

**SPECIAL ISSUE: (AUTO)MOBILITY,  
ACCIDENTS, AND DANGER**

## Introduction

### Global Perspectives on Road Safety History

**MIKE ESBESTER and JAMESON M. WETMORE**

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Worldwide, road safety today is an enormous problem. Automobile technologies that have had a profound impact on the way we move ourselves and interact with other people have also put lives in danger everywhere. The World Health Organization reported that over 1.2 million people were killed in 2013 on the world's roads.<sup>1</sup> The statistics are alarming enough that the United Nations has designated 2011 to 2020 its "Decade of Action for Road Safety."<sup>2</sup> The dangers posed by automobiles on city streets and country lanes, however, are not new. Countless people, institutions, and governments have attempted to address the issues they have perceived as

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1. World Health Organization, "Global Status Report on Road Safety 2013," vii.
2. "The United Nations and Road Safety."

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problematic. This special issue of *Technology and Culture* explores the ways in which road uses have been constructed, practiced, and contested in the motor age.<sup>3</sup> It focuses on road safety, as collisions were a visible rupture between the promise and practices of automobile technologies, and have over the past 120 years provoked some significant debates about how we might deal with some of the unintended and unfortunate consequences of technology.

Almost from its first outing on public roads, the motor vehicle was a contested technology. It provoked a range of responses from unhindered enthusiasm to deeply entrenched opposition. Some of this opposition came to focus on the deaths and injuries in which automobiles—and their drivers—were implicated, a toll running to hundreds of millions of people globally from the late nineteenth century to the present day.<sup>4</sup> It is difficult to think of another technology that has, in the same short span, had such an impact on human life and death without having been intentionally designed to cause harm. Yet issues of safety, risk, and accident on the streets have to date been the subject of relatively little critical historical attention—a neglect the papers in the following pages start to remedy.

This special issue examines some of the ways in which road use and road safety have developed since approximately the 1880s, exploring how different road users interacted with each other, technology, regulation, engineering, design, and the built environment. Together the articles provide a look at a variety of approaches in several locations—including North America, Europe, and Africa—and different road users such as pedestrians, cyclists, and drivers. While most of the papers individually consider a single national example, the picture that is built up across the issue allows comparisons between countries, and produces a better appreciation of the transfer of ideas, technologies, and practices between cultures. In sum, the following pages show how road safety and automobility technologies and cultures are historically and culturally contingent.

Academic interest in the history of road safety has been growing over the last ten years or so. There have been panels dedicated to the topic at the annual meetings of SHOT and the International Association for the History of Transport, Traffic and Mobility (T<sup>2</sup>M).<sup>5</sup> Research on the area has

3. As several contributors make clear, the internal combustion engine did not produce a sudden schism, making the once-safe streets dangerous; the roads were already an extremely dangerous place before the motor vehicle. Much of the current research focuses on the motor age. This is reflected in the papers in this volume, although at least two of the authors put the motor vehicle into a broader and longer-term context.

4. In 2009 the World Health Organization estimated that over 1.2 million people died and 20 to 50 million were injured in road crashes annually. Needless to say, no reliable global estimate exists for the total numbers of people killed or injured since the introduction of the motor vehicle. World Health Organization, “Global Status Report on Road Safety 2009,” vii.

5. “Thrills and Spills: Framing Automobile Safety and Enthusiasm,” session at the

been funded by the Wellcome Trust and the Arts and Humanities Research Council (AHRC) of the United Kingdom as well as the Department of Transportation in the United States.<sup>6</sup> And in 2011 the UK Economic History Society and the AHRC supported a two-day international symposium examining the history of road safety, held at Oxford Brookes University, from which many of the papers in this volume originated.<sup>7</sup>

This issue draws on and contributes to three broad and developing areas within the history of technology. First, the focus on road safety is part of a wider, growing interest in the history of safety, accidents, risk, and the environment. Since the 1997 publication of Roger Cooter and Bill Luckin's landmark edited collection *Accidents in History*, an increasing number of scholars have ventured into this field. They have produced a range of publications, conferences, and, in 2011, a day-long symposium at the Hagley Museum and Library.<sup>8</sup> Some of this energy produced the 2013 "Accidents and Emergencies" conference, hosted by Oxford Brookes University and the University of Portsmouth, which has led to ongoing collaborative work and forthcoming publications.<sup>9</sup> The Hagley meeting was devoted to considering where inquiry into the history of safety, accidents, and risk might go next, and has resulted in the creation of an H-Net list—H-Risk-and-Safety—to provide an international forum for scholars.

The second strand that this issue draws from and contributes to is the growing interest in mobility. Sociologists have for some time explored mobility, but historians, until relatively recently, have been much slower to examine the area. The increase can be seen simply by perusing three history journals: *Mobility in History* (the yearbook of T<sup>2</sup>M), the *Journal of Transport History*, and *Technology and Culture*. The October 2011 issue of this journal explored technology, mobility, and geography, and the April 2014 issue focused on some of the ecological issues associated with the automobile.

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Society for the History of Technology Annual Meeting, Atlanta, 18 October 2003; "Technologies of Road Safety," session at the Society for the History of Technology Annual Meeting, Pittsburgh, 16 October 2009; "Driving Innovation? The Unintended Consequences of Early Automobility," session at the Annual Meeting of the International Association for the History of Transport, Traffic and Mobility, Lucerne, Switzerland, 7 November 2009.

6. See, for example, Mike Esbester's 2010–11 project "Living in Safety: The Culture of 'Safety' and Accident Prevention in Everyday Life in Britain, c. 1900–2000," funded by the Arts and Humanities Research Council (ref: AH/H039864/1).

7. "Road Safety in History: International and Multimodal Perspectives," symposium at Oxford Brookes University, June 2011.

8. See, for example, Amy Gangloff, "Safety in Accidents"; Bill Luckin and David Sheen, "Defining Early Modern Automobility," 211–12; Peter Norton, *Fighting Traffic*; Jeremy Packer, *Mobility without Mayhem*; Jameson M. Wetmore, "Redefining Risks and Redistributing Responsibilities"; "Safety, Risk, and Danger in History: Where Next?" symposium at Hagley Museum and Library, April 2011. The symposium was supported by the UK Arts and Humanities Research Council as well as the Hagley.

9. Tom Crook and Mike Esbester, eds., *Governing Risks*.

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Coupled with a number of articles and book reviews in virtually every issue, this testifies to the increasing attention that historians of technology are paying to the history of mobility.<sup>10</sup> The present issue foregrounds some of the research being done in one area and suggests future directions.

Finally, the issue seeks to make connections between historians, policy-makers, and practitioners. This is something that *Technology and Culture* has identified as an important area to develop, reinforcing Colin Divall's call for a "useable past" and the work of bodies such as the British History & Policy group.<sup>11</sup> In this case, we have asked Claes Tingvall, director of traffic safety at the Swedish National Road Administration, to comment on the assembled articles, bringing to bear the contemporary perspectives of an experienced and respected road safety practitioner and considering the ways in which historical studies might inform present and future practice.

The articles offered here start with a deliberately provocative piece from Peter Norton, author of one of the recent important contributions to transportation history—*Fighting Traffic*. Norton issues a challenge to transportation historians in general and the contributors to this issue specifically. He argues that because automotive safety is such an important topic and because it has been dealt with in a variety of ways in different places and different times, historians should work to understand how efforts around the world compare and contrast, fit together and don't fit together, are created independently, and build on each other. To start this conversation he proposes a series of four paradigms of road safety for the United States, and then asks us to consider how and whether other historical case studies on the topic are similar. Norton's models force us to consider how we might characterize road safety over a long period, and how we might seek to explain changes in attitudes toward safety over time. Norton fully recognizes that there is not one ideal approach to automotive safety, but instead uses his analysis of the long history of automobile safety in the United States as a starting point for the conversation. The remaining contributors to this special issue were asked to respond to Norton's challenge in their more detailed and specific case studies. At the same time, they were asked to remain alert to the dangers of "Americanizing" or even "Othering" the rest of the world. While in some cases similarities to Norton's model are observed—particularly in the Western European examples (as might be expected)—closer attention reveals differences in periodization/chronology, as well as in essence.

Following Norton's piece are six research articles that explore the his-

10. Colin Divall, "Mobilizing the History of Technology"; Peter Norton, "Street Rivals"; Lewis Siegelbaum, "On the Side."

11. Suzanne Moon, "Accepting the Baton"; Richard Hirsh, "Historians of Technology in the Real World." Divall, "Mobilizing the History of Technology," 939; History & Policy, "How Historians Can Help Policy Makers." See also Muhammad Ishaque and Robert Noland, "Making Roads Safe for Pedestrians or Keeping Them Out of the Way?"

tory of road safety in Belgium, Britain, Italy, Kenya, South Africa, and the United States. These articles are not mirror images of each other. They do not simply replicate the same methodologies in different places. Rather, the authors have approached the topic from their own vantage points, thereby shedding light on a number of issues above and beyond the unifying question of this issue.

Most of the contributors concentrate on motorized transport. While this focus on the “new” might be grist to David Edgerton’s mill, it is not to suggest that deaths and injuries were of no consequence before the internal combustion engine.<sup>12</sup> Preliminary findings from Steven Gunn and Tomasz Gromelski’s current research into hazards in sixteenth-century England suggest that travel (a suitably ambiguous, catch-all term) formed a large proportion of incidents.<sup>13</sup> The nineteenth-century streets remained places of danger, whether from horse and cart, steam wagon, tram, or bicycle.<sup>14</sup>

The first two research articles demonstrate that safety was an important issue and generated tensions between different road users even before the advent of the motorcar. Nicholas Oddy focuses on a single sign, apparently warning British cyclists of the late nineteenth century of a “dangerous hill.” His deconstruction of the layers of meaning in this sign contributes to our understandings of both the materiality of road cultures at this moment and the ways in which notions of danger and responsibility have changed radically since the introduction of the automobile. Massimo Moraglio shows how this happened in Northern Italy by examining roadways in the heyday of bicycles through the very early years of the motor vehicle.

The subsequent two articles by Donald Weber and Stève Bernardin look at Belgium and the United States a few decades later when one could argue the automobile was no longer in its infancy. They examine the period when it was clear the automobile was here to stay and governments and other interested groups were making a concerted and widespread effort to address the safety concerns raised by a technology that was increasingly becoming a crucial component of transportation, the economy, and daily life. They each examine the variety of issues that had to be balanced with safety concerns in the development of government policies.

More clearly than any of the other contributors, Wetmore examines the role of the technology user—as constructed by a variety of interested parties, from politicians to automotive manufacturers and lobbyists to the individuals themselves. His analysis of fine-tuning vehicle design in the 1970s in the United States demonstrates effectively how the development

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12. David Edgerton, “Innovation, Technology, or History.”

13. Steven Gunn’s four-year project “Everyday Life and Fatal Hazard in Sixteenth-Century England” is funded by the UK Economic and Social Research Council (RES-062-23-2819) and started in April 2011.

14. Gijs Mom, “Civilized Adventure as a Remedy for Nervous Times”; Bill Luckin, “Drunk Driving, Drink Driving: Britain, 1800–1914.”

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and “success” of in-car safety technologies have been affected by social and political debates—framed around liberty and responsibility.

While most of the history of auto safety has focused on Western nations, this runs the risk of distorting the global picture of road death and injury. Certainly for the second half of the twentieth century, and into the twenty-first century, African and Asian automobility has proved (and is proving) to be a major source of concern. Currently the vast majority of global road fatalities occur in low- and middle-income nations even though these nations have less than half of the world’s cars.<sup>15</sup> Going some way toward correcting this imbalance, Mark Lamont and Rebekah Lee’s article explores the varying experiences of automotive death and injury in Kenya and South Africa in the second half of the twentieth century. Here they foreground the technopolitical to strong effect, demonstrating how culturally contingent the meanings assigned to technologies can be. They also expose to view something that is not found in any of the other pieces: the role of race in road safety. Not only did the colonial and post-colonial history of these nations have an impact on automobile cultures, it ensured that automobility was for many an overtly political act.

We are only too aware that the papers presented here do not represent an even geographic coverage of road safety in the past. How were the issues raised by our contributors addressed in China, Japan, India, Brazil, Mexico, Saudi Arabia, Australia, or a score of other nations? Were the same issues even a problem, and what unique safety questions were posed by the internal combustion engine interacting with specific cultures at a given moment? While the practical issue of space in the journal has limited our selection of articles, a more serious impediment to truly globalizing our understandings of the history of road safety is that the majority of the scholarship currently being undertaken largely focuses on North America and Western Europe. This is not to downgrade this valuable work, but it is to recognize that we are currently missing vast tranches of experience. Even within Europe, the absence of studies in this issue touching on Scandinavia, Eastern Europe, or Germany, with their social and political backgrounds so very different from the rest of the continent, is a major gap. These differing backgrounds have manifested themselves in the divergent approaches to road safety issues adopted across nations in the past—and continue to appear in the differing policies related to traffic deaths and injuries today. Hence, for example, we have Sweden’s “Vision Zero” policy, arguing for the elimination of all road traffic fatalities, as a complete contrast to policies in the Western European nations, which are more tolerant of deaths and injuries.

Needless to say, other European nations have not been totally neglected: Peter Itzen is currently working on German road safety in the twentieth century, particularly in relation to its intersections with medical history, and Mariusz and Ewa Jastrzęb have considered road safety in

15. United Nations, “The United Nations and Road Safety.”

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socialist-era Poland. Bill Luckin's recent *Transfers* article is a helpful example of international comparative work, looking at Sweden, Germany, Britain, France, and the United States.<sup>16</sup> And Thomas Zeller is starting to explore the German experience in transnational perspective, paired with the United States—we look forward to the results of his work in due course. In the meantime, however, we hope that the work here inspires other scholars to explore the issues surrounding road deaths and injuries in other geographic and cultural contexts and periods.

This special issue concludes with a short article that is decidedly not historical. The scholars who contributed here study history because we are fascinated by it. But we have chosen our specific topics because they help us to understand issues that we believe are of increasing importance for contemporary life. To help link our work with contemporary decision-making, Claes Tingvall, director of traffic safety at the Swedish National Road Administration, concludes the special issue with a reflection on the papers and the ways in which they can help inform the work being done on automobile safety today. Among other things, Tingvall stresses the power of interest groups and lobbies in shaping road safety and the ways in which the definition of the problems shapes the solution, and urges policymakers, engineers, and citizens to demand technologies that account for fallible humans. He sees the potential that historical cases offer to understand and evaluate past efforts (so far as possible at some distance from the event) with a view to gaining insights into safety methodologies that either failed or succeeded—or, perhaps, have *partially* failed or succeeded. Is this one part of Divall's “useable past”?

Running throughout the issue, then, are questions of intimate concern to historians of technology—ideas of changing technologies, the nature of the sociotechnical and technopolitical in different cultural conditions, and local or national societies that are confronted by an increasingly globalized artifact. Some of the articles focus on automobility in the period during which it was “new”—on the transition to an automotive streetscape—highlighting the pervasive tensions between different users and the (often unhappy) coexistence of “old” and “new” technologies. Yet some articles (such as those of Wetmore and Bernardin) explore how an increasingly “old” technology adapted to changing circumstances (be they political, social, or technological). Undoubtedly more could be done to stress the continued existence of “earlier” forms of transportation alongside the motor vehicle—particularly the limited resurgence of bicycling in some Western cities in the late twentieth and early twenty-first centuries, pedestrianism, or the continued importance of cycling and animal-drawn vehicles throughout the twentieth century in many Asian cities.<sup>17</sup>

16. Bill Luckin, “Motorists, Non-Drivers and Traffic Accidents between the Wars.”

17. Peter Norton, “Urban Mobility without Wheels”; Clay McShane and Joel Tarr, *The Horse in the City*.

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As a whole this issue raises more questions than it answers. This is as it should be. If it acts as a stimulus to further research—and particularly, to further collaborations among historians, policymakers, and practitioners—then it will have served a valuable purpose. Where might some of the focus of future exploration lie? Norton has proposed an interesting model—to be tested and debated further. While model building might sometimes be frowned upon as an exercise in intellectual futility, it is useful in making us consider the bigger picture(s). Are the theories and approaches that Norton describes justifiably termed “paradigms”? Do Norton’s paradigms apply in countries beyond the United States? If so, does the periodization hold true? What differences exist—and why? Would it be possible to build a set of transnational paradigms? Our authors supply some clues useful in answering these questions, particularly with regard to the international markets and exchanges of information that appear to have interacted with specific local contexts. Yet further studies, drawing on, working with, and challenging Norton’s hypotheses would be welcome.

As noted, most of the articles have concentrated on a single country. Yet as the Tensions of Europe network has reminded us, dividing technological (and other) developments into individual national units leaves much to be desired. Particularly when it comes to the mobility offered by the automobile, borders become problematic as people and concerns—and solutions—transfer between and beyond nations.<sup>18</sup> Gijs Mom’s work on the transnational development of road signs is just such an example of the importance of pursuing this research agenda. Mom has explained how standardization with Europe became a practical as well as a political issue in the first half of the twentieth century, as international drivers encountered roads, conditions, and local signs with which they were not familiar.<sup>19</sup> A look at a single country would be insufficient to explain how road signs came to resemble each other across much of Europe.

This leads us to ask: How were other technical standards and specifications tested and contested, defined, agreed on, implemented, and superseded—particularly when they crossed political and administrative borders? The role of research and development should be of interest. A recent special issue of *Transportation Research Part F* has looked at the history of road safety research—demonstrating that those who govern and implement road safety are interested in the past and are open to the value that history may have, particularly in understanding (as Norton does here) how different paradigms might dominate and direct action at different times.<sup>20</sup>

18. Alexander Badenoch, “Touring between War and Peace”; Gijs Mom, “Roads without Rails.”

19. Gijs Mom, “Building an Infrastructure for the Automobile System.” See also Clay McShane, “The Origins and Globalization of Traffic Control Signals”; Hans Buiter and Peter-Eloy Staal, “City Lights.”

20. *Transportation Research Part F*.

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And there are other transnational factors that come into play. One “solution” to the road casualty problem was safety education, which tried to change behaviors and is discussed by Mike Esbester in his “On the Cover” essay. It spread rapidly across the world in the early twentieth century—but how, and to what effect? How have drivers been tested and licensed—and how have those standards been compared as people take their vehicles across borders?

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Although touched on in some of the articles, the experiences of the users of automobile technological systems and technologies have not been foregrounded. How was road safety experienced? How did seen—and unseen—technologies guide people, force them into certain patterns of action, simultaneously liberating and constraining them?<sup>21</sup> How were technologies of road safety and streetscape co-constructed? Has road safety simply been a battle between motorized and “other” “non-motorized” users (to define them by what they are not), or have more complicated relationships and alliances emerged?<sup>22</sup> How did vehicle manufacturers or service providers, such as bus companies, deal with potential reputational damage and perceptions of risk while selling their wares?<sup>23</sup> How did voluntary agencies, states, and individuals interact to prevent accidents—and how were these activities linked internationally? How were deaths and injuries experienced?

Gender is one analytical category that has barely been touched on, but will have been extremely significant. How did women’s and men’s experiences of road safety vary, and why? How do concepts of safety relate to environmental issues?<sup>24</sup> How have understandings of the road accident changed over time? In Britain today, the charity RoadPeace campaigns for the term “accident” to be dropped, as it is laden with connotations of lack of cause and as being an event beyond control—a position the Pedestrians Association would have recognized when it first operated in the 1920s and 1930s.<sup>25</sup> Numerous countries, including the United States and Canada, have been working to change the language for over a decade. So why do we keep having road “accidents”? Such questions would undoubtedly yield significant insights and aid our understanding of road safety and of the roles technologies have played in our lives.

Implicit in the problematic that has produced all of these papers is the view that road safety in the past has been *only* a problem. The deaths and injuries—among other social ills—were certainly viewed by the vast majority of people as unintended and negative outcomes of automotive tech-

21. Jennifer Bonham, “Transport.”

22. Luckin, “Motorists, Non-Drivers and Traffic Accidents between the Wars.”

23. Crosbie Smith and Anne Scott, “Trust in Providence.”

24. See, for example, the session “The Nature of Risk: Envirotech Approaches to Accidents,” at the October 2013 Society for the History of Technology Annual Meeting in Portland, Maine.

25. RoadPeace.

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nologies. Yet this focus also obscures the benefits that many enjoyed, and that some historians have focused on: the freedom to move, unfettered by timetables or the rigid pathways of the railroad. And, as Kurt Möser has argued, the violence of the automobile might have been viewed by some as a positive force. Arwen Mohun has shown, in relation to roller coasters, how perceived risk can be an attraction—might the same be true for auto-mobility?<sup>26</sup> We should not neglect such alternative and seemingly counter-intuitive perspectives.

These, and many other, questions pose interesting challenges for historians of technology, safety, and (auto)mobility. But they are more than this. Despite more than a century of efforts to address automobile safety, there are more casualties on the world's roads than ever. The topics and questions raised in this special issue continue to be hugely significant for vast swaths of the world today, and question the distributions of power, knowledge, and experience that have been created around the automobile, its infrastructure, and its sociotechnical systems. Better understanding of the temporally and geographically contingent nature of mobility technologies and practices, and of how accidents, safety, and risks are co-constructed and co-produced, could offer us insights into how we might reduce deaths and injuries in the future—surely a manifestation of a useable past if ever there was one. And that is the broader challenge this issue lays down to historians, not just of (auto)mobility, but of technology: while recognizing in its own right the value and importance of producing studies of the past, we can also find ways to make our work useful to non-historians in shaping the world of tomorrow.

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26. Kurt Möser, "The Dark Side of 'Automobilism'"; Arwen Mohun, "Designed for Thrills and Safety"; Michael John Law, "Speed and Blood on the Bypass."

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