



Part Three

Case studies

9.

“Sorry mate...” The conspicuity con

VOLUNTARY TESTING and police surveys indicate that up to two million drivers in the UK would not meet the eyesight standard laid down by the current driving test. In spite of this astonishing figure, the road safety lobby continues to ignore the motorists' own backyard when it comes to apportioning blame for the high number of accidents which are passed off with the phrase “sorry mate... I didn't see you”.



A central focus of “road safety” campaigns and legislation has been the visibility of road users and objects in the road environment. Moving about without getting into collisions must include an element of seeing and being seen; but how vision fits into associated mental and behavioural processes — what “seeing” means in its full sense — is a more complex issue. So, too, is the question of what groups of road user are to be responsible for “being seen”. As lighting on the road, and of vehicles, improves, we also have to consider adaptation of road user behaviour. This can mean the safety benefit being absorbed as a performance benefit by motorists so that they use less attentiveness, higher speeds, and so on.

The issue of visibility, like so many others, involves questions of the power and freedom of different road user groups. Its discussion by the road safety lobby, legislators and manufacturers has been an expression of these different interests and has strengthened the power of dangerous road users against vulnerable ones.

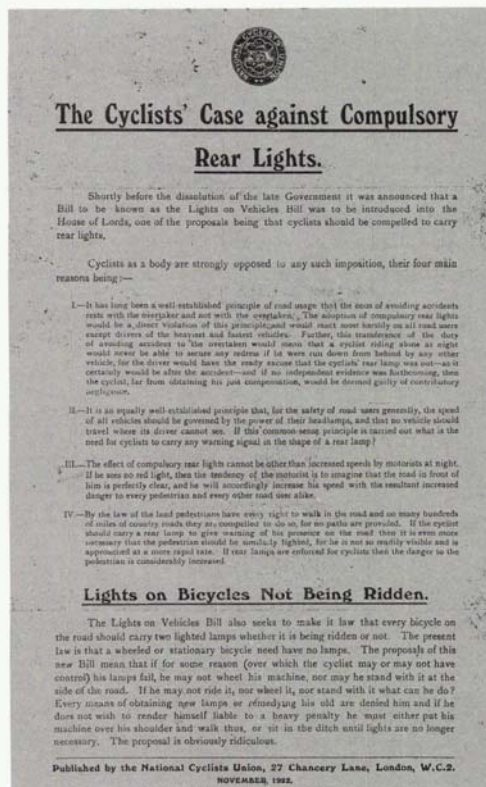
DEATH ON THE STREETS

The efforts of the road safety lobby have been marked by absent or inadequate evidence, the influence of manufacturer pressure and a view of the problem which has confused understanding and diverted attention away from basic issues.

A brief history

Pressure for vehicles to carry lights existed in the nineteenth century, and after lobbying by groups including the Cyclists' Touring Club, the Lights on Vehicles Act 1907 compelled every vehicle to carry a white light at the front at night.¹ Emergency regulations during the First World War (later repealed) required cyclists to show a red rear light as well. From that time on till the Road Transport Lighting (Cycles) Act 1945, the cycling organisations opposed the need for cyclists to have compulsory rear lights. The grounds for opposition were that:

- ≡ The principle of road usage had been to place the onus of responsibility on the overtaker, and this was being reversed in favour of the "heaviest and fastest" vehicles — the opposite of the nautical principle of sail before steam.²
- ≡ The principle of driving had been for motorists' speed to be governed by the power of their headlamps. Pandering to the unwillingness of motorists to accept this principle — now expressed in Rule 50 of the Highway Code — was bad practice when there was a need to encourage correct behaviour, and would lead to higher speeds.
- ≡ These higher speeds, and/or less alertness on the part of the motorist expecting to watch out for lights, would lead to disastrous consequences for unilluminated pedestrians and those cyclists whose lights had failed through no fault of their own.³



9. "SORRY MATE..." THE CONSPICUITY CON

It now seems that the concerns on which this opposition was based were well founded. Some 70 years later, cyclists still complain about the unavailability of cheap and reliable lights and the inability to prove that lights smashed in a collision were functioning. More powerful car and street lights are accompanied by higher speeds, widespread breaking of Paragraph 50 of the Highway Code and a general increase in danger from cars. Cyclists and motorcyclists are pressured to use reflective and fluorescent clothing and other supposed conspicuity aids. The main legislative thrust has been towards daytime motorcycle headlamp use.

The appeal to pedestrians has been more recent, although the 1970s saw the "Wear Something Light at Night" campaign (before widespread availability of reflective materials), which included advice to walkers to carry folded newspapers at night. The winter months typically see a national campaign mounted by the Department of Transport. The 1989 campaign had some characteristic features: support from the manufacturers of "conspicuity aids" (3M); a victim-blaming attitude towards vulnerable road users who failed to wear something reflective or fluorescent at night and during the day (called "dimwits"); an assumption of equal responsibility between motorist and the vulnerable (although most of the effort is directed at the vulnerable); and neglect of legal requirements for motorist eyesight, with advice to them instead to be more alert. Hard evidence as to the benefits of the adoption of such attempts to "be seen" was absent.

The business of "seeing"

When people talk about "seeing" they refer to a lot more than the process of receiving light from an object on the retina of their eyes. Seeing involves making sense of, and understanding, or perceiving, the image, and relating it to the correct programme of behaviour. Images do not just fall on a blank mental screen, but fit into preconceived ideas about the status of the person or object they signify. On the road, these involve ideas about how different road users should be reacted to. Also involved is an *active* element of watchfulness and the willingness to be aware of the different possible road users who may be around the next corner.

Being prepared to take the physical steps to look for these objects or people involves having adequate eyesight, looking in the right directions, leaving enough time to register the image, and so on. It also involves knowing how to react, and an initial willingness to react properly. After all, there are none so blind as those who will not see.

A. The ability to see

Evidence on the physical ability to see comes from voluntary tests taken by motorists, and surveys by traffic police. They indicate that between one and two million motorists cannot pass the existing eyesight test.⁴ In one spot check, Devon and Cornwall police are reported as finding that the driver of a packed 53-seat coach was nearly blind; he informed them that he "suffered from terrible headaches", and was advised to seek treatment.⁵ The eyesight test dates from pre-war

DEATH ON THE STREETS

times. It can be passed by some people registered as blind,⁶ and has been criticised by the Association of Optometrists for not being scientifically based.⁷ Little or no study has been made of factors such as unrestricted head movement or the psychomotor skills which dictate how the body deals with mental reactions. New evidence suggests that one in five drivers suffer from low luminance myopia or “night blindness”.⁸

The official attitude has been to recommend that a right of appeal should be introduced for drivers who fail the present eyesight test.⁹ The Guild of Experienced Motorists, supposedly concerned at what they estimate as one million motorists incapable of meeting the current standards, gives free roadside eyesight tests — on the basis that police will not be informed of negative results.¹⁰ A leading member of the road safety lobby can suddenly become an advocate for the theory of risk compensation:

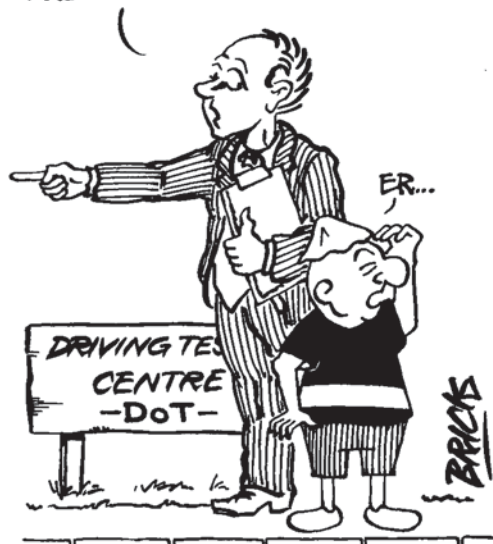
“deteriorating eyesight is not a significant factor in the cause of road accidents... People don’t willingly put themselves in danger. They automatically compensate for their poor vision.”¹¹

More important, the DTp has taken the approach that it is not the inadequacy of eyesight which counts, but the willingness of motorists to use their eyes.¹² This is an excellent example of a good argument being used for a bad cause, namely to avoid performing simple controls, such as eyesight tests after accidents, or other checks. It is also thoroughly hypocritical, as no real effort is made to achieve such willingness — and in fact most official effort effectively leads to *discouraging* it.

B. Observation

The next stage in the process of “seeing” is using visual ability to observe what is, or may be, in the road environment. Material instructing people to drive properly stresses the importance of “seeing” that is not simply ‘looking’.¹³ It calls for *active* visual work: “making your eyes work” — an “acute sense of observation” that “requires intense concentration”. This involves such details as the

CAN YOU READ THE
REGISTRATION
ON THE THIRD CAR
FROM THE



facial expression of other motorists, whether parked vehicles are empty, the position of pedestrians' feet and how other motorists hold the steering wheel.¹⁴ It also involves anticipating road users who may not have emerged into the road environment, and all-round awareness far ahead.

Advanced driver training involves advice to change focal point at least every two seconds.¹⁵ Willingness to anticipate visual signals — to *watch out* — is crucial. Research shows a major difference between the conspicuity of objects, such as road signs, which are searched for by motorists (search conspicuity) and those which have to catch their attention (attention conspicuity). Conspicuity in the former case is far higher.¹⁶

C. Acting appropriately


Paragraph 50 of the Highway Code states: "Never drive so fast that you cannot stop well within the distance you can see to be clear." Unless the instruction to match speed with vision is adhered to, there is no point having adequate visual ability or looking out for other people or objects. The same applies to the possession of driving skills, and the willingness to use them at all times, in general.

In context, then, the visual signals emitted by road users and objects in the road environment are a small part of the process of seeing. The process is not reducible to any one of its parts. Observation involves physical abilities such as the ability to move the head easily, and being able to respond in time to images depends on driver speed. What emerges is the importance of the active factor — the willingness to watch out determines the whole process. Even with a physical inadequacy, the determination to see others with adequate time to react properly would lead motorists to try and compensate by driving more slowly and with more general care. Where the physical defect cannot be compensated for,¹⁷ one would expect a commitment for enforced testing and eyesight checks. While this willingness is absent, pressure on the vulnerable to "be seen" misses out on the central parts of this process and on the *determining* element.

This again raises the issue of something not just failing to address a problem, but making it worse by diverting resources and consciousness away from what needs to be done. On top of this, accustoming motorists to easier conditions can reduce alertness and make it easier to justify unwillingness to see.

Safety benefits consumed as performance benefits to increase motor danger

Consider the wording of an advertisement for 3M's reflective sheeting. It accompanies a photograph of a fatigued, elderly driver with half-closed eyes. The text refers to "drivers who are fatigued, suffering from poor night vision and those affected by age" and is headed: "He's tired, having trouble seeing, it's dark and starting to rain — his journey home could be a nightmare." This is basically encouraging people to break the Highway Code, or is at the least, collusion with




He's tired, having trouble seeing, it's dark and starting to rain — his journey home could be a nightmare.

He's going to need clear roadside information in a form which he can quickly recognise, understand and act upon — in good time. By day or at night. With this in mind, 3M has developed Diamond Grade 'Scotchlite' reflective sheeting for all types of drivers — and road signs.

For drivers who are fatigued, suffering from poor night vision and those affected by age — for signs mounted on the right or overhead, Diamond Grade provides the high performance, bright solution.

Diamond Grade 'Scotchlite' reflective sheeting.

- Colours Sign identifying colours seen and recognised from further away.
- Response Time Readily visible signs add seconds to the response times.
- Brightness Effectively compete with complex and high ambient light backgrounds.
- Performance Levels of brightness that reach further down the road.
- Angularity Signs easily visible even when not directly in the headlight beam.



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TRAFFIC MANAGEMENT

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It sounds like this driver's journey could be a nightmare for other road users as well. A well marked route could increase his speed.

or rather low, visibility reduces the chances of pedestrians dying when they have been involved in a collision with a motor vehicle.²⁰

People see largely what they want to see. If emphasis on one part of the process of seeing results in unwillingness to tackle the more important aspects, the result could be no overall benefit, or even a disbenefit. This might be why there is little or no evidence as to the benefit of attempts to make road users more conspicuous.

The evidence

(i) Motorcyclists

Pressure on motorcyclists to have daytime lights, including legal compulsion, has been a preoccupation of the road safety lobby since the early 1960's. There is, however, no conclusive evidence for the benefits of daytime headlights legislation for motorcyclists.²¹ Extrapolation from experimental studies fails, as with the use

those who do.

Easier visibility can generate higher speeds. The modern highway engineer's concern with long sight lines has led to the problems associated with motorways and similar types of road.¹⁸

The installation of reflector posts on roadsides in Finland "to increase optical guidance and help drivers to foresee the road alignment so that they can prepare themselves for the driving tasks ahead" and "to promote traffic safety" was recently studied. On one type of road there was no change in the accident rate. On the other: "the reflector posts increased driving speeds in darkness by 5 kph... [and]... increased the number of injury accidents by 43 per cent and all accidents by 20 per cent. Accidents in darkness increased most."¹⁹

The converse is also true: the research shows that "bad",



Road fatalities in Britain

1938	6,648
1939	8,272
1940	8,609
1941	9,169
1942	6,926

A white-coated policeman shining his red torch to enforce the 20 mph speed limit during the blackout

The massive increase in road deaths in 1939 is often attributed to the blackout conditions, along with the influx of novice and overseas service personnel drivers. In fact, the increase in economic activity during the war may be more relevant. Policing of motorists was increased in 1942, but a more likely cause of the decrease—a 23 per cent drop in car, bus and lorry occupant deaths—is that motorists were quite capable of driving more safely in very dark conditions, but had to have the experience and incentive to do so.

of other safety aids, to consider how a change in the use of motorcycle lights might not result in less likelihood of crashes.²² The possibilities of motorists looking for lights instead of motorcycles or of risk compensation by motorcyclists themselves being less careful, are not considered.

The real issues of motorcycle safety — the danger posed to vulnerable road users by motorcyclists, and the fault of motorists in the majority of accidents involving other vehicles — are ignored, just as they are with the helmet issue.²³ It is easier to compel motorcyclists to do something which has no proven benefit than to consider important questions relating to more powerful road user groups.

A US motorcycle researcher counted the number of “violations” (the number of times motorists carried out manoeuvres which impinged on his right of way and could have been defined as traffic offences) over three 30 day periods on the same route at the same time of day. In the first period he wore normal motorcycle clothing without reflective gear or the headlight on. In the second he had the headlight on, and in the third used reflective clothing and had the headlight on. The three periods scored 1.9, 1.8 and 2 violations per day respectively. During a fourth period of 14 days the experiment was continued with *no* violations recorded at all — he was dressed to resemble a police motorcyclist! (This survey uses a small sample of incidents and is highly subjective, but nevertheless instructive.)²⁴

A major piece of research in Britain gives an unwitting example of the difference between search and attention conspicuity.²⁵ In the pilot test, the subject was tested for his ability to notice motorcycles with and without daytime lights after first being informed of the purpose of the study. Once aware of the purposes of the experiment, he had no problems in noticing all the motorcycles whether or not they used daytime lights.

(ii) Cyclists

In Britain the evidence available for the effects of conspicuous cyclist clothing is based on experiments where distances left by vehicles overtaking cyclists,²⁶ and the earliest point that a subject wearing different amounts and kinds of high-visibility clothing could be seen by observers,²⁷ were measured. These experiments found that passing distances left by overtaking motorists increased with spacers or full-sleeved jackets made out of high-visibility material, but the effect of clothing which was less bright (that is, without full sleeves, which cyclists could not be expected to wear in summer) was minimal. There is a criticism that the conditions in which the experiments were done were not fully representative of conditions which cyclists might find elsewhere; more important, that giving inadequate overtaking distance may be due more to misjudging distance rather than to the lack of conspicuity of the cyclist (as seen by considering the significance of the use of spacers in the experiment).²⁸ Then, as the report noted, drivers allow different overtaking distances in different conditions: the real determinant of whether cyclists would be given a wide berth or not was the width of the road. This backs up what many cyclists feel, namely that motorists know what behaviour they

should engage in irrespective of the clothing worn by cyclists, but frequently are simply unwilling to engage in it. Finally, because not more than about one in ten of all cycling accidents involve motorists overtaking, such experiments are of limited relevance.

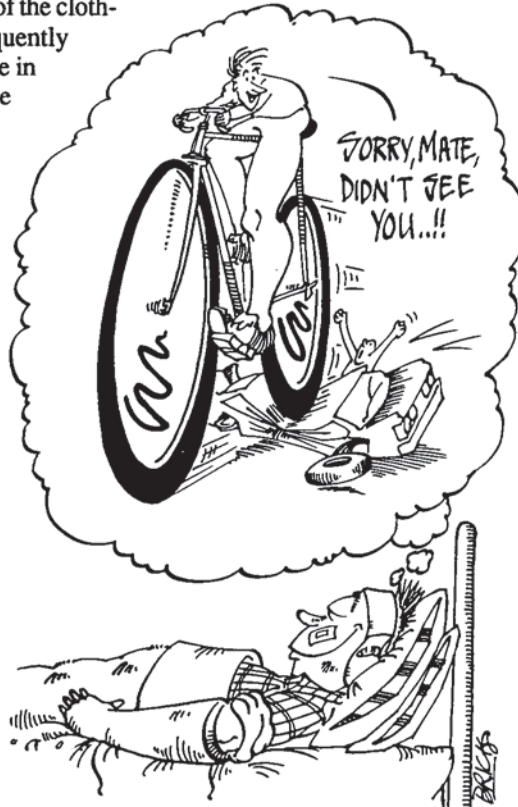
As the Department of Transport itself admitted when questioned specifically on evidence from actual accidents:

It is true that we do not have accident data which shows specifically that conspicuity aids — eg, lights and reflectors, bright and reflective clothing — minimise the number of road accidents involving pedal cyclists.²⁹

Even the obvious danger of not using a functioning rear light figures rather less in reality than is suggested by the frequent citing of this

behaviour as a major "cycle safety" problem. Only some 15 per cent of cycling accidents occur in the dark.³⁰ Allowing for a significant proportion of cyclists not having functioning rear lights (say, 25 per cent), and a doubling of the chances of being in a crash when not using a rear light, we would still have a cause affecting not more than 7.0 per cent of cycling accidents. And since a minority of cycling accidents involve being run into from behind, it is unlikely that the figure could be anything like as high as this. Other variables would have to be considered as well. More interesting is the old question raised by the cycling groups 60 years ago — the extent to which the absence of a rear light should be seen as the "cause" anyway. If motorists are watching out for unlit pedestrians on built-up roads (which are lit at night) where most cycling accidents occur, a cyclist moving away from them should not pose much of a "seeing" problem anyway.

Even this may be allowing too much importance to the lights question. Research material from the Continent indicates that the beneficial effect of lights is dubious.³¹ In a study of the presence or absence of bicycle lamps in night-time



accidents in Copenhagen, some 14 per cent of accidents involved non-light users. Leaving aside questions of whether this could have been a contributory factor — whether people without lights ride worse, whether it was not the cyclist's fault, and so on — it emerges that the proportion of cyclists without lights was *higher* than the proportion of cyclists in accidents without lights. The implication is that the absence of lights leads to cyclists being more careful, and/or that on brightly lit streets cycle lights are irrelevant. This is backed up by a report for Avon County Council which indicated that defective lighting was a contributory factor in some 9.0 per cent of all accidents in the dark, just one per cent of total accidents, with about one in three bicycles in the area having defective lighting.³²

Much of the failure of conspicuity aids to reduce cyclist casualties is summarised by a voice of (partial) dissidence from within the road safety establishment. Describing their contribution as "limited", the long-serving national cycling officer of RoSPA, Howard Boyd, stated: "[A] highly successful campaign [to wear very visible clothing] would not make a great impact on cyclist accident figures... the author's view is that widespread use of any of the [conspicuity] aids would not have much effect on the annual total of cycling deaths."³³ Boyd points out that campaigns urging the use of such aids are "too easy" to mount because of the pressure of manufacturers and the ease of placing the onus on a group which is physically, politically and ideologically vulnerable. In his awareness of the pitfalls of encouraging high-visibility clothing, Boyd suggests that it "might encourage an unconscious attitude among other road users that cyclists are to blame if drivers fail to notice them."³⁴ (I would suggest there is little question of "might".)

One particular case is of interest: the bicycle wheel reflector. Describing the many resources spent on promoting what he calls "relatively ineffective visibility aids", Boyd says:

Pressure to include them in the International Standard... came from manufacturers and well-meaning legislators, not from accident researchers. In practice wheel-mounted reflectors must have a very low accident prevention value as there are few situations where one can visualise that a collision might be averted because of their use. No studies have been undertaken to evaluate the effect that their mandatory use is having on cycling accidents. Yet millions of bicycles in many countries all over the world are being fitted with wheel reflectors, at a cost of many millions of dollars, all because the International Standards Organisation committee followed the US Consumer Product Safety Commission in thinking it would be a good idea.³⁵

But even Boyd is perhaps not sceptical enough. He clings to the belief that some aids are "good", without considering the overall context and risk compensation by all parties involved. His attitude of arguing for other measures will have little effect as long as some support is given, as RoSPA has always given it, to such "aids". The fact is that accident research figures are not the deciding force in political decision-making, and will be used even if they are erroneous (as with seat belts and crash-helmets), as long as the measure taken fits in conveniently with prevailing

attitudes. There is now some indication that research figures on the ineffectiveness of wheel reflectors are being used — to push for reflective bicycle tyre walls. A much firmer break with the ideology and practice of the road safety establishment is called for.

(iii) Cars

Using the criteria of the road safety lobby, it would appear consistent to argue for brighter-coloured cars. There is some evidence that different-coloured cars have different accident rates, and one study of fire-engines indicates that they had less accidents when they were repainted bright yellow.³⁶ The mandatory use of daytime lights on cars in Sweden may have been beneficial for cyclists (but not for motorists).³⁷ Common sense would suggest, however, that if motorists get used to a brighter environment — such as one where lighting-up hours are extended into twilight — their tendency to pick out the smaller amount of light from cyclists and pedestrians will be reduced. There is unlikely to be any study showing that this is the case. Evidence that the vulnerable had yet again been disadvantaged would only result in more calls for them to make whatever pathetic or hopeless attempts they could to keep up with a less attentive and faster-moving motoring environment. Also, with "better" lighting, the additional problems of glare and distinguishing between more and faster-moving lights increase.

(iv) Pedestrians

As predicted by the pre-war cyclists, pedestrians are the next to be victim-blamed.³⁸

A court report meriting a few column inches in my local newspaper tells how a 21-year-old man was hit by a car near the brow of a hill on a road in a built-up area in north London and killed. A passenger in the car said they were doing just over the speed limit. The driver said it was dark, and his passenger that they "didn't remember seeing anybody until the impact". The police said the road was well lit.³⁹ Maybe this story can be looked at for the ease with which a young man's death merits such little attention; or the way, despite admission of rule breaking, no prosecution occurs; or the trivial sentence which no doubt would have followed if it had. My point is to show how easily the motorist can fall back on the "Sorry, mate, didn't see you" argument. If it was well lit, he should have been able to see; more important, *if it was dark he should have been slowing down*. The readiness with which the "conspicuity con" may be invoked implicates the road safety lobby and all the conspicuity merchants in deaths such as this one.

It can not be emphasised too much that this "ordinary" death has a particular importance which other more obviously grotesque examples — which graduate to getting a few column inches in the national press — do not:

- ≡ An 89-year-old driver without his driving glasses collides with a baby on a pedestrian crossing, causing the child probable brain damage, and fails to stop. He receives a ban and £300 fine.⁴⁰
- ≡ An ex-ambulance driver who could not read a number plate at two metres

DEATH ON THE STREETS

kills a woman on a pedestrian crossing: he had knocked another woman down seven months earlier and received a fine for careless driving with his eyesight unquestioned. He receives a ban, a suspended prison sentence and a £300 fine.⁴¹

These cases should show up the failure of the road safety lobby to consider defective eyesight a problem, as well as the usual trivial response from the courts when the worst comes to the worst. But it is much more important not to be drawn into long campaigns to institute random eyesight testing at the expense of cracking down on those who do not use what visual ability they have — and who are pandered to relentlessly and dangerously by the road safety lobby.

Conclusion

Advice to the vulnerable to attempt to be seen is unlikely to be of much use, because it relies on one small part of the “seeing” process. As this book argues throughout, a rational and fair transport safety policy would put the onus on the potentially dangerous and less vulnerable, rather than the other way round. The responsibility of the vulnerable should be far less (or perhaps not considered at all until the responsibility of the dangerous has been properly addressed) — not only because of their relative lack of danger to others, but because whatever they do they depend for their safety on the motorised, and the converse is not really true.

In the case of conspicuity, the aids suggested may be virtually irrelevant — such as reflective dog leads, thin strips of reflective tape on umbrella tips or rear bicycle wheel spoke reflectors (seen too late to avoid collision). Or their relevance may be minimal. As with all minimal controls on motorist danger, conspicuity aids detract attention from more important questions (motorist seeing); they “may encourage the idea that the vulnerable are to blame if motorists fail to notice them”,⁴² or they otherwise lower attentiveness and increase speeds. A minimal restraint becomes a pseudo-restraint, and *the “solution” becomes part of the problem.*

The traditional opposition to this line of argument is that concentration on motorists’ eyesight is not contradicted by an attempt to “be seen”, that there are attempts to discuss issues like night blindness, and that possibly vulnerable road users have to expect more careless and faster motorists. This view is taken up by cycling magazines trying to develop a sense of pride among cyclists (and to gain revenue from manufacturers of conspicuity aids). But, attempts to correct the “seeing” part of the process are somewhat poor and limited. The first effects of bringing night-time blindness to public attention have been for it to be used as a *mitigating* factor in a defence of causing death through reckless driving.⁴³ The implication of the failure of conspicuity aids is that “seeing” is becoming worse, not better. Thus we may not just have victim-blaming; not just pathetic attempts by the vulnerable to protect themselves, or even a necessary “something better than nothing” attitude which attempts to cope with an inevitable increase in danger. We may also have something likely to *make things worse*, when all the indications are

for the need to reduce the danger at source.

The discussion about conspicuity is often little more than a symbolic statement about the rights of different road users. Motorists "notice" cyclists without rear lights, or pedestrians without bright clothing, as a problem. (Indeed, their readiness to "see" these people is an indication of just how easily they could pick them out if they really wanted to.) As elsewhere, this reflects the feeling that non-car-users are failing in obligations. While apparently a harmless enough suggestion, it is based on a dangerous misunderstanding about the real obligations of road users. None of this means that people should not be conspicuous, but neither does it mean that a higher level of obligation should be expected from the vulnerable than was required from, for example, pre-war cyclists. Efforts to pressure them into being conspicuous (beyond perhaps a basic minimum) are bound to produce misunderstanding and no benefits, with victim-blaming thrown in for good measure.