BOOK REVIEWS

Paving the Way for a Cultural Understanding of Roads

Penny Harvey and Hannah Knox, *Roads: An Anthropology of Infrastructure and Expertise* (Ithaca, NY: Cornell University Press, 2015), 264 pp., 16 illustrations, $26.95 (paperback)

Penny Harvey and Hannah Knox analyze road infrastructure as spaces of social and cultural interaction, where state power is actualized. They draw on diverse sources in the study of Peru, including autobiographical narratives of engineers, public officials, migrants, farmers, and other residents to construct their ethnographic study. The wide-ranging work anchors the examination of roads in the lived experience of everyday mobility. Harvey and Knox acknowledge the lasting influence of Claude Lévi-Strauss on anthropology but push back against the assertion that the subject be analyzed in the abstract. The authors are part of a new generation of anthropologists deeply interested in the tangible impact of state institutions on society and culture. By emphasizing themes of cultural difference, social relations, and communal identity, they provide a distinctly ethnographic focus that contrasts with other social science methodologies.

The work pivots carefully from general analytical discussions that frame the authors' arguments to detailed case studies in each chapter. Harvey and Knox focus on the development of two controversial road-building projects: the country-spanning Interoceanic Highway and the exorbitantly expensive, 75-kilometer road from Iquitos to Nauta. They describe the difficult history of mobility in rural Peru in the late nineteenth and early twentieth centuries, which left much of the country isolated and out of reach for economic development. By the 1920s and onward, road promoters promised the construction of new motor routes to "modernize" and "civilize" the nation, improving the material well-being of communities in the Andean highlands and densely forested Amazonian regions. It is a story of political ambition, arduous work, broken promises, corruption, and environmental degradation that forced many people to reflect on the consequences of the infrastructure projects they had long championed.

The authors note that these engineering endeavors could not be carried out by the central state alone but required close cooperation from local citizens. In conducting this work, engineers tried to mediate regional concerns and adapt construction routes accordingly. Harvey and Knox highlight one

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telling case study of a shrine along the Interoceanic Highway, which had been erected to commemorate the many people who had died in accidents along the treacherous route. When crews arrived to expand the road to improve its safety, engineers realized the shrine obstructed the enlarged route. They worked with local leaders to devise a resolution, ultimately moving the shrine to a different location rather than demolishing it. This episode, the authors note, was indicative of the symbolism attached to roads. It was not simply a question of devising the best path according to engineering practice; instead, negotiating the cultural terrain could be just as challenging as navigating the physical landscape.

Another major theme is the issue of poor communication between communities and their elected officials, especially when dealing with the construction and maintenance of important infrastructure systems. In the town of Quince Mil, residents angrily protested their mayor, accusing her of stealing funds meant for maintaining electricity to the community. They blocked the highway and surrounded the mayor's office, preventing her from leaving until she acceded to their demands to restore electricity. In another case, citizens who had played an essential role in clearing the route for the Iquitos-Nauta road through dense vegetation were overlooked during the inauguration ceremony. The president had arrived via helicopter and his security detail denied the local men entrance. When the matter was resolved and the men could pass, the president had already departed. Harvey and Knox emphasize how this case illustrated the social disconnect that existed between national elites and everyday citizens, even when they agreed on the basic need for infrastructure development.

At times, the text became weighed down by jargon and dense prose, which distracted from the authors' bigger analytical points. Aside from that concern, however, *Roads* is an instructive book for scholars interested in the social implications of transport systems. Harvey and Knox integrate detailed analysis of institutional bureaucracies, everyday life, and the conflicting cultures that gave rise to political and social tensions around road building. The book points the way for scholars of mobility and transport to produce richly researched works that retain a clear appreciation of the human element critical to the function (or failure) of these types of infrastructure.

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A Mobility Lexicon

Noel B. Salazar and Kiran Jayaram, eds., *Keywords of Mobility: Critical Engagements* (New York: Berghahn Books, 2016), 196 pp., $90 (hardback)

Exponents of the "mobility turn," such as Ulrich Beck, Manuel Castells, and others, have discussed aspects of what John Urry has suggestively dubbed a new "sociology beyond societies."[1] By focusing on "the flow" of communication through social media and technology, transnationalism, tourism, and global capital, to name a few, movement rather than boundaries has become a central theoretical and empirical problem in the historical moment. *Keywords of Mobility*, whose editors are both sociocultural anthropologists, has taken the opportunity to do a little stocktaking of some of the work that has been done on this issue. Drawing inspiration from Raymond Williams,[2] their volume is meant to present us with a lexicon for its study.

In addition to Noel Salazar's brief but useful introduction, each of the collection's eight chapters offers a literature review of a selected concept. Some are more programmatic and theoretical, while others are more ethnographic and fill out their issue, in varying degrees of detail, with case studies from their own ongoing research, as well as others. By way of highlighting some of the main themes of the book, let me briefly touch on its more successful chapters.

Kiran Jayaram focuses on mobility in relation to capital, which features money transfers and labor migration, and explores questions about the impact of mobility on inequality and production. He presents a case from his own fieldwork about Haitian students who travel to study in the Dominican Republic by way of assessing whether travel creates capital or vice versa. Malasree Acharya, who works on the international movements of Indian entrepreneurs, surveys ethical dimensions of cosmopolitan identity in relationship to travel of several kinds of folks, both wealthy and marginal. Bartholomew Dean, whose research is based in the Peruvian Amazon, offers a fascinating account of how mobility indexes the sovereignty of the self and the state. He argues that mobility but also immobility may be seen in terms of the extent to which they serve as modes of freedom and privilege or else as manifestations of inequality imposed by states and capital. Whatever the case, evaluating what freedom may or may not mean, Dean emphasizes the importance of ethnography.

Inevitably, the collection goes on to include a chapter on gender, which is done thoroughly by Alice Elliot, who works in Morocco. Again, the impact of the broader political context is foregrounded. On the one hand, women's movements, motivated by poverty, leave them vulnerable to exploitation, such as sex trafficking. Or else, patriarchy may restrict their movement outside the house. On the other hand, middle-class women travel for the purposes of sex tourism. In a subsequent chapter, Nichola Khan offers an intriguing

discussion of the ethos of immobility, focusing on feeling states associated with forms of liminality, such as waiting, being stuck, being tied up, or just the sense of going nowhere. She cites the melancholia and boredom that may be experienced by transnational migrants who, for example, are unable to return home. Mari Korpela's chapter then concerns the infrastructures through which mobilities may occur, such as the Internet, vehicles, and the state-based institutions that assert their monopoly over legitimate movement. She points out that access to transportation infrastructure is not equal, as in the case of women in Saudi Arabia.

To what extent, and for whom, does this volume succeed? I think junior graduate students will benefit from it—that is, students beginning ethnographic projects on mobility-related topics. And I think the book will be a useful resource for scholars in disciplines who want fairly comprehensive statements of what is happening in sociocultural anthropology in relationship to mobility cross-culturally. On the whole, however, the book left me a bit dissatisfied. Whatever its overall status is in twenty-first century life, the mobility turn in social thought is doubtlessly having its moment. However, as Richard Handler and I have recently argued, the relationship of mobility to political circumstances and capital, while admittedly of signal import, certainly does not exhaust the significance of mobilities within and across the boundaries of society.[3]

Mobility means more than the extent to which it permits or limits freedom. Mobility has larger reference than to migration. For instance, there is quite a bit more to make of the meaning of such phenomena as lowriders in San Antonio, car coffins fashioned in Accra, or canoes in Papua New Guinea than inequality or oppression. In other words, mobility has a broader significance, which may assert criticism and nostalgia, not to mention cosmological aspects of moral identity. Mobility may express quite a bit more, in other words, than found in the research and social philosophy of the editors and contributors to this otherwise valuable volume.

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Notes

1. John Urry, *Sociology beyond Societies: Mobilities for the Twenty-first Century* (London: Routledge, 2000).
2. Raymond Williams, *Keywords: A Vocabulary of Culture and Society* (New York: Oxford University Press, 1976).
3. David Lipset and Richard Handler, eds., *Vehicles: Cars, Canoes and Other Metaphors of Moral Imagination* (New York: Berghahn Books, 2014).

Walking a Turtle on the Leash

Lutz Koepnick, *On Slowness: Toward an Aesthetic of the Contemporary* (New York: Columbia University Press, 2014), 336 pp., 43 illustrations, $40 (hardback)

Modernity's obsession with speed and acceleration amounts to a grand narrative of progress, rationality, and a distinctive aesthetic experience—a narrative in which industrialization is believed to have annihilated slowness and the slow is thus perceived as antimodern and antiprogressive. Lutz Koepnick's *On Slowness* is a sustained and critical discussion of why we need to reconceptualize that perception. Slowness, he contends, should be seen not as inimical to speed and acceleration but rather as integral to, and an inextricable part of, modern industrial culture. Throughout the book, Koepnick offers an unapologetic articulation of the copresence of speed and slowness.

The book is strikingly ambitious. Its eight chapters are organized around an array of contemporary aesthetic expressions: art, photography, cinema, sound and video installations, fiction, and even walking and reading practices. The author's attempt to tease out these very complex and distinct artistic expressions from diverse historical epochs and weave an overarching argument is commendable. While the chapters have different qualities, each contributes to the overall argument in significant ways. Koepnick highlights how different artists instantiate an embrace of "slowness as a medium to ponder the meaning of temporality and of being present today in general, of living under conditions of accelerated temporal passage and spatial shrinkage" (3). As such, Koepnick weaves a complex philosophical argument that challenges our everyday understandings of the purpose(s) served by art.

For instance, the chapter on slow modernism discusses the extent to which contemporary aesthetic slowness lends weight to how certain early twentieth-century modernists already challenged the dominant association of modernism with speed and acceleration, thus foregrounding contemporary slowness as a critical intervention to the debates that place modernism and postmodernism in an inimical relation. Koepnick engages with the futurists, among others, for whom the notion of speed is a distinct ethos of modernity's consciousness of the present. He utilizes Walter Benjamin's reading of Paul Klee's *Angelus Novus*, an image of the angel of history whose wings appear still—neither moving forward nor backward—as a gesture for slowness, thus buttressing his critique of modernity's ethos of speed.

Modernity's infatuation with speed was embedded in the thought of the present as a radical break from the past, and as the beckoning of a future whose essence negated the past. Koepnick takes a radically new approach by insisting that the willingness "to face the pace of modern life" and "encounter

endless flow and discontinuous shocks of urban modernity" stems from the ability "to recognize the true pleasures and provocations of slowness" (32).

For Koepnick, "the art of taking a stroll" is a slowness that enabled moderns to navigate the spatial relations of the modern city. Following Benjamin, who described it as "walking the turtle," the art enabled one "to counteract the force of industrial speed and traffic" (217). Koepnick skillfully extends how the art offered modern flaneurs "certain subversive tactics of maneuvering industrialized space" (218) to how that same art was also implicated in philosophical thought as philosophers like Nietzsche, Kant, and Rousseau thought walking was "the royal road to thought and reflection" (219). The art of strolling provides deep conundrums with strong implications for researchers in mobility studies, especially how the art and practice of traversing urban space complicates mobilities research. Besides engaging in a transgressive form of urban mobility, the flaneur is embodied, gendered, and racialized, and performs agency as both a gazing subject and an object of gaze.

Koepnick also criticizes the thought that photography is "an art fast seeing" as modernist-induced insofar as it conceives the shutter's increasing speed as evidence that photography follows the "trajectory of acceleration" (55). By focusing on how the "slow shutter speed" technique captures time in motion, Koepnick refutes the association of photography with instantaneity. This lends weight to his argument that the photographic technique is the convergence of different temporalities—that slowness and speed are interlaced. Researchers in mobility studies may wish to explore further how photography is imputed in potential and real mobile experiences.

The book is complex and philosophically dense in some places, with allusions to some philosophers whose thought systems are intricate. This may be somewhat challenging to nonphilosophers. However, the author evens this out with explanations that help readers decipher his main arguments. Researchers working in the interstices of disciplines will find *On Slowness* interesting to read. *Transfers* readers will find it particularly thought provoking, as the different ways it teases out the inextricable link between slowness and speed have great potential to shape new trajectories of research in mobility studies.

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From Transport Economics to Political History?

Gérard Duc, Olivier Perroux, Hans-Ulrich Schiedt, and François Walter, eds., *Histoire des transports et de la mobilité: Entre concurrence modale et coordination (de 1918 à nos jours)* [Transport and mobility history: Between modal competition and coordination (from 1918 to the present)] (Neuchâtel: Editions Alphil-Presses Universitaires Suisses, 2014), 462 pp., $54 (paperback)

It seems difficult to review a book written by twenty-six authors from various countries and disciplines. The editors, however, make their focus clear from the beginning: the contributions gathered here deal first and foremost with an issue of transport coordination "at the forefront of the political agenda of all Western countries" (29). Mobility historian Gijs Mom tells us more about the historical debates related to the topic. He calls for a "cultural turn" in the approach of transport coordination, to put emphasis on some social processes and political practices, beyond what appear all too often as "simple cost calculations" (53).

The four chapters of the first part deal with the coordination of transport policies at the international level. Gilles Forster shows how the fiction of a competition between companies helped to foster an unexpected cooperation during World War II, in the field of rail transport, between Germany and Switzerland (89). Martin Schiefelbusch, in contrast, uses sources from trade associations to underline an early fragmentation of transport offers in the postwar period (74). Michèle Merger investigates the case of "combined" transport, between rail and road, to underline the importance of national priorities for the (un)making of international policies (126). In a similar vein, Sébastien Gardon shows how political and social issues became (ir)relevant to experts at the League of Nations and then at the United Nations (106).

The second part of the book focuses on transport policies at the national level. Bernd Kreuzer emphasizes a growing competition between road and rail during the interwar years in Austria (150). In comparison, Gábor Szalkai shows that the Great Depression led to a new cooperation in the sector of transport in Hungary (172). Gijs Mom insists on a coordination process that started much earlier than historiography suggests in the Netherlands (191). According to Anette Schlimm, some experts played a crucial role in policy integration in Britain (145). They helped to define new principles for transport policies, as exemplified by the concept of "flexible Demokratie" in Ueli Haefeli's chapter on Switzerland (213). As Stefan Sandmeier shows, a new vision of coordination emerged as a consequence in this country, to include spatial planning and environmental concerns to a "comprehensive transport policy" (215–216).

The third part of the book deals with transport policies at the level of the city. Caroline Gallez builds on the cases of Berne, Geneva, Strasbourg, and

Bordeaux to underline a profound change in the meaning of coordination in Europe since the late 1960s. Nowadays, it is no longer a priority for politicians to adapt the city to the automobile. They promote a great variety of new priorities instead, in favor of sustainability and environmental concerns. The analysis leads the author to question the apparent consensus for change (247). Aurélien Delpirou and Arnaud Passalacqua also insist on the importance of local politics, when they study some recurrent difficulties in developing underground mobility in Rome (263).

The chapters of the fourth part of the book focus on interest groups. Wulfhard Stahl insists on some tensions within an intellectual elite regarding the status of bicycles in the public space in Germany around 1900 (277). Peter Cox describes a growing class conflict during the 1930s in Britain. He sheds light on the transformation of the Cyclists' Touring Club, "from social club to campaigning body," to lobby for cyclists' rights (286). Olivier Perroux and Gérard Duc deal with the trucking industry in Switzerland. They discuss the pros and cons of an economic analysis to show the role of the federal authorities in its expansion (323).

The three chapters of the fifth part of the book refer to transport and land-use planning. They discuss the hypothesis of an ideological opposition between the two domains, with pure liberalism on one side and state interventionism on the other. Philipp Hertzog compares two railway projects in France and Germany to underline some strong cultural differences between the two countries when it comes to planning (342). In contrast, Pierre Tilly underlines a trend for policy integration at the European level, over the long run, when he studies the case of Lille and its regional area (361). Sandro Fehr observes a similar process in Switzerland, where public authorities of cities and cantons came to follow a single plan for the construction of airfields instead of competing with each other (378).

The sixth part of the book investigates the coordination of transport and tourism policies. Xavier Bernier focuses on the accessibility of mountain resorts in the Alps, to go against any simplistic approach of the topic (397). In their contribution, Cédric Humair and Mathieu Narindal analyze a balanced relation between transport companies and hotels in Switzerland, to underline the pressure under which the coordination developed (422). Márta Jusztin insists on the mutual benefits of transport for tourism and vice versa in Hungary (415). Valérie Lathion illustrates another viewpoint when she questions the consensus around mobility and leisure for all to emphasize some violent reactions of Protestant groups to the democratization of transport in Switzerland (435).

In sum, the authors propose a rich overview of the social configurations in which transport coordination becomes a matter of conflict or cooperation. That is, how they come to build a stimulating alternative to the traditional economic explanation of transport policies. Nevertheless, they seem to leave

one question open: would it be possible to find some similarities, in the social processes through which a problem becomes worthy of political attention, in various local or national contexts? The question is an invitation to enlarge the scope of the academic debate, from social history to political sociology.

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Mutable Architecture

Mobilizing the Viewer in Seventeenth-Century England

Kimberley Skelton, *The Paradox of Body, Building and Motion in Seventeenth-Century England* (Manchester: Manchester University Press, 2015), 204 pp., 60 illustrations, £70 (hardback)

In *The Paradox of Body, Building and Motion,* Kimberley Skelton escorts the early modern viewer on an intriguing journey through the elite country houses of the Stuart era. These elegant homes are examined in the context of the scientific revolution, anatomical knowledge (not least, the motion of the heart), inventions from the telescope to the pendulum clock, the transformation of the English language, and the increasing ease of travel that reinforced London's contact with rural estates, continental Europe, and the American colonies. Transported to the countryside, the reader accompanies guests as they experience the hospitality offered from Wollaton Hall to Longleat. Beginning with the "meticulously delimited movement" (27) characterizing the reception of a guest in an ideal house in the early seventeenth century amid uneasy attitudes to mobility, Skelton traces a shift in attitude—across six concise chapters—to argue for "motion as mode of perception" (152).

Skelton's study of the "viewer in motion" (11) extends the work of historians who have examined the movement of visitors in the house, the garden, or the palace in the seventeenth century. Skelton moves beyond this scholarship to focus on human sensory perception. Robin Evans and Dell Upton, for example, have examined how movement through architectural spaces can elicit human physical and mental responses. Skelton pairs their work with studies by Jonathan Crary and Georges Didi-Huberman, as well as Michael Baxandall's "mobile viewer" (12), to situate her argument. Later, Michel Foucault's concept of the body as a "passive surface on which powers of authority are

inscribed" (42) provides insight into how the body is disciplined—through architecture—according to strict social conventions. However, such theoretical framing is subtle and precisely integrated, and the reader is often left with the impression that these insights are shepherded into the notes. While Skelton's text is erudite and entirely readable, further reflection on these perspectives would be a welcome addition to the book.

Notwithstanding these reservations, Skelton draws on a rich range of sources to build her case. The strength of the study lies in the critical analysis of architectural space informed by in situ building analysis (from boundary to buttery), architectural drawings, rigorous examination of the reception of Renaissance treatises (and increasingly flexible attitudes to the same), and a dizzying range of philosophical, social, and literary works. The mutable house is deftly introduced with reference to a plate from *L'idea della architettura universale* (1615) (Figure 2, p. 4) by Vincenzo Scamozzi, a plan and section depicting the penetration of light. For Skelton, the diagonal lines representing the light rays animate this space demanding the viewer to "put the interior in motion" (4), while for early century commentators like Sir Henry Wotton and Sir Francis Bacon, these same openings permitted gusts of wind that, unchecked in an interior vista, might bring ill health (123). Similarly, an unobstructed interior vista might compromise necessary sensory boundaries between service and elite functions. Accordingly, some of the most fascinating insights into the purposeful manipulation of architectural space derive from contemporary etiquette manuals such as *The Courte of Civill Courtesie* (1582) or *Christian Hospitalitie* (1632). Skelton highlights the need for predictable social interactions within the home and examines the careful choreography of the "house-dance" (31), which ensured these interactions. In the early seventeenth century, clearly defined "staccato" boundaries governed arrival, reception, and behavior, even directing the inherently disruptive body—"belche, cough, sneese" (30). However, with the midcentury acceptance of mobility, architects manipulated interior and exterior to propel the guest in a "blur of motion" (146)—a tactic, for Skelton, to direct a precise sequence of sensory experiences with the intent to preserve, paradoxically, the "ongoing stability of house and household" (138).

Skelton's study of the house and estate is a valuable addition to scholarship that locates architectural production amid the broader context of travel in early modern Europe. Architectural and cultural historians will relish the rich textual and visual analysis. However, historians of landscape architecture may find Skelton's examination of the grounds less satisfying. The failure to employ digital visualization techniques to evoke the experience of a "malleable sensory viewer" (13) also represents a missed opportunity. Nonetheless, this study is an important addition to the provocative Rethinking Art's Histories series, and Skelton's lean, fast-paced text provides rich insight into the

architectural choreography of a mobile viewer striving to keep pace with a world in perpetual motion.

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Histories and Geographies of International Cycling

Ruth Oldenziel, Martin Emanuel, Adri Albert de la Bruhèze, and Frank Veraart, eds., *Cycling Cities: The European Experience—Hundred Years of Policy and Practice* (Eindhoven: Foundation for the History of Technology, 2016), 256 pp., 100 illustrations. €37.50 (hardback)

Glen Norcliffe, *Critical Geographies of Cycling: History, Political Economy and Culture* (London: Routledge, 2015), 290 pp., 24 illustrations, $119.95 (hardback)

In 1999, two Dutch historians of technology, Adri Albert de la Bruhèze and Frank Veraart, published a comparative study about the changing role of the bicycle in nine European cities in the twentieth century. *Cycling Cities* is an updated and extended English edition of this work. The well-designed and richly illustrated volume includes case studies by ten contributors about fourteen cities in nine countries. They show that from the 1920s to the 1950s, the bicycle was a common means of urban transport all over Europe, before the car superseded it. Modern traffic policies facilitated motorization and made bicycling look outmoded, poor, unruly, and dangerous. The comeback of the bicycle as a sustainable vehicle since the 1970s, as well as a trendy one (*cycle chic*) since the 1990s, in cosmopolitan cities did not restore its former large modal share in urban traffic. The current differences in urban pedaling levels are substantial, however, varying between more than 30 percent in Dutch and Danish towns and less than 10 percent in British and French ones.

In their explanations for such diversity, the authors focus on traffic policies, urban planning, and bicycle activism, thus highlighting the impact of technological and social design in local settings. Unfortunately, they pay less attention to the broader cultural-historical and national dimensions of cycling, such as ingrained habits in mobility and its cultural image. Their emphasis on variations in cycling volumes among cities tends to obfuscate the considerable national differences in the range of these variations and average

pedaling levels. Moreover, the authors largely underestimate the neoliberal social-economic background of the recent "bicycle renaissance," which often matches the lifestyle of well-educated yuppies while ignoring the needs of lower classes and ethnic groups. Cycling is not egalitarian by definition: gentrification, which engenders rising costs of living in urban centers, pushes the unprivileged to the outskirts, where cycling facilities are often far from optimal. For them, commuting distances often increase so that cycling is not an option, apart from the fact that many of them are not inclined to pedal at all.

The case studies are full of details about specific local developments and not always consistent statistical information, implying a need for a more general and systematic analysis. The two concluding chapters by Ruth Oldenziel fall short in this respect. When claiming that "the research field of urban cycling is still wide open" (193), she appears to disregard the many historical, social-scientific, and policy-oriented studies published in the past two decades. Consideration of these studies would have strengthened the authority of this assessment.

In contrast, Glen Norcliffe's *Critical Geographies of Cycling,* a collection of previously published articles, aims for theoretical sophistication. Freedom and expansion of mobility are, in his overall geographic perspective, the essential characteristics of the bicycle. Apart from situating the two-wheeler historically in the context of modernization, he locates the production, retailing, use, regulation, and imagery of the vehicle in concrete local places and more abstract sociocultural, economic, and political spaces. Half of the chapters are about the technical design, manufacturing, and marketing of bicycles in local (nineteenth-century Coventry), national (Canada and the United States), and international (the global market served by Chinese and Taiwanese producers) settings. The other major theme is the link between cycling and social, political, and national identities, as well as gender roles. In his case studies about late nineteenth-century bicycle clubs and cycling feminists in North America, Norcliffe elaborates the entanglement of pedaling with class and status, age and gender, urban and rural locations, and nationhood. During the twentieth century, cycling became a leveling means of transportation for the masses, but since the 1990s, the elitist character of cycling has partly returned. In many parts of the Western world today, the lower social echelons are underrepresented among regular cyclists.

Although Norcliffe expresses the hope that pedaling will be broadly accepted as a viable alternative to motorization, his assessment of the future of pedaling worldwide is far more critical and realistic than that of the authors of *Cycling Cities.* The dramatic rise of motorized traffic in countries such as China and India has had detrimental effects on urban cycling. In most Western countries, there is still a considerable discrepancy between the cycling potential in daily transport and actual pedaling levels, as well as between political rhetoric and cycling activism on the one hand and bicycle-unfriendly

conditions on the other. Moreover, whereas pedaling levels appear to be increasing in cities, they are generally declining in suburbia and the countryside, as well as among children, whereas they remain low among non-Western ethnic groups. The two-wheeler may be widely celebrated as a convivial vehicle, but at the same time it has become a fashionable "class marker" (217) in the neoliberal capitalist order. In some US cities, *cycle chic* has provoked the aversion of deprived groups who are elbowed out of gentrified neighborhoods and who simply cannot and probably do not want to give up motorized transport and public transit. It remains to be seen if and how the populist backlash against neoliberal globalization will affect cycling.

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The Automobile Meets Deep Learning and the Sharing Economy

Hod Lipson and Melba Kurman, *Driverless: Intelligent Cars and the Road Ahead* (Cambridge, MA: MIT Press, 2016), 328 pp., 31 illustrations, $29.95 (hardback)

Driverless offers an engineering perspective on the requirements and possibilities of an "intelligent" future mobility. Hod Lipson and Melba Kurman develop the story of a "revolution" in transportation based on a "disruptive technology." Disruptive refers to a "major paradigm shift in the way cars move people and goods around the physical world" and how this is achieved through forms of self-learning artificial intelligence (vii).

Driverless is a well-informed contribution to the debate on self-driving cars that aims to demystify automated driving. The book focuses on engineering challenges regarding technological solutions and implementation that shall be beneficial in terms of traffic safety, sustainability, increased comfort, and user equality. Despite its outspoken optimism, the book does not simply proclaim automated cars as a universal key to the challenges of transportation. Although the authors promote this technology, they also show a clear-eyed view on the introduction of vehicle automation in car-based societies. Drawing on empirical data, as well as theoretical speculation and possible blueprints drawn from other technologies, the authors' enthusiasm appears well grounded.

The book starts with a summary of the debates on car automation in general. In chapter 1, the authors take their stand as proponents of this technology by responding to arguments against the introduction of autonomous cars.

Chapter 2 continues the work of demystification by presenting a driverless mobility that seems not merely optimistic. The challenge of changing car-based mobility systems is not only to gradually automize the privately owned and used cars of today but also to deploy car automatization to deprivatize the car. Driverless cars could contribute to sustainable mobility only in combination with the cautious implementation of an alternative mobility regime that does not simply takes the promises of technology for granted. "Rebound effects" could in fact increase the miles driven per car and person, as well as the number of cars on the streets roaming around from one user to another. Increased comfort and efficiency of automated and possibly deprivatized cars could make them even more attractive to use for any purpose. Moreover, the life-span of vehicles would probably decrease because of their heavy use. Lipson and Kurman make clear that automatization is also a social, cultural, and political question. Based on several studies on mobility and local economies and on spatial orders and sociality, the authors point out that political answers must prevent the technology from contributing to significant negative effects.

Chapters 3 to 5 focus on different aspects of the development of automized cars as a challenge for engineering, robotics, and computer science. Tracing the history of the influence of computer technology on car traffic, chapter 3 brings the diverse interests, approaches, and strategies in the field of automobile research and production into focus: car manufacturers and software companies, along with municipalities and legal institutions, shape automobility as a systemic assemblage. These perspectives are interwoven with alternative paradigms of agency and the question of whether a disruptive or a gradual implementation of automated cars is preferable. Chapters 4 and 5 discuss issues of the design of operational systems for autonomous driving and of artificial perception—the developers' "last mile [that] could prove to be a long haul" because the car's skills would have to be superior to human driving (85).

Chapters 6 to 9 trace the history of vehicle automation and various past approaches, such as "intelligent" highway systems. Only a fully self-reliant car would be a satisfying option, because every other model would lack the demands on reliability as well as on flexibility. Chapter 10 introduces deep learning—the actual "disruptive" technology—as a promising approach that follows an epistemic shift in robotics. Chapter 11 explores views on the technological and ethical issues of big data and privacy with respect to a system of shared automated cars.

Chapter 12 closes the book with a discussion on why some technologies succeed and others do not. The social, cultural, and political aspects of automation are highlighted beyond the topic of traffic. Thus, mobility is discussed as deeply intertwined with modes of production, cultural habits, and the organization of societies.

Driverless is a good introduction into self-driving cars and especially suitable for developing an understanding of the technology behind them. However, the book in some parts suffers from its fixation on a car-centered and free-market perspective. Other modes of transportation therefore appear only as footnotes, and—in this respect—the enthusiasm for driverless cars seems less disruptive.

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Democracy and Mobility

Mathieu Flonneau, Léonard Laborie, and Arnaud Passalacqua, eds., ***Les transports de la démocratie: Approche historique des enjeux politiques de la mobilité*** **[The transport of democracy: A historical approach to the political issues of mobility] (Rennes: Presses Universitaires de Rennes, 2014), 224 pp., €19 (paperback)**

Does more mobility correlate with more democracy? That fundamental question lies at the heart of *Les transports de la démocratie,* based on a seminar series of the Passé Présent Mobilité association and the "Resendem" project "Les grands réseaux techniques en démocratie: Innovation, usages et groupes impliqués dans la longue durée, des années 1880 à nos jours." Other questions follow in the wake of this central concern: How is mobility governed? What level of accessibility does mobility require to be "democratic"? How should we understand mobility-related protests? The edited volume investigates when, where, why, and how "mobility" turned into a yardstick for "democracy." It rightfully indicates that the robust growth of mobility over the past two centuries has been possible based on its capacity to serve integration and access, as well as discrimination and segmentation.

The book has three parts. The first discusses governmental practices. Contributions range from Vincent Denis's more abstract sketch of how the notion of "mobility" first emerged in revolutionary France to Sébastien Gardon's more pragmatic overview of the mushrooming commissions French cities created in response to the emergence of the automobile. Xavier Desjardins discusses mobility systems' difficulties in overcoming spatial scales. Financial hurdles, differing priorities, and a lack of joint ambitions among public actors precluded coherence. In a valuable contribution, Maxime Huré and Arnaud Passalacqua investigate how a mutual dependence emerged between JCDecaux and urban authorities in Lyon. The company cofinanced bus shelters

and a bike-sharing system in return for advertising all over the city, essentially privatizing public space.

The second part discusses the popularization of mobility, most prominently in Étienne Faugier's discussion of automobile diffusion in the French Rhône *département.* His rural focus draws attention to the uneven spread of the automobile, a well-depicted theme in automotive history, confirming that the "democratization by automobile" did not arrive before the 1960s. Jan Oliva depicts how aviation became a strong symbol for the Czechoslovak state in the interwar years. Aviation served the state and vice versa, befitting the context of Czechoslovakia's emergence out of the rubble of World War I. Carlos López Galviz investigates how the interpretation of public utility affected subterranean outcomes in underground railways. London aligned them with existing ones above ground, while Paris conceived its Métropolitain as a system on its own due to antagonism between national and local actors.

The third part discusses pro–/counter–car movements and the lack of societal gains related to (auto)mobility. Massimo Moraglio's pointy contribution on the 1960s demonstrates how antiautomobile sentiment emerged before the energy needs or the environmental toll of motorized vehicles had become important to political agendas. He combines discussions of the Buchanan Report (1963) and the movie *The Italian Job* (1969) to arrive at the observation that the automobile takeover of urban public space shifted sociability indoors and to the interiors of motor vehicles. Timothée Duverger distinguishes artistic, social, and environmental facets in the discourses of ecologist intellectuals in their antiautomobile stance. The two final contributions critique the idea that speedier modes help society forward. Frédéric Héran spotlights the negative externalities associated with fast (auto)mobility by discussing Ivan Illich's notion of generalized speed in *Energy and Equity* (1974). Illich calculated an optimal generalized speed, a threshold value after which further gains in speed are not desirable due to negative externalities. Yves Crozet explores how we have created a mobility system that claims lots of space, while not saving us time since choosing faster modes of transport was combined with traveling further distances.

Taken together, the volume's chapters spotlight an all-important political dimension but do not add up to a grand statement on the relationship between mobility and democracy. For that, the collection is too disjointed and overly focuses on car-based mobility and France. Complete exploration of the democracy-mobility relation would warrant explicit inclusion of a diversity of political systems (where are the dictatorships?) and less mobile parts of the planet. Finally, one would have expected more engagement with the scholarship on the social construction of technology (SCOT) in which mobility has played a prominent role. SCOT-inspired contributions would have added a bottom-up approach to the more top-down oriented chapters. Nevertheless, the book offers readers of *Transfers* a thought-provoking set of texts that sup-

port interdisciplinarity by including explicitly nonhistorical contributions in line with the calls on the pages of this journal to arrive at more "transdisciplinary" scholarship. It can only be hoped that scholarly circles will pick up this important subject more widely.

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Outer Space Mobilities

From Administrative Discourse to Critique

Erik M. Conway, *Exploration and Engineering: The Jet Propulsion Laboratory and the Quest for Mars* (Baltimore: Johns Hopkins University Press, 2015), 416 pp., 21 illustrations, $32.95 (paperback)

Space travel raises questions of mobility on a massive scale. Erik M. Conway's *Exploration and Engineering* offers an in-depth look at the engineering and administration that enable spacecraft to traverse an interplanetary expanse and remote-automated rovers to roam the Martian surface. As the in-house historian of science and technology for the Jet Propulsion Laboratory (JPL), a NASA research and development center managed by the California Institute of Technology, Conway has meticulously compiled an account of JPL's internal workings. Consulting white papers that include meeting minutes, project proposals, budgets, research notes, design blueprints, and more, Conway creates what amounts to a chronological inventory of the deliberations, tasks, plans, and directives involved in the engineering and administration of the Mars missions executed by JPL with other institutions, from the early 1970s to 2007. With *Exploration,* readers become privy to the minutiae of spacecraft design decisions, debates between team leaders, wrangling over budget line items, persistent revision of mission objectives, and splits between scientists and engineers, to name a few examples. This insider's view of JPL's everyday functioning provides an invaluable resource for people working in the space industry, while for a more general public, the book brings to light processes of space exploration beyond news headlines and familiar historical narratives.

Within the mobilities paradigm, astronautics can be understood as an example of what John Urry calls a "mobility system." *Exploration* illuminates how key aspects of astronautics operate. However, in his narrow focus on discussions within JPL and some of its partner institutions, Conway barely ventures to consider any broader political, cultural, or economic contexts. Even the national and international political developments that render space

budgets are only glossed. In contrast, mobility studies treats mobility systems as embedded within and indexical of larger societal formations and historical conjunctures. *Exploration* is a fascinating report on records and conversations crucial to technologically advancing Earth-based outer space mobility, but as this register is treated in isolation from other kinds of mobility that situate a mobility system like astronautics, the book will leave mobility studies scholars with many unanswered questions.

Disciplinarily, this is not a mobility studies book. Nor is it grounded in fields with which mobility studies might have some established affinity, like interdisciplinary science and technocultural studies. *Exploration* is a traditional work in the history of science and technology. Yet, the book may be of interest to mobility studies scholars as an example of a kind of discourse about travel. It evinces a managerial knowledge that imagines science and engineering in technical terms isolated from a more capacious sociality. However, these fields' output is not in fact isolated. Endless reports of research, progress, and budgeting on any given project provide the documentable knowledge over which government agencies craft space policy and companies plan space business. Additionally, the technoscientific practice not only represented by but also embodied in this book is entangled with places on another planet, and track across the vast expanse of space. It is an instance where human movement—or at least, a group of specialists acting in the name of the human—operates on a scope and in an area seldom treated in critical interdisciplinary social scientific and humanities research.

Mobility studies should pay attention to outer space. At several points in *Exploration,* Conway hints at cultural considerations, but the treatment is cursory and highly uneven. The book opens with a page-long discussion of Mars in the popular imagination but does not take up matters of popular culture until midway through the book in a chapter titled "Mars Mania," where the reader is given another brief treatment of popular interest before being returned to the running catalog of activities carried out inside the walls of JPL. In an example where culture threatens to break through the narrative structure of *Exploration,* Conway mentions in passing that the *Mars Pathfinder* robotic rover was given the name *Sojourner,* after Sojourner Truth. Why is interplanetary travel—regularly touted as humankind's greatest achievement—named after an abolitionist and women's rights activist born into slavery—a captivity that serves as mobility's antithesis in Enlightenment thinking? Such questions are beyond the purview of Conway's study, but consideration of work like *Exploration* as an example of a discourse on interplanetary travel can be a starting point to segue to concerns more germane to critical inquiry about mobilities.

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Novel Review

Pushwagner's Hand-Drawn Soft Mobility Dystopia

Hariton Pushwagner, *Soft City* (New York: New York Review Books, 2016), 160 pp., $35 (hardback)

Upon fading in from black, "good morning everybody" are the first words that appear in the opening pages of *Soft City,* a remarkably prescient work by Norwegian pop artist Hariton Pushwagner. In the pages that immediately follow, we zoom in on a city block of high-rise apartment buildings. As the blocky grid of the building's façade looms larger and larger, the perspective shifts to reveal a baby in a crib, looking out his window at row upon row of similar apartment windows in the facing building. Repetition and obsessive line work are the most prominent visual elements; they work in tandem to create a gripping graphic work about late capitalism gone awry. The reader then follows the baby's father on his daily commute, one of hundreds of identical cars blandly moving about the metropolis in unison. The size and sprawl of the city are on full display as we, too, navigate the dense urban expanse with each turn of the page.

Developed between 1969 and 1975, but not published in the United States until 2016, the book is a graphic novel, conceived and written before the term existed. It is a visual narrative with minimal text, depicting a day in the life of an ordinary family, in a dismal future where capitalism and mass production have rendered everything "soft." Inspired by William S. Burroughs's *The Soft Machine* (1961), in which the machine is the human body, here, soft is an all-purpose modifier. Each day the couple awakes to the sound of their soft alarm, they pop their soft pills, and read the *Soft Times* over breakfast. Even mobility—recurring thematically throughout the work—has gone soft, routinized into a dull nonevent that further highlights the characters' dislocation from their own daily lives. The couple moves mechanically about the day, in unison with hundreds of their identical counterparts, with the husband navigating traffic to reach the soft parking garage and his soft office, while the wife goes shopping for soft meat at the soft market. Softness as an all-purpose modifier effectively suggests the deflating, diminishing aspects of a culture that has lost its edge, and becoming programmed and seamless to the point of irrelevance. Pushwagner's soft citizens are as pliable and malleable as the world they inhabit.

In his introduction to the book, cartoonist Chris Ware describes an array of possible dystopian influences that inform its outlook, from George Orwell and Aldous Huxley to Charlie Chaplin's *Modern Times* (1936). J.G. Ballard's *High-Rise* (1975) is seemingly relevant as well. Ware astutely compares Pushwagner to director Stanley Kubrick, because of his signature use of symmetry

and one-point perspective, repeated until it becomes oppressive in Pushwagner's depiction of the canyons of skyscrapers and the endless streams of traffic that circulate the streets of Soft City. It is reminiscent of the wave of experimental, wordless novels produced in the 1920s and 1930s, by Frans Masereel, Lynd Ward, and Otto Nückel. Unlike his predecessors, Pushwagner does use text sparingly, often to point to the absurdity of both news media and advertising speak; however, it is his black-and-white line drawings that propel the narrative forward. Masereel's *The City* (1925), Nückel's *Destiny: A Novel in Pictures* (1926), and Ward's *Vertigo* (1937) each use sequential woodcut prints to visually explore the modern urban experience and the profound effects of capitalism on all aspects of human relationships. Pushwagner continues this tradition of using sequential imagery to tell a story about modern life and consumer culture. However, while Masereel and Ward favored dense, dark imagery, enhanced by the use of hatching and crosshatching, Pushwagner's line work has a distinctive lightness and vitality. The oppressive repetition of his forms is undercut by his skittish line, which wavers unevenly across his converging grids and cavernous cityscapes, injecting an element of humanity into the sterile scene. His silhouettes of behatted executives recall the anonymous men in bowler hats who wander through René Magritte's surrealist canvases.

The book begins at sunrise and closes as the moon rises in the sky, ending on a fully black page with the word "Goodbye." The framing device neatly encapsulates the narrative and reinforces the text's underlying symmetry, a visual motif like its use of repetition that underscores the stifling nature of existence under a dehumanizing regime. A similar framework appears in Alan Moore's *Watchmen* (1986–1987), which uses symmetrical page designs to great narrative effect in a similarly dystopian context. "Who watches the watchmen?" becomes a recurring catchphrase in the graphic novel, which oddly enough echoes the question posed above the man behind the scenes who appears to be pulling the strings in Soft City: "Who controls the controller?" From his control room, this figure monitors the movements of citizens as they shop in supersized markets in a double-page spread that foresees our current surveillance state. As with every other aspect of life in Soft City, mobility has been neutered, made soft: just another dreary step through a programmed, controlled world. Part of what makes *Soft City* so compelling is its contemporary relevance. As hyperbolic as the repetitive images of conformity are, the metaphor of softness, of the malleability of consumers in a frictionless economy, is gripping.

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