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Back to normal. How people make sense of road accidents through guilt

Johannes Starkbaum^a , Kateřina Nedbálková^b , Eva Kotaskova^b ,
Tomáš Paul^b , Katarína Azzamová^b and Karel Němeček^b 

^aSocial Sustainable Transformation Research Group, Institute for Advanced Studies, Vienna, Austria; ^bDepartment of Sociology, Faculty of Social Studies, Masaryk University, Brno, Czech Republic

ABSTRACT

Road crashes are among the most visible forms of violence in automobility. While they are integral to automobility, they also constitute a breach to people's lifeworlds, bringing violence to the fore. Yet the ways in which people make sense of these remain underexplored from a sociological perspective. This article examines how notions of individualized responsibility structure everyday mobility practices and responses to road crashes. Our analysis is based on 25 move-along interviews with persons involved in crashes through various forms of mobility in Vienna, Austria, and situated within the national road safety policy discourse. We identify three moments in which responsibility operates: the anticipation of crashes during everyday movement, the immediate sense-making after a collision, and the subsequent normalization of violence through the attribution of individual mistakes. We show that the interplay of responsibility and guilt functions as a discursive order that channels attention towards individual mistakes, thereby obscuring the systemic violence inherent to automobility and contributing to the reproduction of its hegemony.

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1. Introduction

Automobility is not just about cars. It is a system and socio-technical institution, constitutive for the ways our societies are organized (Böhm et al. 2006; Sheller and Urry 2006). Through its hegemony, it is also entangled with diverse forms of movement, like walking or cycling. Fundamentally, automobility impacts how people move, how public spaces and infrastructures are built, and how we imagine the world to be. Through every-day interactions, automobility is continuously reproduced, together with the normalization of a certain forcefulness embedded within it.

Violence is integral to automobility as it depends on the energy-intense movement of heavy, fast objects through shared space. It inevitably produces harm at one point. Not as a malfunction of the system (Urry 2007), but as a consequence of its very ontology (Braun and Randell 2022a). Moreover, manifestations of the harm (violence) extend beyond crashing objects, encompassing issues like pollution, social inequalities related to car dependency, or domination of public spaces, resulting in fewer spaces given to more sustainable forms of mobility (Böhm et al. 2006).

CONTACT Johannes Starkbaum  starkbaum@ihs.ac.at  Institute for Advanced Studies, Josefstädterstraße 39, Vienna, 1080, Austria

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Braun and Randell (2022a) emphasize that traces of violence are regularly removed, cleared, and unremarkably taken for granted. Furthermore, many apparent improvements in the mobility sector, such as electrification, automation, and safety technologies have been criticized for merely perpetuating current mobility systems (Kesselring 2024) and failing to account for inequalities and mobility justice (Sheller 2021).

Road crashes are among the most visible forms of violence in automobility. They constitute a breach to the order of people's lifeworlds by making violence apparent. And yet there are discourses in place that constantly reproduce the pervasive order of automobility. These discourses suggest that violence can be controlled and that single causes can be extracted (see chapters 1.1 and 1.2). They offer instructions for action, e.g. what to do after a car crash, and embed them in structures of meaning. By framing crashes as preventable exceptions caused by individual error, these discourses construct automobility as fundamentally safe and its violence as a problem of deviant behavior rather than systemic design. Notions of responsibility play a key role in this.

This perspective on road crashes contributes to ongoing discussions in mobility studies by highlighting the role of responsibility in how the violence of automobility is interpreted and managed. Recent work has explored how these questions are covered in media (Fevyer and Aldred 2022; Te Brömmelstroet 2020) and how those involved are affected. Kwakman, Brömmelstroet, and van Emmerik (2025) identify several narrative strategies through which survivors and victims' relatives in Netherlands make sense of responsibility after a crash, including individual responsibility, social responsibility, and the re-humanization of victims, making clear the crash didn't happen as impersonal encounters, as portrayed by the media coverage.

Our article contributes to this discussion by focusing on the narrative of individual responsibility, which remains one of the most dominant and pervasive ways of interpreting road crashes in public discourse, reinforced through legal and institutional procedures that systematically individualize responsibility for crashes. Our results show how individual responsibility is closely tied to anticipating accidents, making sense of the encounters, and ultimately normalizing the violence of automobility. By examining these practices, the article situates responsibility within a broader systemic perspective that transcends individual sense-making and experience.

In this article, we are also less interested in matters of road safety or distribution and causes of crashes (WHO 2023), but rather aim to understand how people make sense of these and mobility more generally. We show that notions of responsibility are entangled, in many ways, with road crashes and the breach they constitute. Typical questions in that context ask about who or what made the mistake that caused the crash? We discuss how, through this dominance of responsibility, the focus of attention shifts towards individuals, thereby maintaining and normalizing the order of automobility. At the core of our empirical analysis are move-along interviews (Bartlett et al. 2023) with people from Vienna, Austria, who had previously been engaged in accidents with various mobility modes. Our methodology is thus grounded in ethnographic inquiry (Lynch 2013) and participatory engagement. We draw on automobility studies and Science and Technology Studies (STS) literature to link our findings with a more systemic perspective (Braun and Randell 2022a; Urry 2007).

We start with a critical reflection of the interplay of violence, crashes and responsibility in automobility, shed light on the Austrian policy discourse related to road crashes, and, after explaining the methodological approach, discuss different notions of responsibility expressed by citizens in relation to road crashes. Ultimately, we show how responsibility guides and structures mobility practices, responses to collisions, and how its dominance normalizes and obscures, to some extent, the inherent violence in automobility.

1.1. Road violence, crashes, and responsibility

It is estimated that ~1.2 million people die each year globally in relation to road crashes (WHO 2023), and there are more deaths connected to other forms of violence, such as, e.g. pollution

or animal road kills. Socio-political road safety discourses suggest that the violence of automobility can be controlled, contained, and minimized through technological (e.g. safety systems, electrification), infrastructural (e.g. road redesign), organizational (e.g. traffic regulations, safe system approach), and disciplinary measures (e.g. condemning unfavorable behavior). Many of these are entangled with questions of responsibility (of individual road users).

Reducing violence has proven a complex and uneven endeavor, with successes in some areas often accompanied by new or persisting challenges in others. For example, a significant decrease in road fatalities has been reported in the European Union since 2010, while other regions of the world have seen an increase during this time (WHO 2023, 18). Furthermore, several studies show that road safety interventions and innovations for addressing other forms of violence solve only some problems and may even create new ones. Miner et al. (2024) emphasize how the various forms of car related harm, including crashes, pollution, land use, and injustices, would require a more fundamental change in mobility. The policy focus on technological innovation, such as electrified vehicles, continues fostering structural, i.e. indirect, forms of violence (Hosseini and Stefaniec 2023), while also creating new problems, e.g. related to particulate matter (Rakha, Farag, and Foroutan 2025) and safety of vulnerable groups (Stock 2025). Taken together, these cases suggest that violence is a deeply systemic phenomenon, in which interventions targeting isolated symptoms risk leaving—or even reinforcing—the underlying structures that produce harm.

As already mentioned, road crashes are among the most visible forms of violence in automobility. Yet, this violent event, often referred to as ‘accident’, is typically framed as the exception rather than as the normal situation (Braun and Randell 2022b). The generic use of the word accident has been criticized for many decades (Evans 1993) as it eventifies and suggests unpredictability, which is why this term has been widely replaced in this context (and in other fields, such as medicine). STS-perspectives on accidents frame these as tied to complex technical systems and hardly predictable (Beck 1986; Perrow 1984). This over-emphasis on complexity and the vulnerability of systems has also been criticized (Hopkins 1999). However, the general idea that failures (such as road crashes) are not just probable but rooted in the very structure of modern, high-risk systems is still convincing. Virilio (2007) argues in a similar manner that accidents are inherent to technical developments rather than something caused solely by external events or mistakes. Thus, every innovation contains the potential for its specific type of accident, which he calls the integral accident. Seeing crashes as integral or inscribed emphasizes that technologies inherit specific usages and failures often obscured by their seeming neutrality (Akrich 1992; Latour 1992). Therefore, it appears that road crashes, just as accidents, are not as random as they seem.

Notions of responsibility play a central role here: they help people to make sense of crash experiences (Kwakman, Brömmelstroet, and van Emmerik 2025); they are materialized in infrastructures, encoded in legal and police documents, and deeply woven into narratives and cultural understandings associated with automobility (Removed for review forthcoming). In the context of road crashes, responsibility typically takes an individualized form: it asks who made the mistake, who failed to follow the rules, who is at fault. This framing channels attention to single actors and their conduct, thereby reproducing the idea that crashes result from deviant behavior rather than from the structural conditions of automobility.

Responsibility, however, is not only a matter of causal attribution. It is entangled with moral and affective dimensions and as such linked to the concept of guilt. Burke (1959) describes guilt as a basic condition of life, stemming from people’s inability to meet social orders and rules. From this perspective, when guilt cannot be resolved, people tend to hold individuals responsible rather than questioning the system that produced the harm in the first place. Responsibility, in this view, is more than a causal attribution, but a practice through which (the potentiality of) guilt is managed. The disruptive potential of this interplay comes also with recognizable categories: the culprit, the victim, or the mistake. In automobility, the attribution

of individual responsibility thus functions as a mechanism deflecting attention from systemic conditions, offering a route for redemption.

Following Young (2011), we understand responsibility in an even broader sense. She distinguishes political and institutional responsibility from guilt, as these do not necessarily imply individual wrongdoing, but contributing to or benefiting from a system that enables injustice. Guilt is, by contrast, typically tied to a feeling or emotion of self-reproach that can persist well beyond the formal settlement of responsibility. Goffman (1959) associates the emergence of guilt with the violation of social norms, a deviation of 'performances' from social expectations. In a related way, Fromm (1941) sees guilt linked to conflicts emerging from human desires that are not accepted by others. He describes how, in order to escape guilt, people submit to social control and even authoritarian structures. In relation to road crashes, (the potentiality of) guilt thus serves to conceptualize wrong behavior and encourages people to adhere to norms and rules.

What connects responsibility and guilt, in this context, is their shared function in normalization. The dominant socio-political discourse channels systemic violence into individualized responsibility (see chapter 1.2). Through these mechanisms, the breaches that crashes constitute are closed, order is restored, and the violent foundations of automobility are rendered unremarkable. Studies confirm this dynamic: attribution of individualized responsibility helps survivors make sense of road crash experiences (Kwakman, Brömmelstroet, and van Emmerik 2025). Others emphasize how guilt is entangled with emotions and expressions of regret, even in cases involving autonomous vehicles (Aguar, Hannikainen, and Aguilar 2022). Guilt and responsibility are thus intertwined: responsibility provides the framework for attribution, while guilt supplies the affective and moral force that makes that attribution consequential and socially binding.

In what follows, we examine how this interplay between responsibility and guilt operates in Austrian socio-political discourses on road safety, as well as in the lived experience of road crashes in Vienna, and how it contributes to the ongoing normalization of automobility violence.

1.2. Austrian road safety policy discourse

How road crashes are framed and managed in Austria reflects broader socio-political discourses that, as we argue, reproduce particular notions of responsibility. Our empirical material is situated within this landscape. The Legal Information System of the Republic of Austria defines crashes (also referred to as accidents) as 'any sudden event causally related to road traffic that occurs on roads with public traffic and results in personal injury or property damage'.¹ Since 2012, road crashes and selected context data are documented and monitored in Austria, through a data management system (Unfalldatenmanagement, UDM), involving the police, the Ministry of the Interior, and The Federal Statistical Office of Austria (Statistics Austria). These data are a key reference for national policies and measures addressing crashes.

Most of the information on road crashes, by these national institutions, share a common focus on the responsibility of individual road users. More than 95% of the presumed main causes of fatal road crashes, stated by the Austrian BMI in an online document, can be pooled as individual mistakes, including issues like speeding, driving errors, risky behavior, or distraction.² The same document suggests measures against speeding, tailgaters, and drunk drivers, which, again, places attention on the role of individuals and their misbehavior.

Within the last decade, the Austrian ministries responsible for transport have published two road safety strategies. The first edition, covering 2011–2020, issued by the Federal Ministry for Transport, Innovation and Technology, states the 'target of making Austria's roads among the safest in the EU' (BMVIT 2016, 7). It places clear emphasis on addressing individual misbehavior: 'Responsible behavior on the part of every individual driver is the basis for safety on the roads' (BMVIT 2016, 27). It is further suggested to make efforts 'to strengthen the level of individual responsibility assumed by all road users for their own safety on the roads' 2011 (BMVIT 2016, 25).

What might first seem like a manifestation of an individualist approach to crashes is not so clear cut. The road safety strategy 2021–2030 claims a paradigm shift by acknowledging that road users will always make mistakes (BMK 2021). While the ‘safe system approach’ was already mentioned in the earlier edition, it is much more prominent in this current one, akin to an international trend towards this approach (WHO 2023). It emphasizes the complexity of mobility and causalities by stating ‘that safety should therefore be a shared responsibility of all those acting in the transport system and not solely be assigned to the road users’ (BMK 2021, 16). Nevertheless, individual responsibility is repeatedly addressed in this report, emphasizing that ‘everyone is responsible for their own safety and that everyone can do something for it.’ (BMK 2021, 22). In fact, both structural and individualized notions of responsibility are combined as ‘personal responsibility and rule-compliant behavior are to be demanded from every road user, on the other hand, the system itself must also become more fault-tolerant’ (BMK 2021, 20). This approach is supported also by the state-owned company responsible for Austrian road infrastructure, who calls for ‘infrastructure that forgives small errors made by the drivers, thus saving human lives’ (ASFINAG 2021, 4), ‘responsibility of all those involved, [...] [while] this by no means implies that the users are released from their duties.’ (ASFINAG 2021, 15).

Reports, like that of Statistics Austria (2024), place particular emphasis on timing and regional distribution of road crashes, as well as on involved types of persons and means of transportation. Additionally, particular attention is given to specific types of crashes, such as those involving children or people under the influence of alcohol. This focus broadens the perspective towards infrastructural aspects and the roles of vulnerable groups. The latter is one major concern of NGOs like the Austrian Verkehrsclub Österreich (VÖ), who puts, in their work, particular emphasis on road crashes involving vulnerable groups such as children or users of active mobility modes.³ Research on road crashes in Austria typically highlights environmental and infrastructural issues, aspects related to the involved means of transportation, as well as social and psychological aspects of drivers as major factors explaining incidences of road crashes (Kaiser, Furian, and Schlembach 2016; Magusic 2024).

What these documents share, despite their differences in emphasis, is a persistent orientation toward individual road users as the primary focus of responsibility. This framing, as we show in the following, is mirrored in the lived experiences and sense-making of the people we interviewed.

2. Methodology and material

This research was part of the international project *[removed for review]*, involving researchers from Vienna, Austria and Brno, Czech Republic. This article focuses on data from the Austrian context and it is grounded in Ethnomethodology (Garfinkel 1967). Considering citizens as ethnomethodologists, we were thus interested in the everyday, routine practices through which people construct a shared understanding of their lifeworlds (Pollner 1974). Following this tradition, we actively engaged with and observed citizens in motion to understand how people co-create and make sense of road crashes, and automobility more widely.

We conducted 24 move-along interviews with a total of 25 participants in Vienna. These were recruited through online and offline advertisements followed by snowballing and lasted for about 1–1.5 h. These dynamic interviews have the advantage of activating embodied knowledge and getting hold of peoples’ experiences of the world (Bartlett et al. 2023). The people we engaged with had all experienced a road crash, either directly or as a bystander. Nine respondents were involved in a crash with a bicycle, eight with a car, and a further eight while walking. 19 of these described themselves as female, six as male. During the interviews, we moved together through the city, with the mobility mode they had been involved in an accident. This allowed us to not only pose questions, but to observe their mobility practices and their perceptions of it.

The local context of Vienna represents an instructive case for this inquiry: an urban setting with strong public transport and moderate cycling rates, yet one where automobility, as our findings show, permeates the experiences of drivers, cyclists, and pedestrians alike. This supports our theoretical starting point that automobility functions as a systemic and ontological order that disciplines all road users, not only those in cars. Moreover, most people move through the city in multiple ways: someone involved in a crash while cycling likely also walks and drives, reflecting the multimodal reality of everyday mobility. Accordingly, we treat the diversity of mobility modes in our sample not as a limitation but as an opportunity to trace the reach of this order across different subject positions, while remaining attentive to differences where they surface in the data.

The move-along interviews were preceded by *in-situ* interview, addressing the participants' general mobility practices and their individual experiences with past road crashes. The questions were structured by an interview guide, which was adapted to the specific conversation with each interview partner, and in line with problem-centered interviews (Witzel and Reiter 2012) contained both open and detailed questions. After the first set of questions, we then drove or walked together to the places where the locations of the individual crashes had happened, if feasible; otherwise, we moved to similar areas. Interviewees were asked to describe what they do, see, and feel while moving. Ultimately, the interviewer and the interviewee moved away from this scene and ended with a reflection of the interview and the involved feelings, as well as a question about preferences for urban mobility futures. All interviews were audio-recorded, and the moving parts were also filmed. This article focuses on the verbal material, including participants' narratives, descriptions of their movement, and *in-situ* reflections. As such, the audio data provides a unique source, including classical interview data as well as ethnographic self-descriptions during movement. This speaks most directly to our analytical interest in how people construct and negotiate responsibility. A full multimodal analysis of the embodied and visual dimensions exceeds the scope of this article but represents a productive avenue for further research.

The audio data was transcribed verbatim and analyzed in line with Reflexive Thematic Analysis, which is an interpretive approach to qualitative data analysis (Braun and Clarke 2006). It combines content analysis, involving the inductive coding of relevant data segments, with a more reflexive and interpretive approach to analysis. As such, this method places less emphasis on reliability, such as traditional approaches to content analysis (Mayring 2015). Rather, it highlights and reflects the researcher's active role in knowledge production, thus making normative assumptions that might influence the analysis explicit.

Based on theoretical literature from mobility studies and ethnomethodology, and initial analysis of selected interviews, a first coding structure was developed. This initial structure was applied to the data and then developed further in several group meetings among three researchers to better align with the observed patterns of meaning in the interviews. As a research team, we share a critical perspective on automobility and its role in reproducing structural violence, a positionality we made explicit throughout the analytical process, rather than treating it as a source of distortion (Braun and Clarke 2006). This included deliberate reflection on whether our stance led us to underplay differences between mobility modes or to subsume experiences too readily under the frame of automobility, a tension we addressed in regular group discussions and joint coding sessions. Codes were thus understood to represent the researcher's interpretations of patterns of meaning across the dataset, rather than as fixed themes retrieved from the data (Byrne 2022). The actual coding involved five researchers and was conducted using the software Atlas.ti. Code descriptions, joint coding sessions, and reflexive meetings were held to align and to increase the common understanding of the results, and to critically engage with the findings.

The empirical approach was reviewed by an ethics commission, which offered recommendations to account for needs of both research participants and researchers involved. We also

offered the opportunity to consult with a psychologist. Each person received an informed consent with information about the research project and the use of data.

3. Findings

The findings are organized around three moments in which responsibility and guilt structure people's engagement with road crashes and automobility more broadly: the anticipation of crashes during everyday mobility, the immediate sense-making once a crash occurs, and the subsequent normalization of violence through guilt-ascription. Together, these moments reveal how individualized notions of responsibility and guilt operate as a pervasive social and discursive order—one that provides meaning and guidance while simultaneously obscuring the systemic violence inherent to automobility.

3.1. Anticipating crashes

When being on the move we recorded constant strategies to avoid crashes. This became visible across all the modes of movement investigated in our study, including cycling, car-driving, and walking. These strategies were, in most cases, individual efforts of crash-avoidance and included different forms of anticipation and cautiousness, such as paying close attention to all the surrounding objects, adjusting speed, breaking traffic regulations to avoid danger, or actively engaging with others. The reliance on own driving or moving skills, as well as sensorial awareness and carefulness, was repeatedly emphasized, especially by vulnerable road users like bikers. This engagement with the 'potentiality' of a crash (Virilio 2007) shifts responsibility to a good extent towards oneself or other individuals.

Through the interviews, we identified several narratives that show how people place responsibility for preventing crashes on themselves. One interviewee, who had a collision with a bike, highlighted the need to slow down at a spot perceived as dangerous: *'If you don't slow down here, you could have a crash almost any day'* (Int.18/bike/m). There are also phases in which our interviewees focused on speed and flow over foresight and cautiousness, as the following quote from a cyclist demonstrates.

"I try very, very hard to defuse situations through anticipation and observation [...]. I often reduce speed even when a situation is not yet dangerous. Every now and then there are moments when I get caught up in the moment and then I race and do everything wrong, so to speak. Wrong in terms of personal safety. But otherwise, I mainly try to ride with foresight" (Int.2/bike/m).

Anticipation while on the move involves active engagement with people, animals and objects along the way. Given the complex and dynamic interaction, violent events, i.e. crashes, seem at one point almost inevitable, as outlined in the next example:

"So, a quick glance to the left and right, and I'm good. There's a cable hanging down here for some reason. I have to duck to get through. There. And off the pavement, over the tram tracks and right into the street with a brief hand sign. Now I'm in the street. There's a construction site there at the moment, so it's sometimes a bit narrow, even to the point where there's no getting through, but right now it's okay." (Int.3/bike/m).

The same person expressed the complexities involved in managing awareness, in another section of the interview. This example demonstrates also the presence of confidence in oneself, to be able to anticipate all the factors involved. This happens, if necessary, with multiple senses, as the following quote demonstrates:

"I am looking to the front with my eyes but to the back with my ears like I always hear what's behind me. I always look into reflections of cars to be able to see what's behind them what's next to me, to my sides". (Int.3/ bike/m).

Narratives about crashes repeatedly contain references to individual responsibility of others as causal for these to happen. In one case, it is taking a turn even though there was a red traffic light combined with speeding: *'He turned here about now, even though it was red, at an insane speed and hit her.'* (Int.12/walk/f). Another person emphasized the responsibility of others for prevention. At the same time, this person ascribed responsibility by suggesting that people barely follow the rules, pay too little attention, and move too fast: *'It would be a great help in preventing crashes if people would just follow the rules a bit and look ahead while driving instead of looking down and hitting the gas with both feet.'* (Int. 13/walking/m).

By continuously anticipating a crash, our respondents are managing risks at the individual level, avoiding making a mistake, failing to follow the rules, or adjusting to the dynamic infrastructure, while the systemic conditions producing risks remain widely unquestioned. The socio-political discourse framing road crash predominantly as an outcome of individual behavior is encoded in mobility interactions, unquestioning the violence or the systemic conditions itself. The inherent violence is here emerging in the ever-present anticipation of a potential crash for which one would be responsible.

3.2. Making sense of road crashes

The very presence of responsibility and its entanglements with guilt becomes visible once crashes actually happen and people need to make sense of them. While blue-light organizations recommend care as an initial thing to do, to check the scene and to provide first aid if necessary, we observed several instances where matters of responsibility entangled with the moral force of guilt were inherent to the immediate reactions, guiding perceptions and actions, as the following example from a car crash shows: *'He got out, immediately blamed us, saying it was our fault'* (Int.14/car/f). The entanglement of responsibility and guilt is demonstrated by a crash of a biker with an e-scooter. As soon as the health situation allowed, proof of guilt and responsibility was the immediate ambition, which is also resembled in this quote by framing a bystander as a 'witness'. Yet, in this case, the other party avoids negotiations by committing a hit-and-run:

"We crashed completely head-on. [...] There was a witness on a Vespa who saw it all [...]. The guy kept saying: stay down [...]. I thought to myself: why should I lie there? Well, at the beginning I stayed lying down anyway because I couldn't breathe. [...] and then I looked around. In the meantime, someone had taken my bike off me. Or was it me? Anyway, the bike was lying there in the grass. Unfortunately, the phone was lying on top of it. And of course, you should take pictures of the scene of a crash as quickly as possible. Besides, it was perfectly clear to me, when it comes to the question of guilt. [...] I wanted to take a picture of where the scooter was lying, but I didn't get around to it because while I was taking the phone off the bike, [...] the guy grabs his e-scooter, jumps on it and is gone." (Int.18/bike/m).

In line with the cautious and skill-driven approaches to mobility described in [Section 3.1](#), responsibility for actual crashes, and the affective dimension in a form of guilt, is, in several cases, directed to oneself. As such, it is typically described as a failure of one's own action, perception or caution, creating the prevalent reasoning of road crashes emerging immediately after the crash. One interviewee described a bike collision referring to his/her absence of focus, which provided an explanatory frame for the experienced crash:

"It was my fault. [...]. There were already a few cyclists on the road, and I passed one of them. I think I looked down for too long. [...] I somehow didn't see that someone was coming or had just come, and I had been in the passing lane for a while and then I just collided head-on with someone. [...] it was a moment when I thought to myself, okay, wow: consciousness. And sometimes you're so dreamy or, I don't know, or just not completely attentive." (Int.1/bike/f).

We recorded many similar descriptions that revolved around one's own mistakes. Another person, who had a crash while walking, explained how she is someone *'who actually has a slight tendency towards daydreaming'* (Int.6/walk/f) and identified this as a cause of the crash. One

person, who had a car accident, described how she was distracted by a sign and said: *'suddenly I hear a huge crash and realize that I'm crashing into the car in front of me.'* (Int.21/car/f). Another person, involved in a collision while walking, described how right afterwards, she and her companion questioned their responsibility. This is another example of how responsibility and guilt are both part of immediate responses to road crashes, in making sense of the experience:

"I was already thinking [...] shortly after this happened, whether we made a mistake, yes, but we didn't make a mistake. [...] we have nothing to reproach ourselves for, that we somehow made a mistake." (Int.12/walk/f).

Making sense of road crashes is not always clear-cut. Interviewees repeatedly reflected upon multiple factors contributing to the situation at the same time. This is demonstrated by the following example, in which a bike-rider describes his confidence in skills, acknowledges the other party's mistake, and emphasizes his own as well, as a consequence of failure of his own anticipation (discussed in the previous section):

"I am firmly convinced that with what I know about road use, I can deal with these risks. [...] But sometimes you just lack imagination. [...] I saw him coming. [...] He could have seen me too. That he comes up with the idea of driving around the corner on my side, my imagination wasn't enough for that." (Int.18/bike/m).

Another interviewee reasoned, related to a car crash, that she felt guilty unless it was not clear if it was mainly her fault, emphasizing how the attribution of guilt is not always clear:

"In any case, I wasn't paying attention. [...] So, it [the split of guilt] is probably 50/50, but in any case, I could have avoided it, I think. From today's perspective, yes, in any case, I felt guilty." (Int.4/car/f).

Making sense of road crashes is structured by assigning individual responsibility entangled with guilt. Whether directed at oneself or others, this framing provides guidance and meaning as someone is made responsible and guilty. Yet making sense of road crashes are not always clear-cut, and multi-layered accounts reveal the complexity of attributing guilt and responsibility. By channeling sense-making through moralized, individual responsibility, structural conditions receive less attention, setting the stage for the normalization of automobility violence.

3.3. Normalizing violence

As the previous sections have shown, individual responsibility entangled with guilt structures how people anticipate and make sense of road crashes. But it also plays a key role in restoring what is considered normal. By locating fault in individual wrongdoing, the practice of assigning responsibility and attributing guilt provides an accessible explanation for violence. When this ascription succeeds, normality is restored. When it fails, tensions persist.

When the ascription of guilt and responsibility was not possible or perceived as wrong or unjust, the normalization of violence, and the restoring of order in automobility were distorted. The crash remained unresolved. This is illustrated in the strong emotions emerging in such cases. It includes instances where involved parties did not agree on matters of responsibility or accused one another of mistakes. Also, potential impacts and costs stemming from crashes have been described as the burden of those affected only, rather than those who are perceived to be responsible. One person was accused by a car-driver for biking in bad weather, while she clearly saw the responsibility with the other party, who even admitted a mistake. In a reflective narrative about this situation, this person shared her perspective, including emotions of anger and grief:

"Yes, I was actually very angry with the woman afterwards because she wanted to blame me for what happened, but it was clearly her fault. So, I was actually very annoyed with this woman for quite a long time [...]. And what she also said was that she should have actually changed the tires the next day. It was in the winter, and it was already mandatory to change tires, so she didn't want me to call the police as she had somehow not taken her duty of care" (Int.1/bike/f).

Several interviewees described instances where questions of responsibility were unresolved. In these descriptions, crashes were described as something that is not finished, where the normalization has, to some extent, not taken place yet. This included hit-and-run incidents, as well as crashes where responsibilities could not be legally settled. The following example demonstrates how unresolved responsibility triggers emotions long after the actual crash, especially because (long-term) burdens lie mainly with the victim and the opposing side is said to be not affected:

"When I think about it, I'm actually quite annoyed. Because as a crash victim who couldn't be proven to be at fault, because it's simply testimony against testimony [...]. And that leaves me as the crash victim, yes, I'm simply stuck with my costs. I'm actually the one who suffers [...] I have to reconcile physiotherapy with work, I have the costs, I was constantly at the police station, which was a hassle. I have to fill out forms [for the insurance] all the time, there's always something coming up. Yes, and for the opposing side I think, so yes, it's just not like that for them." (Int.9/bike/f).

The desire for clarifying responsibility, which extends to very practical and even financial aspects, demonstrates how it is closely linked to the experience of relief and normalization, in other words, to closing the case. Hit-and-run incidents reveal not only negative emotions and tensions but also bureaucracy for those left behind. In the following example, it is emphasized that those who cause a crash must take responsibility for their actions, while some general understanding for making mistakes is expressed, easing the potential of guilt:

"Everyone can make a mistake and something bad can happen, but if you really run over two people, then the least you can do is stop and get out to see what's going on with them and call the ambulance, police or whatever, take responsibility and not just leave the scene." (Int.12/walking/f).

As previously mentioned, determining responsibility, and thus also normalizing automobility violence, is not always straightforward. Related to the quote above and somewhat in contrast to the dominant policy discourse (Section 3.1), we also observed instances where compassion for mistakes was expressed and thus an increased focus on questions of responsibility and guilt was criticized. The following exemplifies how one interviewee was upset with a friend, who accused and shouted at another person that was perceived to be responsible for the car crash they had:

"I am more annoyed that [...] the friend was so upset about it. [...] Yes, it can just happen, he didn't like doing that anyway, that he ran into us and thank God nothing else happened. [...] He really didn't do it on purpose, and he didn't get out and say it was our fault or anything. (05:12)" (Int.14/car/f).

Finally, several interviewees referred to instances where questions of responsibility and guilt were resolved or settled, i.e. the order of automobility was restored. For example, when there was consent about who or what was responsible for a crash. This usually leads to an easing of the situation, often through formal steps of documentation or the involvement of institutionalized actors like the police or insurance companies, which also engage in the attribution of individual responsibility. One participant described a car collision, where actions after the crash were documented step-by-step, clarifying questions of insurance. She explained how they 'filled out an accident report or something, took license plates, exchanged numbers and [...] that you just have to talk to the insurance company' (Int.4/car/f). The word 'just' emphasizes how this is framed as a step towards easing the situation. The same person mentioned, in reference to another car crash, how, after filling out the European Accident Statement, normality was restored: 'Even the police were there and then this accident report was filled out together and then everything went back to normal' (Int.4/car/f). The culprit was named, the road crash entered the bureaucratic field of forms and columns (Bourdieu, Wacquant, and Farage 1994), and emotions were calmed. Order had been restored.

4. Discussion

This paper explores how people make sense of road crashes through notions of individual responsibility, at times moralized and as such entangled with guilt, and which implications there are for the reproduction of the current order of automobility. The analysis stems from discussions emphasizing entanglement of automobility and violence, through, e.g. its dependency on the energy-intense movement of heavy, fast objects through shared space, which inevitably produces harm (Urry 2007). Drawing on STS literature and automobility studies, policy perspectives, and move-along interviews with crash survivors, we show how notions of individualized responsibility and guilt guides mobility practices, responses to road crashes, and how its dominance normalizes and obscures some of the inherent violence in automobility. Responsibility operates here as a framework for causal attribution, shifting attention towards individual mistakes, while guilt supplies the affective dimension that makes such attribution consequential and socially binding (Burke 1959; Fromm 1941; Goffman 1959). We observe this interplay as a pervasive and constantly reproduced discursive order, maintaining and normalizing the order of automobility. While more vulnerable road users, such as those riding bicycles, expressed comparably more often cautiousness, we still observed individualized logics of responsibility and guilt across different forms of mobility.

Our findings show that responsibility is not only present in instances of actual crashes, but also in everyday mobility practices. Interviewees across all modes of movement, including biking, car-driving, and walking, described constant individual strategies of anticipation and foresight for avoiding collisions. Examples range from scanning reflections in parked cars, listening to traffic out of sight, or reducing speed at intersections perceived as dangerous. Moreover, we also documented moments in which interviewees described giving in to speed or losing focus, framed as a wrongdoing in Fromm's (1941) sense, bringing moralized and affective dimensions in form of guilt into the fore. All this aligns with STS conceptions that see crashes as part of socio-technical systems (Akrich 1992; Virilio 2007), rather than accidental events (Evans 1993). However, these efforts place the burden of crash prevention mainly on individuals, reflecting a deeply internalized sense of personal responsibility and guilt. The automobility system, as relevant site of failure, receives less attention. The complex, dynamic interactions, our interviewees described, make crashes almost inevitable in the long run (Perrow 1984). This aligns with conclusions from another paper stating that 'the search for an isolated cause of fatalities and serious injuries as a result of road traffic crashes has no longer any substantial role in prevention' (Lie and Tingvall 2024, 6).

Once a crash occurs, individualized responsibility and guilt dominates immediate sense-making. The first responses to crashes, whether those involved or as a bystander, involve identifying who is at fault. In Goffman's (1959) terms, responsibility here marks a deviation from expected 'performances', a breach of what is considered appropriate. Our findings show, in the same move, that attributions of responsibility and guilt are not straightforward. Interviewees described conflicting accounts, ambiguous situations, and cases where multiple parties made mistakes. This is relevant as unresolved responsibility triggered unease and negative emotions. This is consistent with recent research highlighting that ascribing responsibility helps crash survivors make sense of their experience (Kwakman, Brömmelstroet, and van Emmerik 2025). The same study emphasizes, however, that car crash survivors and their relatives also refer to systemic aspects, such as infrastructure or politics. Our findings add the ambiguity of responsibility which yet contains the power to mend the breach of crashes. This attribution of responsibility frames complex socio-technical failure through the question of individual guilt, wrongdoing, and single causes (Lie and Tingvall 2024).

This dominance of individual road users as source of fault is also visible in Austrian policy discourse, even though approaches such as the Safe System paradigm offer a fundamentally different perspective as well. Yet, studies reveal that different understandings exist of these more

systemic approaches that foster shared responsibility (Keller et al. 2025; Khan and Das 2024). Similar ambiguities are present in our interview data, where ambitions for behaving responsible conflict with desires for flow of movement, while their very own descriptions of the involved complexity reveal the inevitability of crashes at a certain point. What the policy discourse does not capture, however, is the active role of road users in this, for example, when aiming to avoid crashes or trying to make sense of these breaches. The policy discourse does not only frame how crashes are governed institutionally but also shapes the terrain on which people experience and narrate them, constituting what Smith (2005) called ruling relations between institutional discourse and everyday sense-making. Interviewees indeed described how legal matters guided their post-accident experiences. Artefacts like the European Accident Statement, for instance, translate a complex event into a standardized question of fault, enabling the bureaucratic settlement that interviewees associated with 'everything going back to normal'. This suggests that responsibility and guilt are not only cognitive or affective responses but part of a broader discursive and institutional order that governs how crashes are processed, narrated, and ultimately rendered unremarkable.

Critical mobility studies have challenged the idea of human error as a main cause of crashes as this perspective constructs automobility as normal and safe, and crashes as the exception (Braun and Randell 2022b). Our findings reveal the very mechanisms of this construction in everyday life, where an emphasis on matters of responsibility leaves the systemic aspects of violence in automobility largely unquestioned. This resonates with broader critique that the focus on individual behavior distracts from the multiple forms of automobility-related harm that require more fundamental change, such as pollution, spatial injustice, and land use (Miner et al. 2024; Sheller 2021). Similarly, technological remedies such as electrification or automation do not resolve but may even perpetuate structural violence (Hosseini and Stefaniec 2023) and thus (re-)produce and reinforce inequalities (Dangschat and Stickler 2023). By showing how responsibility and guilt operate together in everyday sense-making, our study contributes to this literature at micro-level. We show how the hegemony of automobility is reproduced not only through policy and infrastructure but through the discursive and affective practices of those who move within it. This, as we show, happens across different mobility modes.

Automobility is sustained by socio-political discourses, against alternative visions such as vélomobility, by strategies such as rendering it essential mobility practice for everyday tasks (Egan and Caulfield 2024). Road crashes constitute a breach of order that may benefit such alternative visions for mobility. It is a breach that brings violence to the fore. Violence, that is often obscured, managed, and cleaned-up, perpetuating the hegemony of automobility (Braun and Randell 2022a; Sheller and Urry 2006). Our findings show that the interplay of responsibility and guilt functions as a key mechanism through which normality is restored. When responsibility can be attributed, if a culprit is named, the crash enters the bureaucratic and affective routines of documentation, insurance, and emotional settlement. When the ascription of guilt failed, such as in hit-and-run incidents, in contested accounts, in unresolved legal proceedings, interviewees described emotions like anger and frustration, especially if they felt left alone with negative consequences. Just as Latour (1988) stated in reference to the scientific conduct, but transferable for mobility: 'everyone is looking for who or what is responsible for some state of affairs; 'accusation' is thus implicated in all attempts at explaining something' (Latour 1988, 156).

At the same time, the dominance of individualized responsibility was not uncontested. Like other studies (Kwakman, Brömmelstroet, and van Emmerik 2025), we found narratives resisting the dominant discourse of individualized responsibility, showing compassion for mistakes, where an excessive focus on guilt was questioned and even criticized. We observed that, e.g. the presence of street design, pedestrian crossings, or speed limits, for instance, shaped expectations of rightful movement, influencing how participants framed their own or others' mistakes. Others challenged the dominance of responsibility and guilt and the related focus on individual mistakes, emphasizing the complexity of being in motion within urban spaces. These moments are significant because they reveal the limitations of explaining automobility violence through the

lens of individualized responsibility and the impossibility of meeting all (social) expectations (Burke 1959), i.e. making no mistakes. This is where the affective dimension of guilt (Fromm 1941) links to matters of responsibility.

A major strength of this paper is an approach to road crashes that depart from the perspective and lifeworlds of those who move through urban space. We consider the sample size and the dynamic and in-depth method of data collection another asset of this paper, together with its theoretical grounding in mobility studies and STS. At the same time, we want to highlight four limitations that deserve attention. First, the methodological focus on narrated experiences collected through move-along interviews might shift attention from aspects that could have emerged in more dialogue-oriented or macro-oriented settings. Also, a full analysis of the video data collected during the interviews represents a productive avenue for further research. Second, the local focus on the city of Vienna needs to be considered when reflecting our findings, as road crashes are culturally and historically situated. Vienna represents a rather larger European city with strong public transport, moderate cycling rates, and a specific legal and bureaucratic regime around road safety. Comparative research across cities with distinct mobility cultures could help assess the transferability of our findings. Third, while we attended to experiences across driving, cycling, and walking, our analysis primarily traced the shared logic of individualized responsibility across these modes rather than systematically exploring mode-specific subjectivities and embodied vulnerabilities. Finally, there are normative positions involved that influence this paper. Recruiting and doing research with people who experienced a road crash might have activated those persons, less satisfied with the mobility circumstances in Vienna. In line with our analytical approach of reflexive thematic analysis (Braun and Clarke 2006), our own critical perspective on automobility might have influenced the research process and the (focus of) analysis.

Building on this research, further studies could explore in more detail the political and institutional dimensions of responsibility and guilt in automobility, particularly the sovereign power (Agamben 1998) of policies, legal frameworks, and insurance mechanisms. Another productive direction would be to research how guilt is embedded in infrastructures and urban spaces. This could shed light on how legal and policy discourses shape which (aspects of) road crashes become visible, and which remain obscured. Several interviewees reported crashes with psychological, emotional, and physical consequences that were never officially documented, raising questions about what counts as a crash in the first place and their bureaucratic visibility. As Rancière, Panagia, and Bowlby (2001) notes, 'politics is first and foremost an intervention upon the visible and the sayable' (Rancière, Panagia, and Bowlby 2001, 21). The discursive order of responsibility determines which forms of automobility violence enter public awareness and which do not. It is thus constitutive of the ontological manifestation of automobility as we know it.

5. Conclusion

This article examines how people make sense of road crashes through notions of individual responsibility and how this contributes to normalizing the violence inherent to automobility. Based on move-along interviews with crash survivors in Vienna, we have shown that individualized responsibility operates as a discursive order that structures everyday mobility practices and guides immediate responses to crashes. Moreover, it provides the mechanism through which normality is restored after a crash, if respective questions of responsibility can be solved.

Our findings contribute to critical automobility studies by showing how the hegemony of automobility is reproduced through everyday discursive practices. While existing literature has emphasized the structural, infrastructural, and policy dimensions of automobility's violence, we show how crashes are experienced through individual responsibility. In doing so, it highlights how narratives transcend individual sense-making and can contribute to the systemic normalization of violence within automobility.

Recognizing responsibility and guilt as normalizing practices opens space for reimagining how we collectively relate to mobility violence. Respective policy discourse has partly moved in this direction, acknowledging shared responsibility and the inevitability of human error. Yet as our findings show, an individualized perspective remains deeply entrenched in everyday sense-making.

Notes

1. https://www.ris.bka.gv.at/JudikaturRechtssaetze.wxe?Abfrage=Lvwg&Dokumentnummer=LWVGT_NI_20160118_LVwG_S_441_001_2014_00&ShowPrintPreview=True
2. https://www.bmi.gv.at/202/Verkehrsangelegenheiten/unfallstatistik_vorjahr.aspx
3. <https://vcoe.at/>

Ethical approval

This study was reviewed and approved by the Ethics Commission of the Institute for Advanced Studies (IHS). All procedures followed the Commission's recommendations and adhered to strict data protection guidelines. A licensed psychologist was available to participants throughout the research process. Each participant provided written informed consent, which included detailed information on the purpose of the study, the procedures involved, and the use and storage of research data.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Generative artificial intelligence statement

The translation tool DeepL.com was used in a pro version to support writing this article. Major parts were written without the tool. DeepL.com was used for selective sentences when words or formulation of sentences were unclear to the authors, who are not native English speaking. For the second revision, Claude.ai Opus 4.6 was used to control the implementation of changed text in light of the reviewers comments and to detect typing errors.

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ORCID

Johannes Starkbaum  <http://orcid.org/0000-0003-2514-3289>

Kateřina Nedbálková  <http://orcid.org/0000-0002-2901-3636>

Eva Kotaskova  <http://orcid.org/0000-0002-5652-9398>

Tomáš Paul  <http://orcid.org/0000-0002-3513-7301>

Karel Němeček  <http://orcid.org/0009-0006-4170-1163>

Data availability statement

There is no additional data available for this article as our original interview data contains also medical information about participants, which is considered sensitive in light of the EDPR.

References

- Agamben, G. 1998. *Homo Sacer: Sovereign Power and Bare Life*. Stanford, California: Stanford University Press.
- Aguiar, F., I. R. Hannikainen, and P. Aguilar. 2022. "Guilt Without Fault: Accidental Agency in the Era of Autonomous Vehicles." *Science and Engineering Ethics* 28 (2): 11. <https://doi.org/10.1007/s11948-022-00363-8>.
- Akrich, M. 1992. "The Description of Technical Objects." In *Shaping Technology/Building Society. Studies in Sociotechnical Change*, edited by W. E. Bijker and J. Law, 205–224. Cambridge and London: MIT Press.
- ASFINAG. 2021. *Road Safety Programme 2030*. https://www.asfinag.at/media/cd2j35qo/72_asf_2_verkehrssicherheit_sprogramm_2030_v11_en.pdf.
- Bartlett, R., A. Koncul, I. M. Lid, E. O. George, and I. Haugen. 2023. "Using Walking/Go Along Interviews with People in Vulnerable Situations: A Synthesized Review of the Research Literature." *International Journal of Qualitative Methods* 22. <https://doi.org/10.1177/16094069231164606>.
- Beck, U. 1986. *Risk Society. Towards a New Modernity*. London: Sage.
- BMK. 2021. *Austrian Road Safety Strategy 2021–2030* (Report by the Austrian Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK), Issue.
- BMVIT. 2016. *Austrian Road Safety Programme 2011–2020*. https://www.bmk.gv.at/dam/jcr:7fab9a6e-348b-4a2c-87cc-f1db78c63d2b/rsp2020_2016.pdf.
- Böhm, S., C. Jones, C. Land, and M. Paterson. 2006. "Introduction: Impossibilities of Automobility." *The Sociological Review* 54 (1_suppl): 3–16. <https://doi.org/10.1111/j.1467-954X.2006.00634.x>.
- Bourdieu, P., L. J. Wacquant, and S. Farage. 1994. "Rethinking the State: Genesis and Structure of the Bureaucratic Field." *Sociological Theory* 12 (1): 1–1. <https://doi.org/10.2307/202032>.
- Braun, R., and R. Randell. 2022a. *Post-Automobility Futures: Technology, Power, and Imaginaries*. Lanham, Boulder, New York and London: Rowman & Littlefield.
- Braun, R., and R. Randell. 2022b. "The Vermin of the Street: The Politics of Violence and the Nomos of Automobility." *Mobilities* 17 (1): 53–68. <https://doi.org/10.1080/17450101.2021.1981118>.
- Braun, V., and V. Clarke. 2006. "Using Thematic Analysis in Psychology." *Qualitative Research in Psychology* 3 (2): 77–101. <https://doi.org/10.1191/1478088706qp0630a>.
- Burke, K. 1959. *Attitudes toward History*. Los Altos, California: Hermes.
- Byrne, D. 2022. "A Worked Example of Braun and Clarke's Approach to Reflexive Thematic Analysis." *Quality & Quantity* 56 (3): 1391–1412. <https://doi.org/10.1007/s11135-021-01182-y>.
- Dangschat, J. S., and A. Stickler. 2023. "Does Automation Strengthen the 'System of Automobility'? Critical Considerations and Alternatives to Connected and Automated Vehicles." *Applied Mobilities* 8 (3): 245–264. <https://doi.org/10.1080/23800127.2023.2243579>.
- Egan, R., and B. Caulfield. 2024. "Driving as Essential, Cycling as Conditional: How Automobility Is Politically Sustained in Discourses of Everyday Mobility." *Mobilities* 19 (4): 789–805. <https://doi.org/10.1080/17450101.2024.2325370>.
- Evans, L. 1993. "Medical Accidents: No Such Thing?" *BMJ (Clinical Research ed.)* 307 (6917): 1438–1439. <https://doi.org/10.1136/bmj.307.6917.1438>.
- Fevyer, D., and R. Aldred. 2022. "Rogue Drivers, Typical Cyclists, and Tragic Pedestrians: A Critical Discourse Analysis of Media Reporting of Fatal Road Traffic Collisions." *Mobilities* 17 (6): 759–779. <https://doi.org/10.1080/17450101.2021.1981117>.
- Fromm, E. 1941. *Escape from Freedom*. New York: Farrar & Rinehart.
- Garfinkel, H. 1967. *Studies in Ethnomethodology*. New Jersey: Prentice Halls.
- Goffman, E. 1959. *The Presentation of Self in Everyday Life*. New York: Doubleday.
- Hopkins, A. 1999. "The Limits of Normal Accident Theory." *Safety Science* 32 (2): 93–102.
- Hosseini, K., and A. Stefaniec. 2023. "A Wolf in Sheep's Clothing: Exposing the Structural Violence of Private Electric Automobility." *Energy Research & Social Science* 99: 103052. <https://doi.org/10.1016/j.erss.2023.103052>.
- Kaiser, S., G. Furian, and C. Schlembach. 2016. "Aggressive Behaviour in Road Traffic—Findings from Austria." *Transportation Research Procedia* 14: 4384–4392. <https://doi.org/10.1016/j.trpro.2016.05.360>.
- Keller, M. E., B. Watson, S.-A. Kaye, M. King, and I. Lewis. 2025. "Experts' Perspectives on Shared Responsibility for Speed Management: A Thematic Analysis Informed by Systems Thinking." *Accident; Analysis and Prevention* 221: 108185. <https://doi.org/10.1016/j.aap.2025.108185>.
- Kesselring, S. 2024. "Contouring the Mobile Risk Society." *Applied Mobilities* 9 (2–3): 248–268. <https://doi.org/10.1080/23800127.2024.2334186>.
- Khan, M. N., and S. Das. 2024. "Advancing Traffic Safety through the Safe System Approach: A Systematic Review." *Accident; Analysis and Prevention* 199: 107518. <https://doi.org/10.1016/j.aap.2024.107518>.
- Kwakman, E. C., M. t Brömmelstroet, and A. A. van Emmerik. 2025. "'In the Name, She Lives On': Responsibilities and Rehumanization in Survivor Narratives of Vehicular Violence." *Mobilities* 20 (3): 501–517. <https://doi.org/10.1080/17450101.2024.2429543>.
- Latour, B. 1988. "The Politics of Explanation: An Alternative." In *Knowledge and Reflexivity: New Frontiers in the Sociology of Knowledge*, edited by S. Woolgar, Vol. 10, 155–176. London, Newbury Park, Beverly Hills and New Delhi: Sage.

- Latour, B. 1992. "Where Are the Missing Masses? The Sociology of a Few Mundane Artifacts." *Shaping Technology/ Building Society: Studies in Sociotechnical Change* 1: 225–258.
- Lie, A., and C. Tingvall. 2024. "Are Crash Causation Studies the Best Way to Understand System Failures—Who Can We Blame?" *Accident; Analysis and Prevention* 196: 107432. <https://doi.org/10.1016/j.aap.2023.107432>.
- Lynch, M. 2013. "Ontography: Investigating the Production of Things, Deflating Ontology." *Social Studies of Science* 43 (3): 444–462. <https://doi.org/10.1177/0306312713475925>.
- Magusic, R. 2024. "Vienna Road Crashes: A Multivariate Approach to Understanding Driver-Related Risks." *Discover Civil Engineering* 1 (1): 1–29. <https://doi.org/10.1007/s44290-024-00092-w>.
- Mayring, P. 2015. "Qualitative Content Analysis: Theoretical Background and Procedures." In: Bikner-Ahsbahr, A., Knipping, C., Presmeg, N. (eds.) *Approaches to Qualitative Research in Mathematics Education: Examples of Methodology and Methods*, Dordrecht: Springer. 365–380. https://doi.org/10.1007/978-94-017-9181-6_13.
- Miner, P., B. M. Smith, A. Jani, G. McNeill, and A. Gathorne-Hardy. 2024. "Car Harm: A Global Review of Automobility's Harm to People and the Environment." *Journal of Transport Geography* 115: 103817. <https://doi.org/10.1016/j.jtrangeo.2024.103817>.
- Perrow, C. 1984. *Normal Accidents: Living with High Risk Technologies*. New York: Basic Books.
- Pollner, M. 1974. "Mundane Reasoning." *Philosophy of the Social Sciences* 4 (1): 35–54. <https://doi.org/10.1177/004839317400400103>.
- Rakha, H. A., M. Farag, and H. Foroutan. 2025. "Electric versus Gasoline Vehicle Particulate Matter and Greenhouse Gas Emissions: Large-Scale Analysis." *Transportation Research Part D: Transport and Environment* 140: 104622. <https://doi.org/10.1016/j.trd.2025.104622>.
- Rancière, Jacques, Davide Panagia, and Rachel Bowlby. 2001. "Ten Theses on Politics." *Theory & Event* 5 (3): 1–16. <https://doi.org/10.1353/tae.2001.0028>.
- Kotašková, E., Azzamová, K., Paul, T., Starkbaum, J., Němeček, K., & Nedbálková, K. 2026. The Crash of Emotions: Socio-Material Landscapes of Guilt in Automobility. *Emotions Space and Society*, 59, 101178.
- Sheller, M. 2021. *Mobility Justice. Sustainable Mobility Futures*. London: Routledge.
- Sheller, M., and J. Urry. 2006. "The New Mobilities Paradigm." *Environment and Planning A: Economy and Space* 38 (2): 207–226. <https://doi.org/10.1068/a37268>.
- Smith, D. E. 2005. *Texts, Facts and Femininity: Exploring the Relations of Ruling*. London: Routledge.
- Statistics Austria. 2024. *Straßenverkehrsunfälle 2023. Mit Personenschaden*. https://www.statistik.at/fileadmin/user_upload/Strassenverkehrsunfaelle2023.pdf.
- Stock, R. 2025. "Sonic E-Mobility: Traffic Noise, Sound-Producing Electric Vehicles, and Blind Pedestrians." *Mobilities* 20 (3): 410–426. <https://doi.org/10.1080/17450101.2024.2436897>.
- Te Brömmelstroet, M. 2020. "Framing Systemic Traffic Violence: Media Coverage of Dutch Traffic Crashes." *Transportation Research Interdisciplinary Perspectives* 5: 100109. <https://doi.org/10.1016/j.trip.2020.100109>.
- Urry, J. 2007. *Mobilities*. Cambridge and Malden: Polity.
- Virilio, P. 2007. *The Original Accident*. Cambridge: Polity Press.
- WHO. 2023. *Global Status Report on Road Safety*. World Health Organisation. <https://www.who.int/publications/item/9789240086456>.
- Witzel, A., and H. Reiter. 2012. *The Problem-Centred Interview*. London: Sage.
- Young, I. M. 2011. "Three Guilt versus Responsibility: A Reading and Partial Critique of Hannah Arendt." In: Young, I.M. and Nussbaum, M. (Eds.). *Responsibility for Justice*. Oxford Academic, 75–94. <https://doi.org/10.1093/acprof:oso/9780195392388.003.0003>.