THIS HILL IS

DANGEROUS

*(FINAL DRAFT)*

NICHOLAS ODDY

Nicholas Oddy is Senior Lecturer in design history and currently Head of the Forum for Critical Inquiry at Glasgow School of Art.

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ABSTRACT

The introduction of cyclists’ ‘danger boards’ in the UK in the 1880s established a new form of road sign aimed at private, mechanised transport that redefined ideas of safety on the road. This article explores the implications of this to established road users. In particular it considers the transfer of responsibility for erecting signs from private clubs to the state in the context of cycling’s eclipse by motoring in the early 20th century. It uses the design development of road signs as a marker of changing power structures in road use.

‘“CYCLISTS” THIS HILL IS DANGEROUS’ reads the text on one of the earliest modern road signs, a ‘danger board’ issued by The Scottish Cyclists’ Union. It is one amongst a plethora of others issued by national cycling organisations in the early 1880s, different from previous road signage in being concerned with hazards and safe passage rather than directions and geography.

In spite of their ubiquity and complicated history, British road signs have received remarkably little attention by writers on transport history; even in the world of collecting and enthusiasts, publications discussing them are few.[[1]](#footnote-1) Moreover, the role of cycling in the politics of road use tends to be understated, eclipsed even, in the context of the motor vehicle. This happened early on. Sidney and Beatrice Webb, in their pioneering history *English Local Government – The Story of the King’s Highway* (1913), considered cycling to have made no impact on roads themselves, except for ‘rehabilitat[ing] through traffic, and accustom[ing] us all to the idea of our highways being used by other than local residents’.[[2]](#footnote-2) Two generations later William Plowden followed in the Webbs’ wake, writing the bicycle off in two paragraphs.[[3]](#footnote-3) Today, even with many more publications looking at the cultural and political history of roads, this has hardly changed. Publications tend to be focused either on motoring or cycling, often with a clear political leaning, making it relatively easy for a writer looking at one to overlook the other.[[4]](#footnote-4)

 All this reflects the fact that there are historic, political reasons that have served to separate the two transport forms. When motoring was beginning to gain a wheel-hold on British roads cyclists were faced with the problematic of where their loyalties lay as to road use. In continental Europe the tendency was to ally with the new form of transport to form tourist associations, which represented both motor and non-motorised vehicles alike. In the UK this did not happen. Instead, the cyclists’ organisations became progressively more separate from and antagonistic toward the motorists’ and vice-versa. In December 1906, after five years of argument as to whether the Cyclists’ Touring Club, the political voice of the cycling lobby, could be reconstituted as a general touring club, a hearing was mounted in the High Court to decide. The court ruled against and effectively enshrined the division between cycling and motoring interests. Henceforth and paradoxically, as this article will show, cycling aligned with Peter Norton’s first paradigm of road safety.[[5]](#footnote-5)

Norton challenges the contributors to this volume to assess if his ‘four paradigms of road safety’ can be successfully applied to motorising nations beyond the United States. His first paradigm, ‘Safety First’, runs from 1900s -1920s, in which mechanized transport is seen to disrupt established road users.

The first paradigm prevailed from the beginnings of automotive traffic until the 1920s. It reflected a perception of cars as dangerous newcomers, and of other street and road uses (especially walking) as more legitimate. Drivers bore most of the responsibility for the safety of others. Cars were associated with speed, and speed was almost equated with danger; the car was occasionally condemned as an “inherently dangerous instrumentality[[6]](#footnote-6)

It is displaced by his second paradigm ‘Control’, in which mechanized transport is made the primary road user and accident prevention is achieved through expert control ‘exerted principally through the ‘“three E’s”: (highway) engineering, education, and enforcement’.[[7]](#footnote-7)

In looking at danger boards from the 1880s, this article takes up Norton’s challenge by not only considering a different country, the United Kingdom, but also beginning at an earlier period when the bicycle and tricycle first established personal, mechanised transport as commonplace on the public highway.[[8]](#footnote-8)

What Norton offers as his first paradigm in terms of motor vehicles in the USA could equally describe that applying to cycles in the UK, prior to the 1896 legislation that allowed the motor car to have an effective place on British roads.[[9]](#footnote-9) This article uses the medium of road signs to connect cycling in the 1870s and 80s to motorisation in the 1890s and beyond. It concerns itself with the transition from the first to second paradigm in the context of one newly-established form of mechanised transport being displaced by another, even more recent. Here, road signs provide a visible record of the transition from roads on which users of personal, mechanised transport (cyclists) had to negotiate with existent traffic, to those on which existent traffic (including cyclists) became ‘other road users’ and had to negotiate with users of personal, mechanised transport (motorists). The article argues that, while cycling can be seen to provide a foundation for Norton’s first paradigm, the road-signs that served it were harbingers of the second paradigm, in which cyclists found themselves losers. Road sign development over the fifty years from the 1880s illustratesa story about infrastructure ‘improvement’ in which the state, at first reluctantly, began to take greater responsibility. By doing so it began to mandate behaviour of its citizens with respect to that infrastructure, not so much in order to extend the writ of the state, but rather to appease small but vocal and well-connected social groups.

It will be found within this paper that, as the visibility of cycling was eclipsed by the rise of the motor car, there was an increasing consideration of the technology of road signs as they proliferated and slowly developed a visual language. At first this language was unique to mechanised road transport, but by being presented to all road users, began to be adopted more generally. Although the principles of design in which the visual process of moving from text to shape and, finally, symbol, seem simple, the politics surrounding UK road signs served to slow and complicate the process. It was not until the terms of the *Road Traffic Act, 1930* were enacted in 1933-34 that the government assumed complete responsibility for road sign design, closing the process for a generation.[[10]](#footnote-10)

The article thus has parallel, but also sequential strands. One considers the politics of road use, particularly the role of cycling, in developing strategies based round road safety for the acceptance of mechanised transport and their transition into those of motoring. The other uses the developing design of road-signs as the marker of changing power structures.

It serves to begin by analysing the danger-board, which, at first sight, seems little more than a quirky bygone. FIG 1 Road signs are so much taken for granted today that it is easy to overlook the fact that one like this was a complete novelty.[[11]](#footnote-11) As there was no precedent, the design of the board seems to follow then-current beliefs regarding sign-writing and advertising, that the eye would be more taken by variance of letter face and style, than it would by uniformity.[[12]](#footnote-12)

In the 1880s danger boards were erected throughout the UK by national cycling clubs to a common format, if with detail variation. While the Scottish Cyclists’ Union looked to signwriting, others looked to contemporary railway signage using a single grotesque face, but at various sizes and compressions.[[13]](#footnote-13) Notably, all addressed a particular road-user, “Cyclists”, who were clearly specified. Their intended readers, mounted on high bicycles, were assumed not to know the road and be travelling too quickly to respond to potential hazards without prior warning. The sign responds to a type of road use, ‘through traffic’, based on personal, fast mechanical transport that had never been experienced before. In erecting such signs cyclists set a precedent for something now taken for granted, but one that was to act as a double-edged sword for the future of the activity.

The hazard here was certainly a real one. High bicycles were hard to control on downhill slopes and their twitchy centre of gravity made real for most riders the prospect of a high-speed ‘header,’ where the machine hit a pot-hole or stone and pitched its rider head first over the handlebars on to the road.[[14]](#footnote-14) But the danger board makes a more specific argument: the *hill* is dangerous, not the bicycle, nor its rider or his (or her) actions. The sign sets up a type of dialogue between the inanimate road and the animate user that attempts to shift blame to the road, something that remains familiar today.

This sets the picture for the problematic of ‘road safety’ that was to emerge with cycling. The concept of safety that the danger board represents was largely new in that it focused on the likelihood of accident caused by the road-user. Before the bicycle, making a road safe was a matter of protecting its users from criminal acts of highway robbery. It would be wrong to think that animal traffic posed no danger, but that the danger was understood as inevitable and largely unchanging. The bicycle moved ideas of ‘danger’ and of a ‘safe’ road into a completely different form of understanding. [[15]](#footnote-15)

Cycling had been associated with danger from its inception. A precedent even existed in the often satirical reaction to the brief craze that surrounded Denis Johnson’s ‘hobby horse’ machines in 1819.[[16]](#footnote-16) A generation was to elapse before bicycling was to re-emerge with the pedal-driven velocipede bicycle after 1867, but key to its longevity was the adoption of the ‘high bicycle’ that relied upon the wire spoked ‘tension’ wheel, invented in 1869 by Eugene Meyer.[[17]](#footnote-17) The high bicycle was to find a stable and expanding market in the UK, where, by the late 1870s, it had enough of a following to justify the setting up of national organisations to represent its riders’ interests. The high bicycle was fairly market-specific. Its riders were male, fit and daring enough to mount it, affluent enough to afford it and leisured enough to have the time to ride it. The machine was fast, faster than anything else on the road. It had little true application as a form of necessary transport, while to ride it was obviously a risky business and the riding position looked dangerous even when it was not.[[18]](#footnote-18) It was not just the non-cycling public who saw bicycles as dangerous. The likelihood of accident, particularly when riding downhill, was by 1880 almost as deeply embedded in cycling culture as it was in the minds of those outside it. In fact, the risk of accident, coupled with the spectacle of riding and the sensation of high speed, was part of bicycling’s attraction to many riders and was almost celebrated in the cycling press by its frequent airing in cartoons and humorous articles. The idea of running over a farm animal, or even a child at the foot of a decline was commonplace in the minds of cyclists. It was not so in the minds of equestrians, who tended to be moving at slower speeds, made more noise and had the eyes and mind of the horse as a back-up to their own.[[19]](#footnote-19) Danger was part of the culture of bicycling, yet cyclists believed that bicycling should be an everyday activity conducted on the public highway.[[20]](#footnote-20)

Not surprisingly, those who perceived a threat from bicycles becoming a part of common road traffic began to mobilise the weaponry that had begun to be used in1819. As then, the machine seemed above the law.[[21]](#footnote-21) In line with Norton’s first paradigm, negative press claimed that the safety of the road-using public was threatened by something incompatible with existing road use. Cyclists were charged with being irresponsible, of courting danger in the pursuit of speed, and the machines themselves were blamed for frightening horses with consequent dire accident.[[22]](#footnote-22) Their critics wanted them defined as locomotives, subject to the strict control laid down by *The Locomotive Act,* *1865*; cyclists saw themselves as equivalent to equestrians.[[23]](#footnote-23) Responding in 1878, the British government defined them as a separate class of vehicle, redefining them as ‘carriages’ in 1888. [[24]](#footnote-24) Both these definitions brought the new form of transport under regulatory control, allowing cyclists to be charged for offences on the public highway, usually on the grounds of excessive speed. [[25]](#footnote-25) Reaction by non-cyclists based on the idea of bicycles being an ‘inherently dangerous instrumentality’ is hardly surprising. What at first seems less easy to understand about our danger board is that it seems to publicly promote cycling as dangerous, in spite of being erected by those lobbying for its advancement. In doing so cyclists grasped their detractors’ strongest weapon, using it against those who thought it should protect them.[[26]](#footnote-26)

The development of UK cycling as a form of touring in the 1870s, rather than competitive sport, is key to understanding the increasing voice of its supporters. As the activity expanded cyclists created their own national legislative organisations that acted in the manner of professional bodies, giving cycling a type of self-regulatory autonomy. Such organisations gave cycling a voice that could engage with government, available to advise and consult whenever policy might be established.[[27]](#footnote-27) Early in 1878 the Bicycle Union was formed by local cycling clubs coming together to define codes of practice for racing, but an organisation to represent non-competitive individual road use was far more important to the perception of bicycles as part of day-to-day traffic. In August, what was to become the ‘father’ of all such organisations, the Bicyclists’ Touring Club, was established. At this time the bicycle was beginning to be joined by the tricycle, important in this context because tricycles were quick to slough off the gender bar that characterised bicycles, appealing to a much wider range of riders. However, their high cost and size gave them an air of stability, class and exclusivity, appealing to a monied elite.[[28]](#footnote-28) Soon the organisation was renamed the Cyclists’ Touring Club (CTC), increasing its reach into a greater resource of social power and influence.[[29]](#footnote-29) Although fundamentally the activity remained focused on bicycling and, with a few exceptions, steep hills were only really dangerous to bicyclists, our danger board is addressed to this larger audience of “cyclists”.

The CTC devised protocols as to what was expected of cyclists’ behaviour on the road, acting to provide a veneer of responsibility to the activity, even if in reality it had no autonomy to control anything. Its position, and that of its peers such as the Scottish Cyclists’ Union, was that taken by the motor lobby a generation later. These groups claimed that the safety problem was not so much an issue of the riding practices of cyclists, but that their seemingly dangerous behaviour was the fault of the roads themselves. To solve the problem the roads should be redesigned around cyclists, at public expense, to facilitate easy passage of their machines. If such roads were provided, accidents caused by cyclists ‘coming a cropper’ in pot-holes and ‘dangerous’ riding to avoid treacherous road surfaces would diminish.[[30]](#footnote-30)

Our danger board is a part of this campaign. It gives no order or instruction; the cyclist is assumed to know how to respond appropriately. The board acted as an advertisement for cycling in three ways. First, it established the presence of cyclists to a wider public, even when none were on the road. Second, it acted as a marker of how responsible cyclists were. Third, it publicised the club that issued it. Additionally, it acted as a sort of ‘naming and shaming’ of the local road authority.

The success that the boards had in these respects is reflected by T. W. Wilkinson writing in 1913:

The club [the CTC] became known to the general public by the danger-boards which it placed on hills. It had been preceded in this useful work by the Bicycle Union... The “C.T.C.” boards, indeed, probably attracted attention more by their number than by their novelty, though they were the first seen in many parts of the country. However this may be, the club missed no opportunity of stirring up the highway authorities and doubtless paved the way for many reforms.[[31]](#footnote-31)

Road improvement was not new, but in the UK had usually been carried out by private trusts based on the increase of necessary freight and passenger traffic.[[32]](#footnote-32) Their diminishing returns in the face of railway competition had led to many to slip into decline and their roads ‘disturnpiked’.[[33]](#footnote-33) The cycling lobby, cycling largely for pleasure, was not keen to pay for its fun. Rather, it argued, on the basis of ever increasing cycle use, that its useful, healthful activity would spread to be universal. It should become a state duty to maintain and construct roads to facilitate its conduct in comfort and safety, free of direct charge to the user.[[34]](#footnote-34)

To encourage this idea, the CTC, with the National Cyclists’ Union, created the Roads Improvement Association (RIA) in 1886, a quasi-independent organisation that would lobby government for investment in road infrastructure.[[35]](#footnote-35) Although sponsored by cyclists, it claimed to act for the public good on the grounds that the roads were for all, with cyclists as a vanguard for the public benefit, ‘the title being carefully chosen to stay any suggestion that it was founded solely in the interests of cyclists’.[[36]](#footnote-36) This was, perhaps, a magnificent piece of hypocrisy, but one that largely went unnoticed by both cyclists and larger community and continues today in organisations sponsored by motoring interests.[[37]](#footnote-37) Typical of the argument is this, written in 1887 by George Lacy-Hillier, one of the cycling lobby’s most well-known voices:

Everybody is interested in having good roads, yet our highways go from bad to worse. What is everybody’s business is nobody’s business... Though the whole community are interested in the goodness of the roads, it is easy to see that the man who is dragged through ruts and stones by the labour of his horse is not quite so keen in his appreciation of a bad road as the man who feels its effects in an aching spine and twisted muscles.[[38]](#footnote-38)

The complaints coming from the RIA were largely resolved in the terms of the *Local Government Act, 1888*, a victory that was probably more one of circumstance than strategy. The Act established County Councils, which were given the budget and remit to provide well maintained, main roads and District Councils secondary roads, replicating arrangements already established in Scotland in 1878.[[39]](#footnote-39)

 In most populist histories of road transport, the shift of control to local authority, overseen by central government, is seen as entirely positive.[[40]](#footnote-40) However, it was positive only to the most problematic road user of its time. Road improvement was largely aimed at appeasing wealthy, franchised, male cyclists, thus vesting the ‘right of the road’, indeed its whole raison d’etre, in its most ‘dangerous’ and unnecessary users. Today’s cyclists might bemoan the motorists’ monopoly of this position, but it is one for which cycling is largely responsible. The bicycle of the 1880s might have posed danger, but did it really threaten existent norms? Non-cyclists involved in accidents were much less likely to suffer serious injury than the cyclists. Bicycles took up little space and although they were quick, they were not vastly faster than a galloping horse or speeding carriage. These factors allowed cycling to appear less dangerous in the social culture of road use than its more outspoken critics would have it. Where its malignance lay was in the political system it created in successfully pushing government to act for the benefit of the leisure activity of a very few.

There are only eight years between *The Local Government Act, 1888* and the *Locomotives on Highways Act,* *1896*,which opened UK roads to motoring, but it is easy to see why the efforts of the cycling lobby of the 1870s and 80s are often belittled or ignored. Most cyclists and the RIA itself were merely looking for road maintenance within extant provision. Cycles performed well on water-bound road surfaces, so long as they were smooth, and did little damage to them.[[41]](#footnote-41) The 1888 provisions were largely adequate to provide consistent, regular maintenance. Danger boards only warned of one type of hazard, hills on which cyclists could lose control of their machines. Otherwise, in the minds of 1880s cyclists, roads posed few real hazards outwith their control beyond pot-holes, loose stones and ruts. It is therefore not a surprise to find that the RIA was not prominent during the 1890s. However, it re-emerged with some force the next decade, on behalf of motorists, under the auspices of William Rees Jeffreys who had come to it through his membership of the CTC.[[42]](#footnote-42) Meanwhile, the general provisions of 1888 were enough to satisfy public demands to have on-road behaviour controlled by law.

Would the 1888 provisions have remained adequate had not cycling been eclipsed by motoring in the late 1890s? Cycling reached its fashionable peak, particularly amongst the upper and upper-middle classes, in the ‘bicycle boom’ of 1894-7. Yet this generated no significant pressure for change to legislation or to road provision.[[43]](#footnote-43)The only serious issue to threaten the status-quo in the 1890s was that of mass-start road-racing. Interestingly, this was legislated against by its own governing bodies for fear that it could escalate into government legislation against cycling in general.[[44]](#footnote-44)

It was in the midst of the bicycle boom that the UK motor lobby became established in its two pioneering organisations, Sir David Salomons’ Self Propelled Traffic Association (SPTA) founded in late 1895 and Harry Lawson’s and Frederick Simms’ Motor Car Club (MCC) founded in January 1896. Unlike cycles, all motor cars were ‘locomotives’ and, under the provisions of the ‘red flag act’, had to be attended by three people with their speed limited to walking pace, hugely restricting their popularity.[[45]](#footnote-45) Both the SPTA and the MCC were founded with a view to having the motor car redefined and subject to less stringent restrictions.

It should be noted that neither Salomons nor Lawson were strangers to the world of cycling. Their interests in cycling were replicated in the nature of the SPTA and the MCC, the former a club for gentleman amateurs, the latter for commercial interests.[[46]](#footnote-46) Both organisations seem to have had little difficulty in achieving their mutual aims. Given their novelty, rarity and the fact that their use was so heavily restricted, there was little precedent for motor cars and few people had any experience of them. Moreover, motor cars were very expensive and those who were promoting them had significant wealth, power and influence.[[47]](#footnote-47)

*The Locomotives on Highways Act, 1896*, redefined ‘light locomotives of under three tons unladen’ as ‘motor cars’. The significance of the Act was in its removal of the need for more than a driver and that he or she could now drive at 12 mph. This speed, well in excess of walking pace, was equivalent to the speed of a touring cyclist. The Act had originally specified a limit of 14 mph, but was reduced by the Local Government Board, which tended to work on the principle of speeds being set by those of existent road users. [[48]](#footnote-48) Thus, the 1896 legislation made no attempt to prioritise motorists; rather, it had the effect of giving them parity with their established equivalents, cyclists. Even so, this made motor cars far more attractive to their potential market. Indeed, the Act was often termed the ‘Emancipation Act’ by motorists.

In the fledgling motor lobby’s strategy to overthrow legislation we see very much the pattern of the issues that pertained to cycling re-emerge in a modified way. Like the cyclists, the motorists would achieve their goals through the setting up of clubs that could lobby government. Having achieved its goal, the MCC was short lived. Motoring interests became focused in the Automobile Club (AC), founded in July 1897, with which the SPTA merged in 1898.[[49]](#footnote-49) The AC was very much the equivalent of the CTC in taking up the role of the national voice of the activity. However, there was a significant difference between the cyclists’ and the motorists’ legal position. The CTC and other cycling interests aimed at *preventing* restrictions. The SPTA, MCC and AC aimed at *removing* restrictions. The motorists’ success in breaking free from the shackles of pedestrian and animal friendly legislation seems much more heroic in the minds of many writers than the cyclists’ equally successful, but earlier and more covert, avoidance of being snared in the first place.

While the speed limits freed up the car, they were still not high enough in the minds of many motorists. As the number of motor cars rose, so did pressure to revise the 1896 Act. Like the cyclists, the motorists argued that far from being a campaign to increase the fun of a few wealthy individuals at the expense of other road users, motoring would rapidly become universal and have huge economic benefits. Therefore, it should be a state duty to encourage it.[[50]](#footnote-50)

*The Motor Car Act, 1903* was written in consultation with the motoring clubs, in particular the AC. It set out to appease popular disquiet caused by increasing numbers of motor vehicles, yet free their use still further. In return for a national registration scheme and driving licenses that could be withdrawn for traffic offences, motorists benefitted by having speed limits raised to 20mph. ‘Within certain limits and places’ application could be made by local authorities to the Local Government Board to reduce this to 10mph. [[51]](#footnote-51) Previously they could apply for any speed and often favoured the 4mph of the *Locomotives on Highways Act, 1865*, which was more compatible with pedestrian and animal traffic, something that the Local Government Board rarely rejected.

The Motor Car Act was the first that made provision for state legislated road signs, largely responding to a process of development by the CTC and the AC shortly before the Act was drafted.

The cyclists’ danger boards were concerned only with hills. During the 1890s the development and almost universal adoption of the chain driven safety bicycle, together with improved brakes, had made many of the ‘dangerous’ hills far safer.[[52]](#footnote-52) Few clubs were still erecting danger boards (although most remained in place) and in 1897 the CTC began to erect ‘TO CYCLISTS – RIDE WITH CAUTION’ boards to apply to any hazard. In 1900 they considered defining the hazards, but rejected the idea.[[53]](#footnote-53) Instead, in 1902, two pressed steel signs were introduced ‘DANGER’ and ‘CAUTION’. Unlike previous signage, these signs did not specify their readers. This reflected the fact that most of their applications would also be relevant to motorists. At this period many in the CTC were eager to include motorists, particularly as some of its most influential members had taken up motoring.

 More or less simultaneously, the AC had begun to design road signs. In mainland Europe, where regulation had been less stringent than in the UK, motoring clubs had already applied some thought to the implications of speed and distance to sign design and had introduced a concept of pictograms to augment text on signs, overcoming language barriers.[[54]](#footnote-54) Taking a cue from this, there were ten AC ‘Caution Boards... to prevent dangerous accidents’.[[55]](#footnote-55) Nine depicted specific hazards by pictograms and were remarkably advanced in that they relied on pictograms alone, without supporting text. Moreover, all ten broke away from rectilinear form by being diamond-shaped, differentiating them from other signs.

Like the cyclists’ danger boards, the AC’s caution boards reflected the motorists’ interest in that they did not instruct; rather, they were designed in the belief that the motorist would slow until the reference point had been passed. Like the cyclists’ signs, they were clearly the initiative of a private club and were not ‘public’ notices in the true sense, even giving provision for a sponsor’s name. Only the Portsmouth Road was equipped with these signs (sponsored by Alfred Harmsworth) before the AC shelved the scheme in the knowledge that the Motor Car Act was to include provision for signage. [[56]](#footnote-56)

Both the design of the Motor Car Act’s signs and the responsibility for their implementation were remitted to the Local Government Board, which announced the specifications of four ‘Motor Car Notices’ in a *Circular* in 1904. They were very different in conception from the AC’s and the CTC’s signage, not only in terms of design, but also because only one of the four was merely advisory.

As can be seen in FIG 2 the Motor Car Notices were all defined by shape. While the ‘motor notice’ diamond was intended to bear text, the other three were defined by shape alone and subtly demonstrated a transfer of power in the place of the motor car relative to other road users. The signs reflected the Motor Car Act itself in that they worked on a quid-pro-quo of applying controls while favouring motoring. The red prohibition disc and the white speed limit ring applied the controls. [[57]](#footnote-57) On the other hand, the ‘speed warning’ red, open triangle did quite the opposite. It was placed fifty yards ahead of any one of three hazards stated in the Act - ‘dangerous corners, cross roads and precipitous places’. [[58]](#footnote-58) However, as the sign was not specific, it was left to the motorist to gauge which lay ahead. In this respect its designers seem to have taken their cue from the CTC’s equally vague boards of 1902. But, by being erected to state legislated specification by local government for the benefit of motorists who formed a tiny minority of road users, rather than by the specialist organisations that represented them, the sign legally enshrined the idea that what constituted hazards on the public highway were those perceived by motorists, not road users in general.

In considering their design, the simplicity of the Motor Car Notices was impressive. Relying on shape alone three of the four needed no text and were easily memorised, which might not have been the case with the more numerous pictograms that the AC’s caution boards presented. This allowed the government not to feel obliged to educate drivers to read the signs and it was largely left to word-of-mouth and motoring-related publications to inform motorists as to their meanings.[[59]](#footnote-59) Such was the ubiquity and simplicity of the signs that they disseminated to the public at large. The ‘speed warning’ triangle was quickly picked up as a symbol of caution, whether applied to motoring or not, particularly once it became the emblem of the National Safety First Association.[[60]](#footnote-60)

Whatever the merits and implications of the Motor-Car Notices, the Act was not prescriptive in their application, allowing clubs to continue to erect signs to their own specifications. The UK state authorities, no matter what their political persuasion, were far from comfortable in taking control and only did so through pressure of circumstance. The cost of commissioning and erecting Motor Car Notices, merely for the benefit of motorists, was often objectionable to County Councils, which were only too happy to have clubs provide signage.[[61]](#footnote-61) Club signs were many and varied; often they made reference to the shapes of the Motor Car Notices, but few revived the idea of the pictograms that had been part of the AC’s short-lived 1902-3 initiative.[[62]](#footnote-62) FIG 3

In spite of these developments, in 1904 the CTC still had by far the most presence on the road in terms of signs, rising to about 4500.[[63]](#footnote-63) However, the CTC was entering a period of crisis, its membership was dropping rapidly and many of its most wealthy members were changing allegiance to motor clubs. The club was divided as to whether or not it should expand its remit, but in 1906 it was irrevocably decided that it could not. In 1900 membership was 56,147; in 1907 - 27,617; in 1914 - 14,569.[[64]](#footnote-64)

In the face of decreasing funds the CTC attempted to withdraw from road signage and, from 1905, CTC signs were removed from the roadside as they became weathered and were not replaced.[[65]](#footnote-65) As CTC signs became fewer, motor club signs proliferated, alongside the steadily increasing numbers of Motor Car Notices. This retreat from road signage by the very body that had created it in the first place is a telling part of the eclipse of cycling during this period. With no visible marker of their presence, cyclists were now firmly placed amongst ‘other road users’ on roads that would be equipped for motoring.

There was an irony in this. There is little evidence that there were substantially fewer cyclists on the road: quite the opposite in fact. Prices of new machines fell by 30-50% between 1897 and 1905, while production steadily increased during the 1900-1914 period and the second-hand market expanded commensurately.[[66]](#footnote-66) The cycling lobby, in particular the CTC, was unable to adapt to changing conditions. The club was set up to cater for upper-middle class, medium and long distance ‘tourists’, but this style and class of ‘touring’ was much more suited to motoring. In fact, cycle use was moving to short and medium distance utility, largely in urban and suburban conditions, for which the chain driven safety bicycle was (and remains) ideally suited. In this context cycling was steadily becoming more demotic and popular. Rather than focusing on this, the CTC persisted in focusing on long distance riding, becoming unrepresentative of cyclists as a whole, less visible against the motor-car in touring and almost invisible in towns and cities.[[67]](#footnote-67) Paradoxically, cycling’s strongest voice in lobbying circles was physically withdrawing from visibly asserting its presence on the road, while cycling itself was more popular than ever.

 The ‘muddlesome disorder’ of signs that faced the motorist might look impossibly confusing today, but it probably served well enough in the context of the national 20 mph limit set down by the Act. [[68]](#footnote-68) Most were obvious in outline, while almost all of them suggested that the motorist should slow down to respond to whatever the sign referred to. Effectively, a motorist need only see an oddly shaped top on a post to understand it as a motor sign and know what action it asked.

 However, while the signs may have served, the roads did not. The new speed limits had the knock-on effect of legalising the ‘dust problem’ caused by motors being driven at speed on dry, water-bound, road surfaces. The ‘dust problem’, a key issue to cyclists and the suburban and rural dwelling public in the early motor period, thus became a problem caused by the road surface, rather than excessive speed. This justified extensive resource being invested in developing tarred, ‘sealed’ surfaces. These solved ‘the problem’, but in turn offered great potential for faster and increased motor traffic that posed another ‘problem’. The resulting demand for further road improvements forced the Government to support them by taxing motor vehicles to create a central ‘Road Fund’ in 1909-10. Effectively, the state had finally assumed responsibility for the road system to facilitate the use of motor vehicles over others, confirming the implications of the Motor Car Notices in terms of traffic hierarchy.[[69]](#footnote-69)

The shift of power these developments placed on non-motorised road users is reflected in the development of ‘national signs’. While the AC had employed pictograms in their caution boards, the UK authorities rejected them, favouring the simple, shape-based system of the Motor Car Notices. The official position after 1903 was that if any detail was needed it could be presented as text on a ‘motor notice’ diamond. However, signage in mainland Europe was developing round the use of pictograms instead of text because of their effectiveness in speaking a universal language that could be read at speed, while giving precise detail, particularly for defining hazards. With the possibility of touring motorists passing over a number of national boundaries separating a multiplicity of different written languages, there was a strong imperative to develop international, non-text based signs.

In the UK the situation was different as no such imperative existed. Moreover, there was an underlying issue of education. If the state was to develop a pictographic ‘language’ it would have to educate road users to understand it. However, there was no doubt of the effectiveness of the European approach. In 1919 the government recommended the County Surveyors Society to appoint a committee to consider the issue. Although nominally controlled by local government, the committee had the backing of a new Ministry of Transport (MoT), created the same year. [[70]](#footnote-70)

The committee’s deliberation resulted in a *Circular* of 1921 redefining the ‘speed waning’ triangle as ‘danger’ for application to any hazard. Thus its designers respected the now public understanding of the red triangle by expanding its remit. It could be supplemented by six ‘national signs’ to be mounted below. Their design took a ‘belt and braces’ approach in which a pictogram was paced above a text box.[[71]](#footnote-71) FIG 4

The strength of these signs was the combination of text and pictogram as equals, avoiding the need for education as both motorists and general public would pick up the meanings of the pictograms as they read the legends. Thus, the peculiar choice of the torch of knowledge to represent SCHOOL needed no classical scholarship for it to be ‘read’ by road users, by default it would become associated with the text and become an effective signifier. However, even without reading the new signs, the triangle kept consistency with the 1904 Motor Car Notice. Nevertheless, their use remained advisory; clubs could continue to erect their own signs and local authorities could make adjustments to taste.[[72]](#footnote-72)

While the national signs were agents of motoring, their title does not make this specific. The signs were in the public realm being read by all and were beginning to be a part of general street furniture. In 1927 a sign was introduced that asked pedestrians to PLEASE CROSS HERE.[[73]](#footnote-73) It is important in that for the first time it suggested that foot traffic should be contained to the pavement (side-walk) and should not be on the highway except when specified. It marks a turning point in attitude that would be consolidated over the following seven years, reflecting Norton’s proposal of paradigm shift.

A range of new signs introduced in 1930, now under the direct auspices of the MoT, can be used to illustrate this shift in action.[[74]](#footnote-74) The new signs included ones that, for the first time, were designed to allow motorists to pass them at speed. ‘Advance direction signs’ were introduced that allowed motorists to respond to junctions without having to slow to read finger posts.[[75]](#footnote-75) Moreover, for roads ‘of lesser traffic importance’ meeting those of ‘greater traffic importance’, a ‘special cautionary’ sign was designed that gave an overt order.[[76]](#footnote-76) It comprised the X pictogram for cross-roads over DEAD SLOW. In design terms it demonstrates that its designers were confident that the reader already knew the meaning of the pictogram as ‘cross roads’ without supporting text, making it the first truly pictographic national road sign in the UK. Its triangular head was enclosed by a ring to emphasise it was both a warning and an order.[[77]](#footnote-77) In terms of Norton’s second paradigm the concept of advance direction signs reflects improved highway engineering, the use of pictogram and the head of the special cautionary sign reflect driver education, while its text reflects increasing enforcement.

At the same time *The Road Traffic Act, 1930* was passing through parliament. Its significance was that, from 1st January 1931, it withdrew the national speed limits, reflecting a belief that, given great improvements both in roads and vehicle technologies, motorists would instinctively drive in response to road conditions.[[78]](#footnote-78) The Act also made provision for ‘traffic signs’ to include cyclists and animal and pedestrian traffic. [[79]](#footnote-79) ‘Signs of another character’ were to be banned. Central government had finally assumed ‘expert control’ in signage that would apply to all road users to facilitate safety and be used to encourage and even coerce behaviour change.[[80]](#footnote-80)

A comprehensive set of traffic signs followed in 1933.[[81]](#footnote-81) The signs were carefully contrived to speak to the reader in a familiar language. The MoT was not willing to develop signs along the lines of DEAD SLOW that assumed its pictogram could function without its descriptive legend. The underlying concept of the Motor Car Notices persisted in the provision of four different heads, but all would have information boards. The warning signs, topped by the red, open triangle, merely expanded the range of national signs further with new pictograms; pure text was used where no pictogram was specified. The red disc now denoted any prohibition, which would be specified by text on the board. The newcomer was a red ring for an ‘order’ such as TURN LEFT, while the combination of the red ring enclosing the triangle was consolidated as an ‘order with warning’.[[82]](#footnote-82) DEAD SLOW was replaced by SLOW – MAJOR ROAD AHEAD illustrated by a pictogram representing a lane joining a highway at right angles, for the first time clearly asserting right of way at a junction. In 1935 it was joined by the even more prescriptive HALT AT MAJOR ROAD AHEAD on a unique T shaped board, effectively representing a junction in shape.[[83]](#footnote-83) FIG 5

The complete lack of free-standing pictograms or symbols in the 1933 traffic signs was important in that it solved the problem of driver education. For the thirty years of their currency, the MoT never had to issue instructions to drivers or the public at large that included the whole range of traffic signs.[[84]](#footnote-84) When driving tests were introduced in 1934-5 signage was hardly considered, given that on being shown any British sign all one needed was a basic level of literacy to read it.[[85]](#footnote-85)

There remained a problem in that the 1933 signage had been created in a process of collaboration with motorists and did not seem to serve pedestrians. For example, PLEASE CROSS HERE was included in the 1933 regulations, considered too conditional and quickly replaced by a forceful looking disc that asked no favour.[[86]](#footnote-86) Such coercive measures could only work if foot traffic was forced to comply with them. However, while the MoT had developed legally binding signage for wheeled vehicles, it refused to control pedestrian behaviour by making use of crossings compulsory, or ‘jay walking’ illegal. Instead, it desired to bring foot traffic voluntarily under the control of the signage and new order of priorities.

A start had been made in the MoT’s *The Highway* *Code* of 1931.[[87]](#footnote-87) Its content was awkwardly posed between advice and legally binding regulation, giving instruction to all road users as to how to behave in the context of precedence being given to motor traffic.[[88]](#footnote-88) However there was little acceptance that the ‘traffic’ in ‘traffic signs’ meant anything other than motor vehicles. Signs for pedestrians were considered to have failed, while a popular backlash was being experienced against the repeal of national speed limits in the wake of press reports of shocking accidents and high casualty figures. This led to a public campaign, which was heard sympathetically by the Minister for Transport, Leslie Hore-Belisha. Belisha included speed limits in an amendment to *The Road Traffic Act, 1934*: 30mph for built-up areas, coming into effect in March 1935, inspiring the first British road sign in which head and board were combined. FIG 5

The imposition of the 30mph limit was seen as a victory for non-motorists and it was the association of this with a new approach to demarcating pedestrian crossings that sold the new signage to a wider public. Belisha considered that to make pedestrian crossings attractive they should be given a powerful visual identity. The new crossings were marked by ‘beacons’, amber globes which, where possible, were to be electrically lit, with the crossings clearly delineated. Legislation demanded motorists gave way to pedestrians who stepped out on them. After a trial in London in September 1934, the beacons were extended nationwide the following July.[[89]](#footnote-89) Both 30mph limit and new crossings seem to have given enough back to pedestrians to achieve the goal of acceptance amongst a larger public.[[90]](#footnote-90)

Norton points out that for a paradigm to become stable it has to enjoy both institutional and popular support. The latter might have been far more difficult to achieve in the mid-1930s, given the behavioural changes it expected. Yet, soon the Traffic Signs became part of popular culture. In particular the ‘Belisha Beacon’ became a popular icon appearing as handles on everything from pencils to toasting forks. Through the second half of the 1930s traffic signs in general were used for the inspiration of puzzles and games and incorporated into jewellery and novelties such as teaspoons and cocktail swizzles. In effect such novelties acted as an adult education programme without any public expenditure. FIG 6

Equally, if not more important in establishing unquestioning public acceptance of road signs, and the hierarchies they stood for, was child education. Children were introduced to road signs through play, embedding their values even though none could drive. Road signs were incorporated into many children’s games. Series of miniatures, far more comprehensive than the ‘examples’ given in official publications, were issued by toy makers such as Meccano ‘Dinky Toys’.[[91]](#footnote-91) Moreover, road sign iconography was used in children’s publications aimed at safety in the home.[[92]](#footnote-92) It is reasonable to propose that it was at this point that the language of road signage started to become the language of safety, not just on the roads, but generally.[[93]](#footnote-93) (FIG 7)

While traffic signs began to engage with foot traffic, none catered for cyclists. By 1933 cycling had expanded further than it had in the pre-war period and had become associated with working class travel to the workplace.[[94]](#footnote-94) There is a clear socio-political issue here: while cycling became more demotic and those cycling more numerous, its voice at government level became ever more diminished. Instead, cyclists were supposed to respond to the traffic signs as if they were motorists.[[95]](#footnote-95) The failure of the cycling lobby, notably the CTC, in asserting cycling’s place in road provision at this period could be argued to place it outside of the paradigm, giving many cyclists excuse for ignoring road signs as the signs seem to ignore them.

The process of paradigm shift was slow; if the danger board marked its beginning - setting in motion a process of redefining ‘road safety’ in which the free passage of mechanised transport became the responsibility of government, which was then forced on to established, non-mechanised road users - the traffic signs marked its conclusion half a century and nearly two generations later. This seems very long in comparison to Norton’s ideas, but surely reflects the fact that it included a change of vehicle form. Both provoked similar issues and responses, but only limited legislation sufficed to control cycling enough to make it unthreatening. The rise of the motor-car re-lighted the issues and took them forward into the twentieth century with much greater impact. Today, even if the Danger Board is only preserved as a collectors’ item, a relic in a private house far removed from any hill or passing cyclist, it still stands as an advance warning of the start of a dangerous descent to the power structures of today’s roads that, appropriately, cyclists seem to have found particularly difficult to negotiate.

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1. Interestingly the first attempt to provide a full history of the signs themselves, though no more than a booklet, was published by the Department of Transport, *The History of Traffic Signs* in response to the fact there was little information available. This has been followed by a Shire booklet: Hands, *Road Signs*. At the time of writing a more substantial history has been published: Willrich, *Did you Notice the Signs By The Way?* [↑](#footnote-ref-1)
2. Webb, *English Local Government,* 240. [↑](#footnote-ref-2)
3. Plowden, *The Motor Car and Politics,* 24-5. [↑](#footnote-ref-3)
4. Modern academic publications continue to reflect this ‘tradition’, for instance Horton, *Cycling and Society* and O’Connell, *The Car and British Society.* In Rosen, *Framing Production*, there is even a political call to arms against the motorised status-quo in the final chapter ‘Up the Velorution’, 155-180. Publications aimed at collectors and enthusiasts also tend to draw distinct boundaries between cycles, motor cars and motor cycles. [↑](#footnote-ref-4)
5. ‘Why the cyclist is commonly supposed to be the arch enemy of the motorist I am at a loss to see’ *The Motor*, IV, 289. For details of the debate and hearing in the Cyclists’ Touring Club see Lightwood, *The Cyclists' Touring Club,* 84-92, 232-235, and Oakley, *Winged Wheel,* 19-21. [↑](#footnote-ref-5)
6. Norton, **‘**Four Paradigms,’ XX. [↑](#footnote-ref-6)
7. Norton, **‘**Four Paradigms,’ XX. [↑](#footnote-ref-7)
8. Until 1922 this includes what is now the Republic of Ireland (Eire), after this time the legislation covered in the article is not applicable to Eire. The acts cited are those covering England and Wales. Ireland and Scotland had different legal legislatures and generally what is covered here was replicated, but sometimes with minor differences, in acts for these. [↑](#footnote-ref-8)
9. In the form of *The Locomotives on Highways Act,* *1896*, discussed at more length later in this article. [↑](#footnote-ref-9)
10. Although it continued to be debated and was subject to minor adjustment. See Noble, *The Book of Road Signs,* 10-29 [↑](#footnote-ref-10)
11. Previously road signage had focused on direction and distance marking, Haines, *Marking the Miles*, 8-33 [↑](#footnote-ref-11)
12. For examples of such layouts see Callingham, *Sign Writing*, and Sutherland, *The Practical Guide to Sign Writing* [↑](#footnote-ref-12)
13. Rickards, *The Public Notice*, 201 [↑](#footnote-ref-13)
14. McGurn, *On Your Bicycle* 66-67, 71-72 and fig 35; and Wiebe Bijker, *Of Bicycles, Bakelites, and Bulbs*, 38-39 and fig 2.8. [↑](#footnote-ref-14)
15. Thompson in *Over to Candleford*:‘How fast those new bicycles travelled and how dangerous they looked! Pedestrians backed almost into the hedges when they met one of them...it was thrilling to see a man hurtling through space on one high wheel with another tiny wheel wobbling helplessly behind.’ Cited in Mackenzie, *Cycling,* 9. [↑](#footnote-ref-15)
16. Street, *Dashing Dandies.* 82-89, 129-140. [↑](#footnote-ref-16)
17. Clayton ‘The Coventry Machinists’ Co Ltd’, 5-7, and ‘Who Invented the Penny Farthing?’, 31-42. High bicycles are characterised by a driving wheel fitted to the inside leg measurement of the rider (mainly about 50-56 inch diameter), giving the maximum ‘natural’ gear and therefore the highest speeds for direct drive though cranks and pedals. They were called ‘ordinary bicycles’ in the UK after c1880 to differentiate them from other bicycle types, and more derisorily ‘penny farthings’ once they had been largely displaced by chain driven ‘safeties’ in the 1890s. In the USA they are commonly called ‘high wheelers’. [↑](#footnote-ref-17)
18. This raises the issue of experiential history. See Corn in Kingery, *Learning from Things,* 44-50. To best understand the riding quality of a high bicycle, it is probably necessary to ride one given the problematic of retrospective value judgement resulting from progressive linear histories and the ubiquity of bicycling experience today. What can be said is that the non-rider’s perception of difficulty seems very much exaggerated to those who can ride it. [↑](#footnote-ref-18)
19. ‘*Wheels and Woes, words of warning to would-be velocipedists’* by ‘A Light Dragoon’ is self-explanatory, but is further enhanced by a pictorial cover showing a night scene of a bicyclist running over two others who have crashed into each other in a mud-filled pot-hole. See also Ritchie, *King of the Road,* 96-7. [↑](#footnote-ref-19)
20. Wiebe Bijker, *Of Bicycles, Bakelites, and Bulbs,* 73-77. The problematic of bicycling can be seen appearing in cycling handbooks from an early date, typical is *Bicycling: Its rise and development, a text book for riders*. It devotes a single paragraph on page 10 to ‘utility’, the rest to racing and touring. [↑](#footnote-ref-20)
21. The exception being the *Metropolitan Paving Act*, which outlawed the use of wheeled vehicles on footways. [↑](#footnote-ref-21)
22. Ritchie, *King of the Road,* 84 -89. [↑](#footnote-ref-22)
23. See note 45 [↑](#footnote-ref-23)
24. *The Highways and Locomotive (Amendment) Act, 1878* (41 & 42 VICT. CAP. 77.) s26(5) redefined at section 85 of *The Local Government Act (England & Wales),* *1888*. Williamson, *The Rights & Liabilities of Cyclists*, 30. [↑](#footnote-ref-24)
25. Lightwood, *The Cyclists' Touring Club,* 138-155. [↑](#footnote-ref-25)
26. See, for example, Bernardin, ‘Traffic Safety in the United States,’ XX. [↑](#footnote-ref-26)
27. Wilkinson, *The Highways and Byways of England,* 267-270. [↑](#footnote-ref-27)
28. The origins of the modern tricycle are to be found in James Starley’s attempts to design a women’s bicycle capable of being ridden in a full skirt, which led to the ‘Coventry Lever’ tricycle of 1877. Starley was careful not to overtly gender the machine and tricycling became popular for both sexes. As a general rule bicycles cost between £10 and £20, tricycles £20 and £30. For an overview of prices see Griffith, *Bicycles and Tricycles of the Year* annually from 1878. [↑](#footnote-ref-28)
29. For a history of the CTC in its early years see Lightwood, *The Cyclists' Touring Club* and Oakley, *Winged Wheel*. [↑](#footnote-ref-29)
30. ‘Coming a cropper’ was a popular term amongst cyclists to describe accidents involving a fall from the machine, usually by losing control in adverse road conditions. [↑](#footnote-ref-30)
31. Wilkinson, *The Highways and Byways of England,* 269-270. See also Lightwood, *The Cyclists' Touring Club,* 191-194 also *The Boneshaker* 56 (1969) 141-143 and 79 (1975) 249-251. [↑](#footnote-ref-31)
32. From 1706 ‘Turnpike Trusts’ maintained and improved sections of road, in return for which they could levy tolls. At their peak, over 1000 trusts administered around 30,000 miles in England & Wales. Albert, *The Turnpike Road System* and http://turnpikes.org.uk [↑](#footnote-ref-32)
33. ‘Disturnpike road’ was the legal term for a toll road where the Trust had either gone dormant or been wound up, with the road given over to free public use, but with no facility for its upkeep. See Sections 3-27 in *The Highways and Locomotives (Amendment) Act, 1878* (41 & 42. VICT. CAP. 77.) [↑](#footnote-ref-33)
34. Cyclists had been the butt of jokes as to what they should pay at toll gates in the 1860s, for example see Ritchie, *King of The Road,*70, but more general complaints came from road users as turnpike trusts continued to demand tolls but lacked the funds to maintain roads, Wilkinson, *The Highways and Byways of England,* 205-209. See Howard, *The Roads of England and Wales,* vii, for contemporary comment as to the state of the Turnpikes and main roads in general. [↑](#footnote-ref-34)
35. Announced in the CTC *Monthly Gazette* inJanuary 1887, Lightwood, *The Cyclists' Touring Club,* 225. [↑](#footnote-ref-35)
36. Lightwood, *The Cyclists' Touring Club,* 225. [↑](#footnote-ref-36)
37. A parallel can be drawn to the organisations discussed by Steve Bernardin elsewhere in this volume. [↑](#footnote-ref-37)
38. Rt Hon The Earl of Abermarle, *Cycling*, 37&38 (1895). [↑](#footnote-ref-38)
39. In spite of these revisions there remained no national road body and a confusing complexity of local authority responsibilities below that of the County Councils. Webb, *English Local Government,* 223, 243-246. [↑](#footnote-ref-39)
40. In cycling histories such positivism is often used to reaffirm the cycle as a harbinger of motorisation, for example Herlihy, *Bicycle*, 298. [↑](#footnote-ref-40)
41. Water-bound describes a road surface not ‘sealed’ by use of bitumen, tar or cement, nor ‘paved’ using setts, blocks, slabs or cobbles. For detail see Law, *The Construction of Roads and Streets*. [↑](#footnote-ref-41)
42. Rees Jeffreys first attended the RIA in 1900 as the CTC’s representative. The following year he became the RIA’s secretary, while also chairing the Metropolitan District Association of the CTC. In 1904 he became Technical Secretary of the Automobile Club and secretary of the Motor Union. Reid, *Roads Were not Built for Cars,* 132-135. [↑](#footnote-ref-42)
43. Wilkinson, writing in the context of late Edwardian road improvement, noted that ‘Already the dreams of old cyclists have ... been realised’ and it was now ‘the persistent agitation carried on by automobilists’ that would achieve ‘still greater improvements’ *The Highways and Byways of England,* 270. [↑](#footnote-ref-43)
44. In the UK road racing was seen to impede and disrupt day to day traffic. The National Cyclists’ Union, moved to prohibit it in 1890. Clubs that persisted with road racing were blackballed by the NCU and found their activities disrupted by the police, for example the North Road Cycle Club which gave up road racing for this reason in 1894. *The Boneshaker* 150 (1999) 35-36 and 111 (1986) 15. [↑](#footnote-ref-44)
45. *The Locomotives Act, 1865* (28 & 29 VICT. CAP. 83. – s3) set limits on ‘locomotives’ at four miles per hour (two in villages, towns and cities) preceded by a flag bearer. Modified under *The Highways and Locomotive (Amendment) Act, 1878* (41 & 42 VICT. CAP. 77. Part II) that, in England, a person ‘shall precede by at least twenty yards the locomotive on foot’. Glen, *The Highways Acts*, 237-239. [↑](#footnote-ref-45)
46. Salomons was president of the Tunbridge Wells Cycle Club (where he was also mayor) in the 1880s, while Lawson was a key player in the development of the chain-driven safety bicycle and was a major figure in the cycle industry, particularly in financial speculation. *The Boneshaker* 180 (2009) 26-27; Roberts, *Cycling History, Myths and Queries*, 43, 58-63; Plowden, *The Motor Car and Politics*, 25-31. Reid, *Roads were not Built for Cars*, 27-30, 187, 242 [↑](#footnote-ref-46)
47. Knight, *Notes on Motor Carriages,* 79*,* believed that ‘within a year or two, a very fair carriage for two passengers will be procured for £75 or £80’. In fact, this was ambitious**.** Using*Peach’s Motor Annual* *1905,* vii-xvi, the cheapest car, a light single cylinder was £90, but most light cars under £200 were above £150 and these were few in comparison to those above £200. The average price was approximately £500. Motor cycles started with the 2.5hp Kerry at £29.8.0 rising to £68.5.0. At this period a craftsman earned about £2 a week (£8 per month) and a labourer £1.5.0 (£5 per month). See Brown *A Perspective on Wages and Prices,* 12, and Plowden, *The Motor Car and Politics,* 39.Plowden points out that at this time less than 5% of the population left a total estate to a value of £300 or more, equivalent to that of a motor car. The exchange rate was approximately $5 to £1. [↑](#footnote-ref-47)
48. *The Locomotives on Highways Act, 1896* (59 & 60 VICT. CAP. 36). Williamson, *The Motor Car Acts*, 13. [↑](#footnote-ref-48)
49. For a full account of the complex machinations surrounding the foundation of the early UK motoring clubs see Brendon, *Motoring Century,* 24-38. . The AC continues to exist as the Royal Automobile Club (RAC). [↑](#footnote-ref-49)
50. Knight, *Notes on Motor Carriages,* 5, 81-83. Plowden, *The Motor Car and Politics*, 51,59. In fact it took a long time for ‘necessary’ motor traffic to materialise and commercial horse traffic increased by approximately 13% in the first decade of the 20th century. Barker, *The Rise and Rise of Road Transport,* 60-61. [↑](#footnote-ref-50)
51. *The Motor Car Act*, *1903* (3 EDW. 7. CH. 36. – s9). For the full text see Williamson, *The Motor Car Acts* and also *Motoring Annual and Motorist’s Year Book*, 263-277 with extra detail and commentary. [↑](#footnote-ref-51)
52. This is the pattern of the modern bicycle popularised by Starley’s ‘Rover’ of 1885. It could be braked hard on the front wheel without high risk of the rider being pitched over the bars. A plethora of brakes and free-wheel clutches were developed in the later 1890s rendering almost all the ‘dangerous’ hills of the early 1880s rideable. See Clayton 'The Origin of the Bowden Cable', 13-18. [↑](#footnote-ref-52)
53. RAPID DESCENT, DANGEROUS TURNING, LEVEL CROSSING, WATER SPLASH, and GATE. Lightwood, *The Cyclists' Touring Club,* 193-195. [↑](#footnote-ref-53)
54. In mainland Europe the concept of universal road signage for motorists had been discussed by the Ligue Internationale des Associations Touristes in 1900, but in spite of four pictographic symbols for bends, uneven road, level crossing and cross-roads being accepted for use by the various European motoring and touring clubs, the idea that such signage should be state controlled was rejected and continued to be so for a decade. Mom ‘Building an Infrastructure for the Automobile System’, 2,5,6. Samples of the signs were shown to the AC Executive. Wllrich, *Did You Notice the Signs*, 132-133. [↑](#footnote-ref-54)
55. *Motoring Annual and Motorist’s Year Book*, 286. [↑](#footnote-ref-55)
56. Alfred Harmsworth (1st Viscount Nothcliffe) was a newspaper magnate and an enthusiastic supporter of automobilism, although his papers often did not reflect this, see Plowden, *The Motor Car and Politics,* 47-48. The choice of the Portsmouth Road (now the A3), was not apolitical; since the 1870s it had been seen as the definitive cycling road, particularly as far as The Anchor inn at Ripley (some twenty five miles from London), which was termed ‘the Mecca of all cyclists’. For details see Oddy, ‘The Anchor Hotel, Ripley’, 108-114. [↑](#footnote-ref-56)
57. *The Motor Car Act*, *1903* (3 EDW. 7. CH. 36.) ‘Erection of notice boards’ 10-1. The ‘10 MILES’ plate fitted beneath the speed limit was superfluous as this was the only option given in the Act. [↑](#footnote-ref-57)
58. *The Motor Car Act*, *1903* (3 EDW. 7. CH. 36.) ‘Erection of notice boards’ 10-2. More contextual information can be found in Department of Transport, *The History of Traffic Signs*, 6. [↑](#footnote-ref-58)
59. For instance they were illustrated as a preface to Inglis’ *Contour Road Book* series. [↑](#footnote-ref-59)
60. For the early development of this and its relationship to the road lobby see O’Connell, *The Car and British Society,* 125. [↑](#footnote-ref-60)
61. An example is reported in *The Motor* 116 (26 April 1904) 235. ‘At a meeting of the Derbyshire CC, the Highways Committee made a report referring to the new Motor Car Act. 2000 posts, costing from 10s. To £1 each, would be required for the county. In view of an offer from the C.T.C. of a supply of caution boards with nuts and bolts... provided the council would take over the responsibility for the maintenance of the existing boards and posts...the Highways Committee recommended that no action be taken with regard to new posts for at least one year.’ [↑](#footnote-ref-61)
62. See Brendon *The Motoring Century.* 140, 142. Remarkably, Brendon does not seem to have been aware of the AC’s 1902-3 signage, but it is likely that the shape of the ‘motor notice’ was inspired by it. In 1910 The North Eastern Automobile Club seems to have been exceptional in introducing ‘international signs’ based on the LIAT pictograms (see note 54). Scottish Tube *Wrot Iron* gives a cover illustration. [↑](#footnote-ref-62)
63. In 1902 the figures were 2,331 DANGER and 1,989 CAUTION and this was rising. See Lightwood, *The Cyclists' Touring Club,* 195. [↑](#footnote-ref-63)
64. For figures see Lightwood, *The Cyclists' Touring Club,* 274. [↑](#footnote-ref-64)
65. Lightwood, *The Cyclists' Touring Club,* 197-198. [↑](#footnote-ref-65)
66. Raleigh's output rising to a high of approximately 55,022 per year in 13-14, from 7,813 in 1896-97 in an almost constant increase; for full figures see Rosen, *Framing Production*, 52. The retail price of a new ‘popular’ model had fallen to about £6 from about £12. First class mounts to £12-£15 from £20-£30. [↑](#footnote-ref-66)
67. For a fuller discussion of British cycling in this period see Oddy, ‘The Flaneur on Wheels?’ 97-112. [↑](#footnote-ref-67)
68. As described in ‘Opinion’ *The Motor* 93 (1903) 358. [↑](#footnote-ref-68)
69. Webb, *English Local Government,* 250-253. Plowden, *The Motor Car and Politics,* 84-96. [↑](#footnote-ref-69)
70. Department of Transport, *The History of Traffic Signs*, 6-7. Willrich, *Did You Notice the Signs*, 123-124 The *Circular* also introduced specifications to apply road numbering to finger posts. A very good idea of the problematic of through motoring on roads before numbering and advanced signage (and of road conditions) can be got from Johnson, *Roads Made Easy With Camera and Pen*. [↑](#footnote-ref-70)
71. CORNER, CROSS ROADS and STEEP HILL described the hazards mentioned in 1903 and were joined by SCHOOL, LEVEL CROSSING, and DOUBLE CORNER. The pictograms, while referential to European signs, had a distinctive, British, style. [↑](#footnote-ref-71)
72. Mostly other dangers were detailed by text alone, but some authorities adjusted the pictograms. The lone open triangle remained valid as a general ‘danger’ sign. [↑](#footnote-ref-72)
73. Department of Transport, *The History of Traffic Signs*, 27. [↑](#footnote-ref-73)
74. Under *Memorandum No291 (Roads),* Hands, *Road Signs*, 9. [↑](#footnote-ref-74)
75. Department of Transport, *The History of Traffic Signs*, 7-8. . Finger posts were erected at road junctions and have destination boards that point down each road; often each board terminates in a likeness of a pointing finger. Willrich, *Did You Notice the Signs,* 20-30; Hands, *Road signs*, 16-22. [↑](#footnote-ref-75)
76. Willrich, *Did You Notice the Signs*, 148-150. [↑](#footnote-ref-76)
77. The ring already carried meaning as an order in its use for the 1904 speed limit notice and as the head for

 local authority finger posts, which motorists were meant to slow to 10mph to pass. [↑](#footnote-ref-77)
78. *The Road Traffic Act*, *1930* (20 & 21 GEO. 5. CH. 43.) Rees, *The Road Traffic Acts 1930-1934*.The implications of this are discussed by O’Connell, *The Car and British Society,* 130-136. [↑](#footnote-ref-78)
79. See, for instance, Howat, *The Law of Cyclists,* 11-13. [↑](#footnote-ref-79)
80. *The Road Traffic Act, 1930* at 20 & 21 GEO. 5. CH. 43. (1st Aug) S48, ‘Erection of notice boards’, S48(2) [↑](#footnote-ref-80)
81. *The Traffic Signs (Size, Colour and Type) Provisional Regulations 1933*, *dated December 22*.Department of Transport, *The History of Traffic Signs*, 8-9. For all regulations see Woodward, *Woodward’s Road Traffic Acts and Orders*. [↑](#footnote-ref-81)
82. Willrich, *Did You Notice the Signs*, 45,150 [↑](#footnote-ref-82)
83. The motoring organisations had consistently opposed any sign that would demand a driver to stop. Willrich, *Did You Notice the Signs*, 150-151. [↑](#footnote-ref-83)
84. The *Highway Code* did not include signs in its first editions; in the mid-1930s it gave only 10 examples ‘among the more important of the traffic signs…’ 21 in the 1936 edn. The number had risen to 12 ‘examples of signs that must be observed’ and 9 ‘examples of signs which warn and inform’ 23,24 in the 1966 edition. At no time were more than six pictographic warning signs illustrated. This compares to 37-39 in the 1968 edition (the first to include the European style ‘New Traffic Signs’ of 1964) 31 circular ‘signs giving orders’ and 41 triangular pictographic ‘warning signs’. [↑](#footnote-ref-84)
85. It was not until the 1960s that the Ministry was convinced that text could be dispensed with and traffic signs could finally adopt continental European design., The current UK road signage was introduced under *The Traffic Signs Regulations and Directions, 1964* on 1 Jan 1965 and for public education the full range was published in a booklet *The New Traffic Signs*. [↑](#footnote-ref-85)
86. The ‘sign indicating a suitable crossing place for pedestrians’ was updated ‘on account of urgency’ in *The Traffic Signs (Pedestrian Crossings) Provisional Regulations, 1934,* and came into effect on 7 June 1934. [↑](#footnote-ref-86)
87. To an extent this was developed from the National Safety First Association, *Safety First on the Road,* a booklet ‘issued with the approval of the Ministry of Transport to Registration Authorities free of charge for distribution with every driver’s licence.’ Although legislated by the 1930 Act, it was entirely sponsored by the motoring organisations. It barely mentions any other road users than motorists. [↑](#footnote-ref-87)
88. Ministry of Transport, *The Highway Code* (1931). ‘It is hoped that the code of conduct now issued in accordance with the direction contained in the Act may come to be universally respected and obeyed....’ 1. Six pages are given to motor vehicles, four to specified other users, two to all users, a single page to pedestrians. It was appended by advertising indicative of the close relationship between government and motoring interests, the AA and RAC, the Motor Union Insurance Co, *The Autocar* and *The Motor Cycle*, Castrol motor oil, and BP petrol. [↑](#footnote-ref-88)
89. Department of Transport, *The History of Traffic Signs*, 21-22, 24. [↑](#footnote-ref-89)
90. For a typical assessment of the success of this ‘propaganda’ see *Good Motoring Road Safety Handbook 1957-1958,* 80. Belisha was subsequently made President of the Pedestrians’ Association (now Living Streets), which used the beacon as part of their emblem. [↑](#footnote-ref-90)
91. 12 different in set No 47of 1935, rising to 24 in the post war set No772 of 1959. Richardson, *Dinky Toys,* 67,242, 245. [↑](#footnote-ref-91)
92. Whatley, *Safety for Young Citizens,* cover. *Good Motoring Road Safety Handbook 1957-1958,* 36-48 [↑](#footnote-ref-92)
93. As the author has been working on this article he has been drinking from disposable cups printed with the current road sign for ‘Other danger’ beneath which is the text ‘Contents HOT’. [↑](#footnote-ref-93)
94. The Hercules Cycle and Motor Co set the retail price of their machines to about £4, with hire purchase based on tram and bus fares for an urban worker, bringing new machines within the budget of much of the working class. From 1933-39 Hercules made approximately 3,000,000 machines. Millward, ‘The Founding of the Hercules Cycle & Motor Co’, 99. [↑](#footnote-ref-94)
95. As a fitting finale to the invisibility of cycling at this period , the major campaign carried out by the CTC between 1927 and 1934 was to fight the ‘red light act’, a proposal that cyclists should be forced to show tail lights after dark in order that motorists could more easily see them. It was the last major campaign to attempt to disrupt the primacy of the motor car on British roads until recent times. See *Why Cyclists Object To Compulsory Rear Lights*.

 [↑](#footnote-ref-95)