INTRODUCTION

Making World Mobility History

This book is intended to be, and has been written as, a (somewhat opinionated and personalized) *essay*, rather than a formal scholarly historical study, in order to answer a seemingly simple question: Why the car (and why not)? While my answers to the first part of the question will necessarily be historical, the second part of the question suggests a look into the future, based on the answers to the first part. To reach both aims it was clearly not enough to rewrite my monograph dealing with the history of the electric vehicle[1] and the trilogy on global automobilism,[2] written during the past quarter century, into a shortened version in which the argumentation takes center stage (and referencing in the footnotes has been limited to justifying direct quotations, and new research).[3] Such a shortened version is presented here, but in addition it was necessary to expand the historical evidence into three directions.

First of all, whereas the explanation of the decline of the early electric car hinged on the masculine character of the hegemonic car culture, the automobilism trilogy, which began with the same assumption, shifted in the course of its three volumes toward an acknowledgment of another trend, less well covered by mobility history: the status character of the car as commodity, a trait that emphasized ownership rather than use, and became more pronounced as car culture became global, a trend I sometimes called 'feminized,' to contrast it with the dominant masculinized user culture of the car as 'adventure machine.' It appeared appropriate, therefore, that some extra research would be done into the role of a minority group of motorists (mostly women, but also some men) in the production of another, less aggressive and violent adventure, expressed in the early 'gymkhanas' and flower contests and revived half a century later in a youth culture of car modifying and 'lowriding.' The writing of the third volume of the trilogy brought the insight that without reconstructing this 'feminine' and alternative 'masculine' tradition of the automotive culture, such new subcultures could not be satisfactorily explained. Through exploring, in a more pronounced way, the role of women in early automobilism, and some trends of nonhegemonic masculinity in the West as well as redefinitions of the masculine

self in Asia in the post-World War II phase, the 'consumerist' tendencies in global automobilism could be given more relief and the fledgling contours of a perhaps different car culture in the Global South could more convincingly (I hope) be identified. In other words, this essay is not so much a gendered history of automobilism as a more gender-equal base for such a history.

For the same reasons, some extra attention is given to the bicycle culture at the turn of the twentieth century, prefiguring in many ways the 'soft' elements in the subsequent culture of automobilism, elements that did not disappear with the emergence and persistence of the car. This is all the more urgent given the recent revival of interest in cycling as an alternative to and a critique of the car. Likewise, the motorcycle had to gain somewhat more attention because of its masculine reputation. This in its turn led to somewhat more emphasis on the class character of mobility cultures, not only to give (motor)cycle culture a clearer class profile (especially the role of the working and lower-middle class in this culture), but also to make the role of the global new middle classes more pronounced in the emergence of a worldwide car culture. Further, I used the opportunity of this essay to bring the narrative of the trilogy, which ended around 2015, up to date by including the last decade or so.

Additional research was also needed to make two countries a bit more prominent than in the original studies, Japan and the Soviet Union/Russia. Within mobility history, not much is known about the distinctive trajectory of motorization in Japan and its intermediary role as an Asian imperial power and, later, as a mediator between the West and the East in the neoliberalization of automotive Asia. Likewise, the Soviet Union has been under-researched because of the obsession with 'scarcity' among its mainstream 'area students,' neglecting the futile efforts in the SU and Eastern European socialist states toward an alternative motorization pattern, a pattern that again became more clear when writing the third volume. Together with very recent new research about Tanzania, I am now able to construct at least a patchwork of a possible 'socialist' car-cultural narrative, which can be connected to the efforts to construct alternative car futures, or futures alternative to the car, as discussed in the fully new Chapter 5. A visit to the 2024 T2M conference in Leipzig opened my eyes to the efforts to develop a 'socialist city planning' (as both a planning of socialist cities and a socialist planning of cities) including the proliferation of dozens of trolleybus networks, not only in the Soviet Union, but also in several Eastern European countries.[4]

Second, as the essayistic, succinct character of this book lends itself to reading in an educational context, the relevant theoretical tools had

to be introduced more explicitly, in an abbreviated introductory form suitable for a classroom environment, located where they need to be understood for the clarification of the interpretation of particular historical evidence. They are (opinionated) vignettes rather than theoretical treatises, signaling the opportunity for further study. Also, for this purpose the somewhat enumerative presentation of hundreds of belletristic utterances had to be considerably diminished and its argumentative treatment tightened. Furthermore, the structure of the entire essay has been construed such that it would fit in a course setting through its seven independently readable texts (Introduction, Conclusions, and five chapters in between), whereas an annotated 'canon' should enable the novice in the history of mobility to become familiar quickly with the field's assumed common denominators, a necessity that will be made clear when dealing with the recent 'mobility turn' in Chapters 4 and 5.

Thus, a brief introduction to the social construction of technology and some other concepts from the history of technology and innovation theory (such as the concept of 'script' and the 'ironic car'), as well as a brief reference to gender and masculinity scholarship, are to be found in the first chapter, whereas the second chapter includes some paragraphs on the so-called 'toy-to-tool' thesis (the questionable thesis that the popularity of the car is due to its becoming a utilitarian tool) and the 'America as model' thesis (the no less questionable thesis that national histories of automobilism are following, somewhat later, the 'script' of the US in this respect), both relevant for understanding the *persistence* of car culture (rather than its emergence of the first period) in the West. Similarly, 'actor network theory' is briefly introduced in Chapter 3, as it was developed in part through the analysis of the (failed) efforts to reintroduce the electric passenger car in France after World War II, whereas the emergence of car modification and street racing among the Atlantic youth invites some attention to Mikhail Bakhtin's concept of the 'carnivalesque.' Chapter 4 contains an introduction to 'mobility Orientalism,' the problematic, Eurocentric reflex to analyze mobility in the Global South as 'backward,' assumed to 'catch up' to the Western model as soon as prosperity reaches its population, or, worse still, to universalize the Western story into a 'global' one without much consideration for the fundamental differences between the two.

The third adjustment to my earlier monographs concerns a rethinking of the concept of 'world history,' a rethinking needed for a better understanding of the globalization of automobilism. World history or global history (terms I use interchangeably) has a long tradition as "a minority tendency," reaching back at least into the sixteenth century of the Mughal Empire.[5] Nowadays, three distinctive 'schools' can be identified:

world history as a history of everything that has happened in 'the world,' constructed as a patchwork of individual histories, such as the history of silk, or (elements of) mobility history, several of which are presented in the annotated bibliography at the end of this book; second, as a history of connections and the 'transfers' between different cultures and civilizations, for instance the spread of the 'idea' of automobilism as well as of its materialities such as bicycle technologies and bicycle paths, or cars and car-friendly roads; or third, as a 'perspective,' a way of finding the global in the local for instance, such as the emergence of so-called 'layered' urban mobilities in Africa in which the car adds a new dimension to what many observers experience as 'chaos.'[6] This book's world mobility history has elements of all three approaches.

Efforts to write non-Western world visions, such as the Latin American *dependencia* theory (with its radiance toward Africa and influencing Wallerstein's approach, see Chapter 3) and subaltern studies (trying to give people a voice who are not to be found as active agents in the sources, for instance Indian peasants, see Chapter 2), or the 'Orientalism school' (depicting visions from the South as 'deviation from a standard pattern,' see Chapter 4), enabled a more balanced, multi-perspectivist view.[7] This multi-perspectivism is especially relevant when world historians focus on the process of 'globalization' itself, a phenomenon that also has a history of several centuries, but that experienced a rather sudden intensification and acceleration from the 1970s in which (as this study claims) the proliferation of automobilism (especially through the construction of a worldwide network of car-friendly roads, described in Chapter 3) played a crucial role. It is a conceptual, teleological error (a *Denkfehler*, as Helmuth Berking posited)[8] to suggest that globalization is a deterritorializing process of unbounded flows; on the contrary, globalization is not a top-down process alone, it also settles down locally, from where it at the same time is modulated.

But the traces mobility has left in world history writing are remarkably thin, literally so: in Patrick Manning's standard handbook it encompassed exactly two paragraphs, mentioning animal traction, shipping, and the 'technology of empire' in a reference to Daniel Headrick's famous study (without even mentioning the dominating land-based technology of the railways).[9] Likewise, efforts to conceive a global history of technology as the scholarly roots of mobility history, for instance in Arnold Pacey's and Francesca Bray's thousand-years-long *Technology in World Civilization*, focused on invention, innovation, and engineering rather than on use. Hence, it is understandable that automobilism hardly plays a role in such studies, as its culture was, as a 'bricolage' of existing cultures and technologies developed during the previous century (see

Chapter 1), hardly anything new, despite claims to the contrary about its revolutionary character.[10] But even a very recent and very welcome effort to rewrite current globalization from the perspective of 'things' and their surrounding 'practices' appears to be deficient in presenting automobilism as a worldwide phenomenon: in Nigel Thrift, Adam Tickell, Steve Woolgar, and William Rupp's *Globalization in Practice* (2014) the chapter on road safety is reduced to a survey of localized speed limits in Anglophone countries (neglecting an entire bookshelf on transnational automotive safety technology, safety statistics, and WHO and UN safety epidemiology, to mention only some omitted aspects), whereas the chapter on 'mobility' lacks any reference to globalized automobilistic empirics.[11]

However attractive it seems to many novices to the history of mobility, even the 'mobility turn' of a quarter century ago (which we will introduce as an important *historical* factor in Chapter 4) does not seem to satisfy the obvious need for a historical approach, for instance in the combination of 'global networks' and 'global liquids' ('automobility,' migration, tourism), in sociologist John Urry's attractive but rather schematic model. A similar attraction resides in more historical (but perhaps somewhat teleological) approaches that use alternative integrative metaphors such as 'web' (by the American world historian William McNeill).[12] Recently, an edited volume on the *Global History of Techniques* provided a correction to such approaches, in which Arnauld Passalaqua, writing on "Mobility Techniques," observed that 'mobility studies' "have diverged further and further away from the technical dimensions of the systems that are being studied."[13] Mobility historian Kate McDonald has warned us in her analysis of Japanese 'railway imperialism' against "the centrality of movement to the traditional conception of modernity as an historical period," because it risks to "uncritically adopt . . . the terms of its subject . . . we should take care to treat the mobility of modernity as an argument, born of imperialism."[14] To heed her warning, positioning 'mobility' as such in 'world history' needs careful theorizing indeed. The field of 'mobility history' is not yet so far: this book gathers the main elements of such a history in perhaps still a somewhat kaleidoscopic narrative. I have no doubt that mobility history, in the coming years, will gain from an ever increasing inclusion of mobility cultures.

The current study, because of its 'imprisonment in English' (including its English translations from Russian and from Asian, African, and Latin American languages), runs the risk of what Margit Pernau saw as a new form of colonialism: I am one of the 'caste of global historians' not endowed with linguistic knowledge of extra-European societies.[15] This is especially problematic for a special kind of source mobilized

to feel the pulse of global road motorization: belletristic utterances in high- and lowbrow genres, but also forms of popular culture such as movies, songs, and games. Although I am less interested in their representative contents than in their symbolic and especially structurally homological properties (a three-level style of analysis explained in the next chapter), the selection of these sources is not only biased by their language (Dutch, English, German, French, some Spanish), but also by the selection process of both the translating publishers and the mainstream sources for book reviews that I used, such as the *Times Literary Supplement* and the *New York Review of Books*. Many of these (what I will call) 'autopoetic' sources (that is: not necessarily books on car travel, but sources with 'autopoetic' scenes, explained in Chapter 1) are in themselves considered to be part of 'world literature,' even if some literary scholars oppose such epithets on the grounds of these sources' 'untranslatability.'[16] For similar reasons this study includes songs only (with some African and Chinese exceptions) as part of Western pop and rock culture and not what in Europe has been called 'world music' of the Global South; nor will we go far beyond Hollywood's and Western European film culture (and we will neglect Bollywood and Nollywood [nearly] totally, but will deal with some Chinese movies and TV series). Conversely, when in Chapter 4 gaming is introduced we will dedicate some space to Asian (especially Korean and Japanese) designs.

In the theoretical introductions to the monographs on which this book is largely based I have addressed several 'problems' that need rethinking or reprocessing for the purpose of the present essay. Some of those problems have been resolved by time, as it were. 'The Trouble with Travel Writing,' for instance, namely that it deals with the destination rather than including the 'way' to get there, seems to be addressed by new approaches inspired by the 'mobility turn' (see Chapter 5).[17] Also, considering the car as a 'commodity' (mobilized as a 'correction' to a more or less exclusively practice-theoretical approach to the car as an 'adventure machine'),[18] the acquisition and possession of which grants status and at the same time enables fetishism, is widely enough accepted as a possible angle of approach to automobilism to obviate separate attention in this chapter, although I still miss the contribution by media studies scholars helping mobility historians to analyze the car as a message, a medium rather than a transport vehicle.[19] The same argument of sufficiently wide acceptance applies, I contend, to my original efforts to convince (what I thought to be) a potentially skeptical readership of transport students of the explanatory power of 'narrative histories.'[20] I refer those readers who are interested in a deeper understanding of these aspects and arguments to the monographs mentioned earlier.

At first sight, the same also seems to apply to the use of literature as a historical source, considering the very recent revival of a humanistic interest among mobility students.[21] Yet there still exist some doubts, especially among literary theorists working in the tradition of the 'mobilities paradigm,' about the merits of literature (and other 'texts' such as movies or songs) as historical evidence, doubts that are fed by poststructuralist theorizing, most particularly by what human geographer Nigel Thrift has termed 'non-representational theories.'[22] In the first volume of my world mobility trilogy I have introduced, referring among others to the work of Thrift, several theories of 'social practices' (philosopher-geographer Theodore Schatzki's social action theory, the theory of affordance by psychologist James Gibson, and the 'hybrid subjectivity' of German cultural sociologist Andreas Reckwitz) as an entrance into narrativist histories of automobilism, theories that also inspire the current book. On this basis I have defended the use of literature as a historical source by pointing at the *performative* aspects of writing (and reading).[23] Hence my earlier emphasis on the 'affinity' of these practices with driving and passengering, as well as on the symbolic level. This is not to say, I claim again, that these sources' *content* should not be used as evidence. They should, but not so much because it 'represents' an extra-literary reality, but rather because they are *translations* of experiences from one medium into another, undertaken by people considered to be specialist in 'verbalizing' such experiences. Such content often cannot be found in the more traditional sources such as archives and trade journals. In doing so, I am constantly aware that "experience can never be reduced to processes of representation."[24]

If a comparison between fictional and nonfictional media is possible (for instance when social scientific research exists on the same topic in the case of contemporary, nonhistorical research, or when nonfiction accounts can be found in historical sources, as is the case in Chapter 1), the limits of the former can be neutralized. Thus the ubiquitous 'flight' metaphor in both cycling and autopoetic fiction can be explained as a very strong adventurous (and transcendental) element, considering the condition of the roads, which, as we know from more mundane sources, were mostly too bad to enable a smooth ride. Similarly, we can relativize the focus on the individual self in such fiction as a structuring element of the novel and the short story, knowing from the usual sources about the collective (group and family) character of many cycling and automotive touring practices. The recent revival of literary mobility studies tends to ignore or neglect the historical context of fictional utterances suggesting an idyllic culture (even if admittedly "sensationalized" for "literary effect") incompatible with nonfictional historical sources.[25]

The problem with *historical* literary sources about the adventurous aspects of automobilism, however, is that such comparisons with non-fictional sources are often not possible, especially when sociocultural norms inhibit talking or writing in public about such issues. This is for instance the case with the phenomenon of 'inversion' (see Chapter 1), where only a *close reading* of the literary sources allows us to observe a fundamental narcissistic trait of early automobilism: nobody in the contemporary press self-diagnosed as narcissistic; such conclusions are to be found in cultural histories of the fin-de-siècle neurasthenia debate.[26] Geographer-historian Peter Merriman has asked, in a polemic against the recent call for more 'mobile' methods of social science research, for our attention to what his opponents have called 'conventional' or 'traditional' methodologies. At the same time he mobilizes non-representational theories, without disclosing how he intends to analyze historical 'representations' of car culture in a 'non-representational' way.[27]

Non-representational theorists have emphasized that although they "do not prioritize the role of representation in their accounts of the social and the subject," they are not "anti-representation *per se*," so some of them would prefer their epithet to be changed into "more-than-representational" theories. Representation is about "transformation and difference" (a process we have called 'translation') and as such non-representational theory does not "refuse" it, only if it is seen as "the repetition of the same or representation as a mediation."[28] A representation, from this perspective, should be seen as a practice, a "presentation" itself, as a medium "on its own terms": "A face is painted. A sunset is photographed. A room is described. What has already taken place in one medium passes over into what takes place in another medium . . . Non-representational styles of thought treat everything usually regarded as representational (e.g. words, concepts, ideas, perceptions, and images) as events in their own right."[29] For literary theorists this must sound quite familiar (as the 'relative autonomy' of art, a point of view ushered in before the emergence of the sociology of literature), although non-representational theories emphasize the embeddedness of such 'events' in social 'life.' Despite Nigel Thrift's belief in the performing arts that can "jolt people . . . into places they never thought they'd get," *historical* autopoetic fiction remains elusive for non-representational theories, their vagueness (as an openness, for others to build on) seen as a virtue by its proponents.[30] Perhaps one avenue around the contradiction of addressing representations from the viewpoint of practice theory is to consider fiction à la Michel de Certeau as "a form of modern ethnography," a space "populated by everyday virtuosities that science doesn't know what to do with."[31] There is indeed, *pace* Nigel Thrift, a

lot "going on that talk cannot grasp," but if we don't have the luxury to 'grasp' such 'absent present' phenomena in contemporary 'reality' through non-representational means, we are lucky to have historical sources that 'talk' about the 'untalkable,' that try in all kinds of registers (novels, short stories, songs, movies, games) to translate the 'untranslatable.'[32] Especially when aiming to 'represent' subaltern historical actors, all forms of scholarly 'tools' should be mobilized, all the more so if we acknowledge that even Deleuze and Foucault "declare that the oppressed subject of history can speak through the intellectual, that is to say, without mediation."[33]

This book presents mobility history as a process of all kinds of movement (of people, things, ideas, bodily gestures) in a period, a 'very long twentieth century,' dominated by the practice of and the discourse about *automobilism* (or in Brigitta Frello's terminology: movement [on and beyond the road] conceived as both empirical and metaphorical),[34] constructed and constantly changed by riders, drivers, passengers, and many other personal and institutional stakeholders, such as governments, experts, non-users (in particular pedestrians and cyclists), and sometimes even technologies, as agency. Apart from the passenger car, the bus, and the truck, two-wheelers (motorized and non-motorized) also play leading roles in this narrative, next to supporting roles for railways, tramways, and very rarely ships and airplanes. Although some mobility scholars emphasize the 'system' character of 'automobility' (the latter a term, borrowed from transport science, that we try to avoid, preferring instead the neologism 'automobilism' [French '*automobilisme*'] as suggesting process and change rather than rigidity),[35] my main goal in this book is to understand the history of the *practice of moving-by-car* (and by bicycle, and by foot) in a *systemic context*, especially the (directly user-relevant) infrastructural context of road network building. One of the main plots in this narrative is the gradual shift, during this period, from an Atlantic to a Pacific stage. The Atlantic, defined initially as an anti-communist civilization in its Northern part in a Cold War setting, experienced a metamorphosis in the masterful hands of later historians who introduced a Southern part of massive trade (of enslaved people and other 'goods') and a no less massive tradition of migration, excellently reviewed by Bernard Bailyn.[36] The Pacific, with an even older history of 'civilizations' (home of "hundreds of distinct tribal societies and languages that flourished in jungles and mountain valleys, and across beaches from the Solomons, Vanuatu, and New Caledonia to Papua New Guinea," often invisible in world histories),[37] has only recently been revived by historians and social scientists alike as the Atlantic's rival in a geopolitical sense, the result of a century-long process of globaliza-

tion, in which automobilism, and mobility in general, has played and is still playing a dominant role, especially after the energy crises of the 1970s, accelerated even further in the 1990s, "after the end of the bipolar world," and further still around the turn of the last century.[38] This role of (auto)mobility is important, but not "ubiquitous," as several scholars have emphasized who have warned (like Kate McDonald) against the "obsession with mobility and movement" among globalization students to the detriment of place-based histories, and of people with historical agency who threaten to disappear behind abstractions of 'flow' and 'circulation.'[39]

A world mobility history can be written from several angles: institutional, technological, sociocultural. The world mobility history presented here has elements from all three angles, but it concentrates on the bicycle's and the car's *user cultures*, rather than their production, on *conceptual transfers* (for instance of the freeway concept over the globe) rather than their technology, on its *sociocultural differences* rather than its 'system.' This is not to say, of course, that an encompassing world mobility history should not include a history of car technology and repair (introducing labor history, largely absent from the current narrative, also needed to better understand the proliferation of 'informal transport'), or the history of oil production (and related geopolitical aspects of world mobilities). Nor should an 'entangled' or 'connected history' of an emerging global automotive economic 'network' be absent in a comprehensive global mobility history, if only to explain the initial weak position of Chinese negotiators in their effort to build a national industry vis-à-vis the car multinationals (see Chapter 4). Nonetheless, I believe the present *focus on sociocultural factors in a context of technical, economic, and institutional influences* is justified because of their being, in exactly this composition, a major 'driver' of change: perhaps the best example of this claim is the 'victory' of the internal combustion engine car over the electric car at the start of the twentieth century, as discussed in Chapter 1, a victory that still haunts the current efforts to radically change the automotive paradigm as addressed in Chapter 5. However, at this moment in the historiography of world mobility the most important needs are contributions from scholars who read and speak the languages of the countries that here have been accessed only through (highly selective) translations, as well as the dozens of countries that have not been covered at all. Only then would world mobility history have become not only in its products, but also through the community of its producers, a mature discipline.[40]

In Chapter 1, then, we start our analysis of nearly two centuries of mechanized road mobility with the urban rickshaw in Asia, an original

'bricolage' of indigenous and Western technologies and practices, followed by a focus on the Western emergence of the car and its culture from earlier bicycle, carriage, and engine technologies and its 'struggle' with two competing options, steam and electric propulsion. Around this car, an aristocratic and bourgeois mobility culture was built, soon extended with and dominated by a middle-class leisurely culture, supported by national governments and interconnected through transnational associations.

Chapter 2 continues the rickshaw narrative, following its quantitative Asian blossoming and its subsequent demise, caused, depending on the country, by the bus, the jitney, or the car. This chapter also zooms out for the first time to the *entire* globe, analyzing the struggle between road and rail in Africa and Latin America, while in the West national 'car systems' were established by the end of the Interbellum, including a countrywide car-friendly road system.

Chapter 3 sees these systems develop into exuberant Western cultures on freeway networks, a principle that then becomes the subject of an active rollout over the globe, a globalization stimulated by the World Bank and International Monetary Fund, and supported by Western consultancies. Whereas Latin American countries see their middle classes motorize, and Japan promotes its own specific form of automobilism in the Pacific, the Soviet Union sets on the railways for its modernization, and invites China to do the same. In Africa a new phenomenon emerges: the informal semipublic transport of the jitney, a revival of forgotten alternatives in the West.

Globalization governs Chapter 4, in the midst of growing concerns for the environment and ever increasing energy use and pollution, trends that provoke the emergence of new generations of mobility students producing the concept of the 'mobility turn.' We witness the explosion of Asian automobilisms, accompanied by growing concerns about traffic unsafety, monitored and redefined by the World Health Organization as an epidemiological phenomenon, as an issue of public health. In the new century, a re-electrification of the global car fleet seems underway, exacerbating the problems caused by mobility injustice and mobility inequalities.

Chapter 5 is new. It addresses the hope for an 'end of automobilism' and investigates the alternatives to the car society, contrasting global car cultures of carnivalesque mobilities versus status, of autonomous vehicles versus non-motorized alternatives in the cities. We look at the history of car futures and wonder whether the electric car will, after more than a century, lose its stigma of being a perpetual car of tomorrow. The current crisis has also triggered an explosion of suggestions of

a culture 'after the car,' a condition to be reached by an activism 'against the car.'

At last, the Conclusions, after a wrap-up of the previous chapters, reflect on what a world-historical approach has brought us beyond what a national-historical or a purely social-scientific approach have enabled so far.

Notes

1. Gijs Mom, *The Electric Vehicle: Technology and Expectations in the Automobile Age* (Baltimore: Johns Hopkins University Press, 2004).
2. Gijs Mom, *Atlantic Automobilism: Emergence and Persistence of the Car, 1895–1940* (New York: Berghahn, 2015); *Globalizing Automobilism: Exuberance and the Emergence of Layered Mobility, 1900–1980* (New York: Berghahn, 2020); *Pacific Automobilism: Adventure, Status and the Carnival of Mobility, 1975–2015* (New York: Berghahn, 2022).
3. Direct quotations are indicated by double quotation marks; single quotation marks either mean 'so-called' or are quotations from my trilogy that, because of space, are not separately justified. The reader is invited to consult the chapters in the trilogy referenced in general at the beginning of the passage concerned.
4. For instance Wladimir Sgibnev, "Post-Socialist Public Transport Development Trajectories: An Overview," oral presentation (2024 T2M Annual Conference, "Mobilities and Infrastructures: Transitions and Transformations," 23–26 September 2024, Leipzig [Leibniz-Institut für Länderkunde and Lancaster University Leipzig]).
5. Sanjay Subrahmanyam, "On the Origins of Global History: Inaugural Lecture delivered on Thursday 28 November 2013; transl Liz Libbrecht," 26, 28, https://books.openedition.org/cdf/4171 (accessed 12 February 2025).
6. Roland Wenzlhuemer, *Globalgeschichte schreiben: Eine Einführung in 6 Episoden* (Konstanz: UVK Verlagsgesellschaft, 2017), 9–23.
7. Dominic Sachsenmaier, *Global Perspectives on Global History: Theories and Approaches in a Connected World* (Cambridge: Cambridge University Press, 2011), 48, 51, 78, 133–34; Sebastian Conrad and Andreas Eckert, "Globalgeschichte, Globalisierung, multiple Modernen: Zur Geschichtsschreibung der modernen Welt," in Sebastian Conrad, Andreas Eckert, and Ulrike Freitag (eds), *Globalgeschichte: Theorien, Ansätze, Themen* (Frankfurt: Campus, 2007), 7–49, here 18, 23, 26; on deviation: Emily Apter, *Against World Literature: On the Politics of Untranslatability* (London: Verso, 2013), 157.
8. Helmuth Berking, "Raumtheoretische Paradoxien im Globalisierungsdiskurs," in Helmuth Berking (ed.), *Die Macht des Lokalen in einer Welt ohne Grenzen* (Frankfurt: Campus, 2006), 7–22, here 9.
9. Patrick Manning, *Navigating World History: Historians Create a Global Past* (New York: Palgrave Macmillan, 2003), 222–23; however, see also his "Global History and Maritime History," *International Journal of Maritime History* 25, no. 1 (June 2013), 1–22; Daniel R. Headrick, *The Tools of Empire: Technology and European Imperialism in the Nineteenth Century* (New York: Oxford University Press, 1981).

10, Arnold Pacey and Francesca Bray, *Technology in World Civilization: A Thousand-Year History; Revised and Expanded Edition* (Cambridge, MA: MIT Press, 2021 [1990]), Chapter 10 (195–216, covering the period 1860–1960).
11, Nigel Thrift, Adam Tickell, Steve Woolgar, and William H. Rupp (eds.), *Globalization in Practice* (Oxford: Oxford University Press, 2014). The two chapters are "Road Safety and Traffic Management" (79–83, written by Daniel Neyland and Steve Woolgar) and "Mobility" (31–34, written by Peter Merriman).
12, John Urry, "Globale Komplexitäten," in Berking (ed.), *Die Macht des Lokalen*, 87–102, here 92; McNeill quoted in Sachsenmaier, *Global Perspectives*, 74.
13, Arnaud Passalacqua, "Mobility Techniques: Between Globalization and Local Solutions," in Guillaume Carnino, Liliane Hilaire-Pérez, and Jérôme Lamy (eds.), *Global History of Techniques (Nineteenth to Twenty-First Centuries)* (Turnhout: Brepols, 2024), 351–62.
14, Kate McDonald, "Imperial Mobility: Circulation as History in East Asia under Empire," *Transfers* 4, no. 3 (Winter 2014), 68–87, here 68, 83.
15, Pernau quoted in Conrad and Eckert, "Globalgeschichte," 39; Anna Wierzbicka, *Imprisoned in English: The Hazards of English as a Default Language* (Oxford: Oxford University Press, 2014).
16, Apter, *Against World Literature*.
17, Mom, *Globalizing Automobilism*, 38–42; for one of the first studies to include the 'mobility turn' see: Anita Perkins, *Travel Texts and Moving Cultures: German Literature and the Mobilities Turn* (Oxford: Peter Lang, 2016), 217.
18, Mom, *Pacific Automobilism*, 14–18.
19, Mom, *Globalizing Automobilism*, 35–36. For a scholarly 'call' to integrate mobility and media studies that did not acquire a following, see: Dorit Müller and Heike Weber, "'Traffic'—On the Historical Alignment of Media and Mobility," *Transfers* 3, no. 1 (Spring 2013), 65–74.
20, Mom, *Atlantic Automobilism*, 3–7.
21, See the founding of the journal *Mobility Humanities* (2021) by the Academy of Mobility Humanities of Konkuk University in Seoul, South Korea. See also the founding of a Mobility & Humanities Centre of Advanced Studies at the University of Padova (https://www.mobilityandhumanities.it, accessed 24 February 2024).
22, Nigel Thrift, *Spatial Formations* (London: Sage, 1996); see also Nigel Thrift, Paul Harrison, and Ben Anderson, "'The 27th Letter': An Interview with Nigel Thrift," in Ben Anderson and Paul Harrison (eds.), *Taking-Place: Non-Representational Theories and Geography* (Farnham: Ashgate, 2010), 183–98.
23, Mom, *Atlantic Automobilism*, 34–40.
24, Mom, *Globalizing Automobilism*, 28–30; last quote: Ben Anderson and Paul Harrison, "The Promise of Non-Representational Theories," in Ben Anderson and Paul Harrison (eds.), *Taking-Place*, 1–34, here 204. On the problematic relationship of non-representational theory with history ("memory") see ibid., 204–5.
25, See for instance Una Brogan, "Cycling and Narrative Structure: H.G. Wells's *The Wheels of Chance* and Maurice Leblanc's *Voici des ailes*," in Marian Aguiar, Charlotte Mathieson, and Lynne Pearce (eds.), *Mobilities, Literature, Culture* (Cham: Palgrave Macmillan, 2019), 237–57; on "sensationalized": Peter Merriman, "Rethinking Mobile Methods," *Mobilities* 9, no. 2 (2013): 167–87, here 181.
26, Joachim Radkau, "'Die Nervosität des Zeitalters,' Die Erfindung von Technikbedürfnissen um die Jahrhundertwende," *Kultur & Technik* 3 (1994): 51–57; Gijs

Mom, "Civilized Adventure as a Remedy for Nervous Times: Early Automobilism and Fin de Siecle Culture," *History of Technology* 23 (2001): 157–90.

27, Merriman, "Rethinking Mobile Methods," 168, 173.

28, Anderson and Harrison, "The Promise of Non-Representational Theories," 2n1 ("prioritize"), 19 ("*per se*"; italics in original), 25 ("refuse" and "mediation"). On 'translation' see Mom, *Globalizing Automobilism*, 28–38.

29, Marcus A. Doel, "Representation and Difference," in Anderson and Harrison (eds.), *Taking-Place*, 117–30, here 119–20.

30, Thrift, Harrison, and Anderson, "The 27th Letter," 195–96.

31, Ben Highmore, *Cityscapes: Cultural Readings in the Material and Symbolic City* (New York: Palgrave Macmillan, 2005), 114 (the first quote is Highmore's).

32, Nigel Thrift, "Intensitäten des Fühlens: Für eine räumliche Politik des Affekts," in Berking (ed.), *Die Macht des Lokalen*, 216–51, here 222.

33, Tariq Jazeel and Stephen Legg, "Subaltern Studies, Space, and the Geographical Imagination," in Tariq Jazeel and Stephen Legg (eds.), *Subaltern Geographies* (Athens: University of Georgia Press, 2019), 1–35, here 15.

34, Birgitta Frello, "Towards a Discursive Analytics of Movement: On the Making and Unmaking of Movement as an Object of Knowledge," *Mobilities* 3, no. 1 (2008): 25–50, here 29.

35, See, for instance, John Urry, "The 'System' of Automobility," *Theory, Culture and Society* 21, no. 4/5 (2004): 25–39.

36, Bernard Bailyn, *Atlantic History: Concept and Contours* (Cambridge, MA: Harvard University Press, 2005).

37, Matt K. Matsuda, *Pacific Worlds: A History of Seas, Peoples, and Cultures* (Cambridge: Cambridge University Press, 2012), 3.

38, Giovanni Levi, "Frail Frontiers?" *Past and Present* (2019), Supplement 14: 37–49, here 38 ("bipolar"); Richard Drayton and David Motadel, "Discussion: The Futures of Global History," *Journal of Global History* 13 (2008): 1–21, here 6.

39, Sebastian Conrad, *What is Global History?* (Princeton, NJ: Princeton University Press, 2016), 226; Stefanie Gänger, "Circulation: Reflections on Circularity, Entity, and Liquidity in the Language of Global History," *Journal of Global History* 12 (2017): 303–18, here 312 (agency).

40, Gijs Mom, "New Mobility Studies: Niche to Mainstream; History and Social Sciences in the Mobility Turn" (*Transfers*, forthcoming).