewhere.

32. In Greater London, high vehicle speeds occupy a far smaller place in the records of fatal accidents than do the low speeds. Speeds not exceeding walking pace (say, 5 m.p.h.) have a six times larger list than all speeds above 20 m.p.h.

33. In less than 4½ per cent. of these fatal accidents had the vehicles exceeded 20 m.p.h.

In 58 " " " 10 m.p.h.

In 30	"	"	"	10 m.p.h.
In 80	"	"	"	15 m.p.h.

34. There is other corroboration. During four years, starting at 1930, speed limits (urban or general) were abolished. It became a test case. This was the first and only legislative Act to be attended by a *decline* in the curve of fatal accidents in which motors were involved. The curve had been rising for 30 years to a peak of 6.222. The reduction was from 6.222 to 5.608 in the first year of no limits. Between 1930 and 1934 the number never exceeded 5,765 per annum. Yet the number of vehicles registered continued to increase by 200,000 during those four years.

35. In spite of this and without proof, evidence, statistics or logical basis, there are those who say in 1941 (see Hansard, 25.2.1941), "If speeds were reduced all over the country to 20 m.p.h. . . . accidents would be reduced to an enormous extent." All the available evidence contradicts this. It is deplorable that no scientific research is made to clarify a datum so vital to the whole Nation.

36. This mere guess has been repeated for 40 years as if it were an established verity. The same uninformed group widely publicises the undoubted legal right of pedestrians to enter and move on the carriageway in complete anarchy as when and how they will.

37. Gratuitously to impress on the public mind this archaic and dangerous state of the law that needs repeal (be it only in the interests of children and infirm old people), is a perverse act.

38. Such publicity is an incentive to the individual self-assertiveness which will create collisions in any traffic however slow in any medium whatever.

39. Moreover, it creates antagonism to the only known method by which safe traffic movement can be sought, viz., the principle that sailors call "Show your helm."

40. When Parliament shall have accepted this as a guiding principle for *all* units on the highways it will be time to expose the details which will make this both an easy and convenient path to safety.