

Cars & Crime 2026 Symposium

DAY 1 - Thursday

- 9.00** **Tea and coffee** (Craiglands Hotel)
- 9.30** **Introduction** (Craiglands Hotel)
- 9.45** **Session 1** (Craiglands Hotel)
Sally Kyd - *Reframing road traffic offences: Driving as a prima facie unlawful act*
Nicholas Goldrosen - *Sentencing motonormatively*
- 10.45** **Coffee** (Craiglands Hotel)
- 11.00** **Session 2** (Craiglands Hotel / Ilkley Moor)
Juan Fonseca Zamora – *Predicting traffic offence hotspots: A network-based approach to identifying congestion-induced violations in residential areas*
Caroline Tait - *The violence toll of sprawls: A registered report using STATS19 recorded collisions against vulnerable road users*
- 12.00** **STATS19 demo** (Craiglands Hotel)
Roger Beecham & Robin Lovelace
- 13.00** **Lunch** (Craiglands Hotel)
- 14.00** **Session 3** (Craiglands Hotel / Ilkley Moor)
Samuel Moreira - *Do fair traffic stops matter? Police procedural justice and legitimacy, and drivers' behaviour*
Mariana Machado - *Do professional and nonprofessional drivers behave differently on the road? A comparison of driving violations, prosocial behaviors, and road accidents*
- 15.00** **Tea** (Craiglands Hotel / Ilkley Moor)
- 15.15** **Session 4** (Craiglands Hotel / Ilkley Moor)
Victoria Lebec - *Serious injury collision investigation in London: Challenging to reform, despite Vision Zero*
Helen Wells - *"I think it's affirmation that you're not just being a dick": Validation, adaptation and rejection in the context of police decisions about 'journey cam' footage submitted by road users*
Ruth Halkon - *Policing and digital citizen evidence: Unlocking the potential for public participation'*
- 16.45** **Discussion** (Craiglands Hotel / Ilkley Moor)
The Road Violence Manifesto
- 17.15** **Walk** (Ilkley Moor)
- 19.00** **Drinks and dinner** (Cow & Calf Pub)

DAY 2 – Friday

9.15 **Session 5** (Craiglands Hotel)

Laura Vozmediano - *Perceptions of safety and sustainable mobility choices: Lessons learned and research plans in the Basque Country*

Alex Trinidad - *Does road violence victimisation explain perceptions of safety?*

10.15 **Session 6** (Craiglands Hotel / Ilkley Moors)

Reka Solymosi - *The safety of women Road users across greater Manchester*

Charles Lanfear - *Effects of bystander modes of transportation on pedestrians' guardianship and safety perceptions*

11.15 **Coffee** (Craiglands Hotel)

11.30 **Session 7** (Craiglands Hotel / Ilkley Moors)

Henry Yeomans - *Should England and Wales lower its legal blood alcohol content limit for driving?*

Noel Cass - *E-micromobility crime: botched regulation and confused policing*

Amy Aeron-Thomas - *How the justice system can help promote active travel*

13.00 **Lunch** (Craiglands Hotel)

14.00 **Session 8** (Craiglands Hotel / Ilkley Moors)

Jose Pina-Sánchez - *In defence of walkability as a crime prevention strategy*

Ian Loader - *Securing car-centric cities: An ecological reconstruction of 'Designing out crime'*

15.00 **Future plans and close** (Craiglands Hotel)

16.00 **Drinks** (Flying Duck / Bar T'at)

List of abstracts

Reframing road traffic offences: Driving as a *prima facie* unlawful act

Sally Kyd (University of Leicester)

My paper will explore how the criminal law, in regulating the use of motor vehicles, has been shaped by societal views dominated by motonormativity. One consequence of this is that driving is often assumed to be lawful, unless proved that an identifiable statutory offence has been breached.

Although not necessarily obvious to those unfamiliar with criminal law theory, driving offences such as dangerous driving (and causing serious injury or death thereby) share much in common with sexual offences such as rape. They are both “conduct crimes” rather than “result crimes”. Conviction in such cases relies on the jury (or magistrates) being persuaded that the defendant has departed sufficiently from what can be expected of him in the circumstances so that he should be convicted of a serious criminal offence. In the case of rape, the defendant must depart from an expected standard of behaviour through proof of lack of reasonable belief in consent. In the case of dangerous driving offences, the defendant must have fallen far below the standard of a competent and careful driver. Both are thus crimes of negligence. Jonathan Herring and Sorcha McCormack have argued for a rethinking of rape, starting from the proposition that a sexual penetration is a *prima facie* legal wrong which requires justification.

I will argue that we similarly ought to view driving a motor vehicle as a *prima facie* legal wrong. I do not go so far as to argue that the act of driving requires *justification*. Rather, my simple proposal is that in framing driving as a *prima facie* unlawful act, we can begin to try to undo some of the damage caused by motonormativity. Driving should only be deemed lawful *if* the driver complies with obligations imposed on them by regulatory offences. Driving is lawful if the driver has appropriate documentation (valid licence; insurance), is fit to drive (not impaired by drink or drugs, whether prescribed or unlawful), has their attention on their driving (and not allowing themselves to be distracted by, for example, their phone), the vehicle is in a roadworthy condition, and the driver is abiding by the speed limit and other rules indicated by road markings and signage.

By legally reframing the act of driving in this way, the ambition of normative compliance with road traffic offences might more easily be achieved. We can also begin to think about what changes are needed to the definition of such offences and their enforcement.

Sentencing motonormatively

Nicholas Goldrosen (Pennsylvania State University)

The centrality of cars to everyday life—especially in rural and suburban areas—means that road-related risks and harms are often perceived as less severe. I consider this motonormativity in the sentencing context, with the hypothesis that judges might sentence defendants for motor vehicle offences differently by virtue of decreased blameworthiness (motor vehicle harms seen as less weighty) and decreased need for incapacitation (less perceived risk of future harm). Using Pennsylvania (USA) sentencing data, I show that homicides caused by motor vehicles are punished more harshly than other similar homicides, but only in cases involving driving under the influence of alcohol (DUI); non-alcohol-related homicides are punished more leniently. Increased car dependence in the local area is associated with shorter sentence lengths for vehicular homicides. Non-homicide DUI offences (which have a strict mandatory minimum structure) do not display this local variation. I argue that the bifurcation in sentencing outcomes reflects the social view of driving whilst intoxicated as a particularly serious offence, whilst simultaneously downplaying the harms that result from “normative” driving. Similarly, the analysis of DUI sentences shows that sentencing legislation is a potential mechanism to reduce the impact of car dependence on sentencing variation for motoring offences.

Predicting traffic offence hotspots:

A network-based approach to identifying congestion-induced violations in residential areas

Juan Fonseca Zamora (University of Leeds)

Traffic offences in urban environments are often symptoms of broader systemic issues, such as severe congestion on major arterial roads. As main corridors become congested, drivers frequently seek alternative routes through residential areas, a practice known as rat-running, leading to reduced road safety, and negative impacts on local communities. Authorities aiming to curb these offences are often constrained by limited data and the sheer scale of the network, making it difficult to allocate enforcement and traffic management resources effectively. We propose a predictive screening methodology that uses network analysis and open data to identify residential streets most susceptible to congestion-induced traffic offences. Applying the method to Bogotá, Colombia, we integrated OpenStreetMap road network data, observed speeds on major roads, and georeferenced traffic offence reports. By calculating changes in betweenness centrality (ΔBC) on a travel-time-weighted network graph under varying congestion levels, we quantified each link's susceptibility to receiving redistributed traffic. Using a two-level cross-classified multilevel logistic model, we incorporated traffic offence reports as an empirical proxy for the presence of cut-through traffic. Our results demonstrate that increased ΔBC on residential streets is positively and significantly associated with a higher probability of traffic violation reports. Furthermore, this relationship varies significantly across city sectors, highlighting the complex interplay between local network structure, driver behaviour, and traffic enforcement intensity. This methodology provides a proactive, data-driven tool for authorities to anticipate where traffic offences are most likely to occur independently of historical incident data, enabling more targeted enforcement and strategic traffic management interventions.

The road violence toll of urban sprawl: A registered report of collisions with cyclists and pedestrians across England

Jose Pina-Sánchez, Caroline Tait, Roger Beecham & Juan Fonseca Zamora (University of Leeds)

We know the risk of collision for cyclists and pedestrians is higher in sprawls than in city centres. We also know that the higher risk of collision generated by residents from car-dependent sprawls is not confined to their residential areas but due to commuting the risk is disproportionately imposed on city dwellers. However, there is no evidence facilitating direct comparisons with which to illustrate the road harm imposed by urban sprawls. This registered report will combine collision data from the Department for Transport and the Urban Grammar Spatial Signatures dataset that characterises geography by form and function to estimate the share of road violence induced by sprawls' residents within and outside their localities, and relative to levels of road violence generated by city dwellers in Great Britain. Furthermore, using the subset of collisions data including contributory factors, we will provide a lower bound estimate regarding the share of collisions that could be classified as motoring offences. Drawing on these findings we will: i) reassess the widely held belief of sprawls as safer than city centres; ii) test the perception of city dwellers as less law-abiding than residents from urban sprawls; and iii) question the effectiveness of crime prevention strategies that actively promote car-dependent developments.

STATS19 demo

Roger Beecham & Robin Lovelace (University of Leeds)

Do fair traffic stops matter? Police procedural justice and legitimacy, and drivers' behaviour

Samuel Moreira, Josefina Castro, Sandra Torres, Mariana Machado, Inês Guedes, Margarida Santos, Carla Cardoso (University of Porto)

Traffic stops are the most common form of police–citizen interaction and, as such, play a crucial role in shaping people's perceptions of police procedural justice and legitimacy. While traffic policing has traditionally relied on deterrence-based assumptions to promote drivers' compliance with traffic rules, procedural justice theory argues that police fairness in treatment and decision-making fosters police legitimacy, which, in turn, promotes voluntary compliance with the law. This study examines normative

and instrumental pathways to police legitimacy and traffic rules compliance. It explores whether drivers' perceptions of police procedural justice during the most recent contact predict police legitimacy, whether this relationship is mediated by general perceptions of police procedural justice, and whether deterrence (perceived certainty of sanction) contributes to police legitimacy. We further examined whether police legitimacy and deterrence are associated with transgressive and prosocial driving behaviours. Data for this study were collected through a self-report survey administered to a large sample of Portuguese-licensed drivers (N = 1,221). Findings indicate that the mere occurrence of police stops or searches does not, in itself, predict police legitimacy. However, procedural justice by the police during the last contact is positively associated with police legitimacy, and this association operates largely through general perceptions of police procedural justice. In turn, police legitimacy is associated with lower engagement in transgressive driving and greater involvement in prosocial driving behaviours. Deterrence also contributes to these behavioural outcomes, suggesting that instrumental and normative considerations coexist in shaping compliance. Implications for legitimacy-based approaches to traffic policing are discussed.

Do professional and nonprofessional drivers behave differently on the road? A comparison of driving violations, prosocial behaviors, and road accidents

Mariana Sebastião Machado, Carla Cardoso, Josefina Castro, Sandra Torres, Margarida Santos, Inês Guedes & Samuel Moreira (University of Porto)

Driving violations are a critical social problem worldwide, given their high prevalence and their role as an important risk factor for road accidents. In this context, scientific literature highlights the possibility of differences between professional and nonprofessional drivers in how they behave in traffic, which is intrinsically related to how the driving task is undertaken and perceived. However, research has primarily examined differences in the involvement of these driver groups in road accidents, overlooking the possibility that they may also differ in their behavioural patterns, including not only transgressive but also prosocial behaviours. Taking this into account, the current study aims to explore behavioral differences between professional and nonprofessional drivers. To achieve these goals, 1203 Portuguese drivers, split into professional (n = 656) and nonprofessional (n = 547), completed a self-reported survey that comprised driving violations, prosocial driving behaviors, and involvement in road accidents. Results indicated that both groups reported higher levels of prosocial driving behaviors than of driving violations. Nevertheless, professional drivers exhibited more prosocial behaviors than nonprofessional drivers, but no significant differences were found between the groups in driving violations. Regarding involvement in road accidents, the results indicated that professional drivers were more frequently involved than nonprofessional drivers. Moreover, in both groups, a positive association between driving violations and road accident involvement was observed. The study's results, limitations, and possible directions for future research are discussed in light of the literature in the field.

The safety of women road users across Greater Manchester

Nicola Fox, Reka Solymosi, Caroline Miles, Rose Broad, Karen Lucas & Helen Zheng (University of Manchester)

In this presentation, we will present interim findings from a Greater Manchester Combined Authority (GMCA) funded research project on the safety of women road users (for example, as pedestrians, cyclists, drivers and passengers). This project seeks to explore the inequalities and challenges experienced by women road users, how women's perceptions of safety and experiences impact on their use of roads, how they negotiate these concerns and how police could improve their responses to women. We will draw upon the initial phase of the project, which involves a scoping exercise and analysis of existing data (including police collision data and travel safety data) on gendered experiences of using roads in Greater Manchester, which will inform the latter phases of the project, involving a survey, focus groups and interviews with women road users in Greater Manchester. Our results highlight gendered differences in safety perceptions, travel behaviour and injury patterns, showing how safety concerns shape women's transport choices and intersect with place, time and caring responsibilities in ways current monitoring approaches often overlook. By integrating mapped evidence with lived-experience insights, the project aims to build a fuller picture of women's encounters with road environments and identify directions for future interventions.

Effects of bystander modes of transportation on pedestrians' guardianship and safety perceptions

Charles Lanfear (University of Cambridge) & Jose Pina-Sánchez (University of Leeds)

Serious injury collision investigation in London: Challenging to reform, despite Vision Zero

Amy Aeron-Thomas and Victoria Lebrech (Action Vision Zero)

Nearly 4,000 people are reported to suffer serious injuries on London's roads every year. Of those, around 1,000 will have 'very serious' or 'moderately serious' injuries e.g. multiple wounds, amputation, several fractures. The vast majority of these collisions will be investigated at-scene by a borough officer who, up to 2024, had received only 22 minutes of training on driving offences, 20 minutes on vehicle offences, and 20 minutes on drink/drug driving as part of basic training for new officers. In most instances, the borough officer will then pass the case on to police staff at Marlowe House who have limited investigation powers.

Better collision investigations are key to (1) reducing road harm through better understanding the causes of collisions; (2) detecting and sanctioning criminal driving behaviour; and (3) securing financial compensation for injured people. Action Vision Zero has since 2021 been working to improve how these collisions are investigated, and our presentation will reflect on the challenges and wins in a city whose police force has adopted Vision Zero. Whilst 2024 saw the London Assembly's Police and Crime Committee launch an inquiry into serious injury collision investigations, change has been slow.

"I think it's affirmation that you're not just being a dick":

Validation, adaptation and rejection in the context of police decisions about 'journey cam' footage submitted by road users

Helen Wells and Santiago Amietta (Keele University)

Road users are, in increasing numbers, using 'journey cams' (including dash cams, helmet cams, body cams, and mobile phones) as a way of capturing digital evidence of behaviour on the roads that they deem unacceptable and worthy of police attention. These submissions are not solicited by police forces, which have nevertheless had to respond to this increased demand. Submissions of footage are, we suggest, 'pitched' as 'policeable moments' by the public, as attempts to secure some police resource. Submissions then take on additional meaning, however, as they are either accepted, rejected or (seemingly) ignored by police decision-makers. Using data from a national survey, from interviews with those who have submitted footage, and with those who make decisions about footage, we explore the negotiation of access to limited police resources, and the continued role of the police in shaping citizens' feelings about status, belonging and value.

Policing and digital citizen evidence: Unlocking the potential for public participation

Ruth Halkon (The Police Foundation)

Digital citizen evidence – including footage from cyclists, pedestrians, horse riders, and drivers – is transforming how harm on the roads is detected and addressed. Drawing on a literature review, expert interviews, focus groups, a nationally representative public survey and new data from 22 UK police forces, this paper argues digital citizen evidence offers a vital and largely untapped resource for improving safety across all modes of travel. Such footage captures near misses, intimidation and everyday endangerment that seldom appear in official statistics, giving visibility to risks disproportionately experienced by vulnerable road users. When designed and governed ethically, digital reporting can free officer time, support targeted prevention, and strengthen trust by enabling the public to actively contribute to safer streets.

However, the rapid growth of submitted footage raises concerns about privacy, data governance and procedural justice. Forces report annual submissions ranging from hundreds to nearly 23,000, with sharp variation in processing capacity, automation and feedback. Inconsistent systems, limited communication

and unclear victim or witness status can undermine confidence, entrench inequalities, shift evidential burdens onto the public and blur boundaries between state and civilian surveillance.

We propose a national framework grounded in privacy by design, with consistent portals, ethical triage, proportionate action thresholds and trauma informed communication. Used responsibly, digital citizen evidence can democratise road policing, improve protection for vulnerable road users, and help foster a fairer, more accountable approach to managing road danger.

Perceptions of safety and sustainable mobility choices: Lessons learned and research plans in the Basque Country

Laura Vozmediano (University of the Basque Country), Alexander Trinidad (University of Cologne) & Jone Aliri (University of the Basque Country)

Fear of crime and perceived safety are recognized factors shaping urban mobility, yet their role varies significantly across contexts. This presentation draws on two empirical studies conducted in the Basque Country to synthesize key findings and outline a future research agenda. The first study compared safety perceptions and active transportation decisions across two neighborhoods of contrasting socioeconomic levels in a mid-sized Spanish city (n=226). Residents in disadvantaged environments reported higher perceived unsafety and assigned greater weight to crime- and traffic-related safety when deciding to walk or cycle. A pattern of "endo-avoidance" -avoiding places within one's own neighborhood was identified in more vulnerable contexts. The second study analyzed parental predictors of children's active school commuting in Donostia-San Sebastián (n=819). In this low-crime city, altruistic fear of crime was not a significant predictor. Instead, perceived route safety and quality — encompassing traffic safety, maintenance, and route pleasantness — dominated all other predictors. Parental active mobility habits emerged as the third strongest predictor, suggesting intergenerational transmission of sustainable travel behavior. Together, these findings raise questions about the contextual boundaries of safety perception effects on mobility — including when and how fear matters — that will be discussed alongside methodological priorities for future research in this region.

Does road violence victimisation explain perceptions of safety?

Jose Pina-Sánchez (University of Leeds), Alex Trinidad (University of Cologne) & Ian Loader (University of Oxford)

This registered report (work in progress) examines whether experiences of road violence victimisation explain individuals' perceptions of safety, addressing a key assumption underpinning contemporary transport policy. In particular, the study is motivated by recent road safety policies in UK, which prioritise reductions in road collisions as a pathway to broader social and public health benefits. We question whether this assumption is empirically justified.

Drawing on parallels with research in criminology—where victimisation is known to be weakly associated with fear of crime—we investigate whether a similar disconnect exists in the context of road safety. Using observational data from the E-Survey of Road Users' Attitudes (ESRA), we analyse whether pedestrians and cyclists who have experienced road collisions in the past twelve months report different perceived safety levels compared to non-victims. Perceptions of safety are measured on a 10-point scale, with pre-registered criteria defining meaningful differences.

Results will be discussed in the symposium. The study contributes both theoretically and practically by testing assumptions about behaviour change and highlighting the potential need for road safety strategies that explicitly target perceptions of safety alongside collision reduction.

Should England and Wales lower its legal blood alcohol content limit for driving?

Henry Yeomans (University of Leeds)

The UK Government is consulting on a proposal to lower the legal blood alcohol content (BAC) limit for driving in England and Wales from 80mg of alcohol per 100ml of blood to 50mg of alcohol per 100ml of

blood. The current limit is unchanged since 1967 and is the highest in Europe. Its proposed reduction aligns well with a body of international literature that, in general, shows that lowering the BAC limit is associated with improvements in road safety. However, much of this literature is based on findings from evaluations of laws introduced in 1970s, 1980s or 1990s. Evaluations of more recent reforms, including in Scotland and Utah, found that lowering the BAC limit for driving from 80 to 50mg per 100ml of blood had no positive impact on road safety. Two possible explanations of these outcomes have been put forward. The first is that lowering the BAC limit only has a positive effect on road safety when accompanied by wider measures, such as enhanced law enforcement or public education campaigns. The second possible explanation is that lowering the BAC limit does not have a positive effect on drink-driving when implemented in contexts where the prevalence of drink-driving is already low. Both explanations raise questions about the effectiveness of the proposed reform to drink-driving laws in England and Wales, where drink-driving levels are comparatively and historically low.

E-micromobility crime: botched regulation and confused policing

Noel Cass (University of Leeds)

My presentation reports on aspects of criminality, regulation and policing, associated with four modes of 'e-micromobility': e-scooters, e-bikes, e-cargo bikes, and e-motorbikes. It uses data and analysis arising from two projects at the University of Leeds: Elevate ((Innovative Light **E**lectric **V**ehicles for **A**ctive and **D**igital **T**ravel) and E-Safe (**E**quity, **S**ocial Determinants, **A**nti-social Behaviour and **F**uture **E**-Mobility). In Elevate, we interviewed 18 e-scooter owners in 2022, half of whom were still using their vehicles after the introduction of legal trials and their banning for use on public roads. We also researched 49 households' use of e-cargo bikes we loaned them for 1-7 months. In E-Safe, we surveyed and interviewed food delivery e-riders, using legal and legal e-bikes/e-motorbikes. The interview data reveal attitudes of users of illegal and 'semi-legal' vehicles about their regulation and policing, and reveal how the UK's approach to 'semi-legalisation' has had the consequence of tarring modes with the brush of illegality – reducing and stigmatising legitimate use and users.

How the justice system can help promote active travel

Amy Aeron-Thomas (Action Vision Zero)

Active travel is being promoted by government for multiple reasons. Most focus on the role of the transport system and road environment.

This presentation argues there is much the justice system can do to reduce the risk posed to active road users. Starting with enforcement, this means prioritising different offences, lower speed roads and wider detection methods than possible with roads policing officers and fixed cameras. Re sanctions, key issues include the presence of vulnerable road users, out of court sanctions, repeat and extreme offenders, rehabilitation, disqualification and deterrence.

And with cyclists over 300 times more likely to be seriously injured in a crash with a car than any of the car's occupants, the post crash response is also critical, especially collision investigation. What evidence is there that these are thorough and able to identify criminal culpability and civil liability fairly? The few prosecutions that result suggest otherwise. The importance of civil compensation, often missing from justice discussions, will be highlighted. Data will come from the MoJ Criminal Justice Statistics and the Home Office Motoring Offence statistics.

In defence of walkability as a crime prevention strategy

Jose Pina-Sánchez (University of Leeds) and Ian Loader (University of Oxford)

New Urbanist ideas promoting walkability have many purported economic, social, public health and environmental benefits. But they have been criticised by proponents of Crime Prevention through Environmental Design (CPTED), who have blamed street connectivity for facilitating target recognition; providing offenders with access and escape routes, and weakening informal surveillance by making it harder

to distinguish locals from non-locals. This view has been corroborated by more recent body of evidence that has consistently found a positive association between different indexes of walkability and street crime. In this paper, we challenge the consensus portraying walkable neighbourhoods as criminogenic by highlighting two key issues – one methodological, the other substantive - that have been overlooked by CPTED and environmental criminology more broadly. First, the focus on crime counts which confounds crime risk with the number of human interactions in the physical world. Second, the recurring neglect of how walkable neighbourhoods reduce crime beyond their borders, something that becomes clear once motoring offences – the most common form of street crime – are brought within the analytic frame. Once we do this, we argue, it becomes clear that - by indirectly promoting car dependency – crime prevention programmes such as *Secured by Design* inadvertently promote criminal harm. Finally, we explore the points of intersection between CPTED and walkability. Neighbourhoods can be made simultaneously more vibrant, sustainable and safe by reducing road - not street – connectivity, as proposed by urban regeneration strategies such as low traffic neighbourhoods.

Securing car-centric cities:

An ecological reconstruction of *'Designing out crime'*

Ian Loader (University of Oxford) and Jose Pina-Sánchez (University of Leeds)

What can we learn about urban crime and disorder by 'following' the car? In this paper, we address this question via an ecological critique and reconstruction of the 'crime prevention through environmental design' (CPTED) movement. We first describe the ways in which CPTED has since the mid-20th century overlooked the impact of automobility on urban life and danger, seeking instead to 'design out crime' in ways focused on crime against vehicles at the expense of car-generated crime and disorder. CPTED has, we suggest, been an agent in the formation and securing of car-centric cities. We then seek to critically reconfigure the aspiration to 'design' out crime in ways that encompass the mundane harms of auto-centric mobility systems, and attend to the active role that socio-material infrastructures can play in fashioning both safe and liveable urban environments.