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Christopher W. Wells, *Car Country: An Environmental History* (University of Washington Press, 2014). ISBN: 9780295992150

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Introduction by Jacob Darwin Hamblin, Oregon State University

One of historian Lewis Mumford's many complaints about modern society was that compulsory action often posed as freedom of choice. In his 1970 book *The Pentagon of Power*, for example, he marveled at the free-loving, drug-taking, war-protesting hippies at Woodstock, who believed they were defying society's expectations by acting out against the establishment. He thought that the revelers were just naïve pawns of music-producing record companies. Mumford, then in his seventies, might be forgiven for a curmudgeonly vision of 1960s counterculture. But it was an elaboration of a point he had made already about "authoritarian" technology and the illusion of individual choice: "one must not merely ask for nothing that the system does not provide, but likewise agree to take everything offered... in the precise quantities that the system, rather than the person, requires."¹

Few technologies represent the tension between freedom and compulsion better than the automobile. Americans in particular seem to have a pathological aversion to public transportation, and in consequence much of the landscape is characterized by city sprawl, interstate highways, toxic smog and perennial traffic jams. The staggering number of deaths in cars is an ineffective deterrent. In fact cars routinely are used as a reference point for other risks: how often do we hear that a person is far more likely to die in a car accident than fall prey to cancer, have a heart attack, or come to some other unpleasant end? Yet we still drive them. For better or for worse, automobiles have a reputation for being an individualistic goal that people want so badly they are willing to ignore the environmental consequences and the immense annual toll on human life.

In *Car Country*, **Christopher W. Wells** seeks to dismantle the idea that America's car-dependent landscape is a result of such individualism. While it is true that many people prefer and would choose cars for a host of reasons, Wells places much more responsibility upon the government agencies that made it virtually impossible for Americans to operate in any other way. For Wells, cars do not represent freedom or individual choice. Quite the opposite. He sees city planners designing communities dependent upon cars, and government investment in infrastructure—including the military-based interstate highway system—forging a future that necessitated use of the automobile.

To comment on *Car Country*, I invited **David Blanke**, Professor of History and Department of Humanities Chair at Texas A&M University—Corpus Christi. Like Wells, Blanke has probed the origins and meaning of "car culture" in the United States. In his book *Hell on Wheels*, he tackles head-on the problem of car accidents

¹ Lewis Mumford, *The Pentagon of Power* (New York: Harcourt Brace Jovanovich, 1970); Lewis Mumford, "Authoritarian and Democratic Technics," *Technology and Culture* 5:1 (1964), 1-8. Quote on p. 6.

and the tensions between freedom and risk. He sees Americans' experiences with automobiles as crucial to an evolving public discourse about risk and safety.²

Our second commentator, **Martin V. Melosi**, is the Hugh Roy and Lillie Cranz Cullen University Professor of History at the University of Houston. His prolific writings on environmental history often touch on technology and energy, and he has written extensively about urban infrastructure. In his award-winning book *The Sanitary City*, for example, he revealed the development and standardization of sewers, water supply, and waste disposal, highlighting the interplay between technological systems and the professional administrators who helped to design them.³

Offering our final comment is **Thomas Zeller**, Associate Professor of History at the University of Maryland. He brings to this roundtable an eye for international dimensions. An expert on environmental history in Germany, he has written comparative studies of American and German roads and landscapes. His book *Driving Germany*, is an environmental, technological, and cultural history of the Autobahn from the 1930s to the 1960s. He shows how the iconic roadway underwent a cultural transition in the postwar years, having begun as a symbol of the many promises of the Nazi party, among them a plan to reconcile nature and technology.⁴

Before turning to the comments, I would like to pause here and thank all the roundtable participants for taking part. In addition, I would like to remind readers that as an open-access forum, *H-Environment Roundtable Reviews* is available to scholars and non-scholars alike, around the world, free of charge. Please circulate.

² David Blanke, *Hell on Wheels: The Promise and Peril of America's Car Culture, 1900-1940* (Lawrence, Kansas: University Press of Kansas, 2007).

³ Martin V. Melosi, *The Sanitary City: Urban Infrastructure in America from Colonial Times to the Present* (Baltimore: Johns Hopkins University Press, 2000).

⁴ Thomas Zeller, *Driving Germany: The Landscape of the German Autobahn, 1930-1970* (New York: Berghahn, 2007), translated by Thomas Dunlap.

Comments by David Blanke, Texas A&M University—Corpus Christi

C*ar Country: An Environmental History* by Christopher Wells is a fine book: well written, researched, and argued. Its greatest strength lies in the way that Wells positions his analysis at the intersection of the many new questions and analytical methods that have emerged from environmental history over the past few decades. While the text describes the appearance, rise, and now paradoxical realities of modern mass automobility in America – an often-told tale, but one that Wells tells with both energy and economy – the narrative is re-purposed to accentuate the ways that these developments “refashioned, on a grand scale, both the basic patterns of interaction between people and the environment and the fundamental structure and composition of the nation’s ecosystem” (xxxiv). To do so, Wells explores the role played by technology and engineers, by capitalism and capitalists, and by governance and civic reformers (although, significantly, not driving and drivers). The real heart of his argument, however, lies in its analysis of the car-centered, low-density built environment and the resulting land use patterns that put this country into an automotive gridlock.

While it would be wrong to claim that the book’s ultimate contribution is in how seamlessly Wells synthesizes the diverse and deep reservoir of secondary literature, this aspect of *Car Country* merits special praise. Given the profound transformations produced by the automobile – which, along with television, the personal computer, and the Internet, ranks as one of the four most significant technologies of the twentieth century – scholars have long examined the arrival, development, and dominance of the motorcar. Having reviewed much of the same literature (for far different purposes), I remain impressed by Wells’ ability to relate the many contingencies and unintended consequences that emerged from more than a century of technological change, reform, and economic competition. His chapter summaries and expository footnotes are models of focus and clarity. For those interested in understanding how automobiles have been problematized by scholars, and how these analyses provide new opportunities for environmental historians, *Car Country* is an essential first read.

More than merely a synthesis, however, the book uses the new metrics of land use patterns to re-purpose older and often-ignored questions about nature and to isolate the empirical causes of America’s dependency upon the automobile. The result is a two-staged narrative. The first, which comprises 250 of the book’s 295 pages of text, explores the establishment of “car country” from 1880 to 1941. The second, from 1940 to 1960 and then briefly beyond, describes the material consequences of these developments and the ways that they, effectively, eliminated Americans’ ability to choose the best transportation option. The irony, of course, was that early automotive reformers and manufacturers appeared to be attuned to these needs. In fairly rapid order, they made the car easier to use, own, and operate. But the car-centered landscape they fashioned soon made driving a necessity. This,

more than any other cause, “profoundly altered how people interacted with nature” (xxxiii).

The shift in Wells’ narrative emphasis – from production and operation to practical use – is subtle but results in a causal argument that emphasizes the determined distinctions between first and second nature. Post-war suburbanization, for example, is commonly described as the by-product of mass automobility. While Wells does not deny that cars were a “prerequisite for car-dependent landscapes” such as Levittown, a “better explanation is that [while] cars made suburban development *possible*... mushrooming suburban developments made cars *essential*” (285-286, emphasis added). Using an apt metaphor, Wells depicts the resulting transportation system as a commercial “monoculture, a landscape designed to maximize the benefits of car-based mobility....by imposing a brittle simplicity of the landscape that sacrifices environmental resiliency and complexity” (289).

Wells’ focus on causality and the built environment is well documented. Chapters four, five, and six provide the best examples of his approach and are the most relevant to those interested in environmental history. Repeatedly, from 1920 to 1940, we see reformers, regulators, and manufacturers responding to immediate problems – typically understood in terms of traffic congestion, affordability, and ease of operation – with solutions that temporarily alleviated concerns yet which (often) unwittingly doubled-down on the country’s commitment to a single transit option. Case studies, taken from Minneapolis-St. Paul and its rural hinterland, show how these modifications rapidly reduced travels times to the central business districts which, in turn, inspired entrepreneurs “hoping to capitalize on new motor-age mobility patterns to pioneer new spatial arrangements and consciously car-oriented land uses... that took automobile-based mobility for granted” (155). The result was an unimpeded material growth in automotive use – more cars, more miles, and more speed – that externalized costs at the expense of both driver agency and nature.

The post-war “monocultures” of suburbs and malls offer the most obvious products of these expediencies, but Wells argues that during the early formative years automobiles and auto-friendly reforms “had a much bigger impact on people’s *mental* geographies than they did on the nation’s physical geography” (142). Using time and distance maps for car and rail transit, for example, Wells shows how “Motor Age Geography” not only introduced (and subsidized) the personal passenger car into both urban and rural communities, but also convinced the country that “getting [to] places by car was often easier, faster, more convenient, and more pleasant than the available alternatives” (171). The result was a lost opportunity for transit diversity. Reformers modified roads and streets to accommodate greater volumes but then neglected and eventually wholly ignored ideas “to remake the built environment in ways that would unlock the full potential of automobiles to enhance personal mobility” (126).

While his analysis is strongly deterministic, Wells remains careful to frame his argument around these notions of enhanced personal mobility. Throughout the text there is a sense that manufacturers and reformers could be forgiven – à la “The Scorpion and the Frog” – for their natural proclivities to sell more cars and ease the day-to-day political pressures caused by congestion. Rather, it is the country’s long-term willingness to settle for easy answers and to accept an automotive-based vision of nature that are chiefly to blame for our current ills. In his introduction Wells recounts his personal transit experiences in Atlanta, Switzerland, and Madison (a narrative bearing a striking resemblance to William Cronon’s, Wells’ dissertation advisor and author of the book’s foreword, recollections at the start of *Nature’s Metropolis*). Struck by the profound differences in each locale, particularly between the mixed-transit system in Wisconsin and the pinnacle (or nadir) of automotive dependency in Atlanta, Wells dismisses the “false boundary between *how Americans feel* about transportation technologies and *why Americans drive* so much” as the source of these “nefarious consequences” (xxiii). As he correctly points out, Atlanta’s mass transit system fails less because “people here just don’t like to ride trains” or that the trains themselves are dirty or unsafe, but rather because Atlanta’s trains deliver people to only a fraction of the possible places (in this case, to commuter parking lots, office space, convention facilities, and sport venues) that would meet their possible needs. As Wells rightly asks, with such limitations in functional usage, “why should anyone else ever ride the trains?”

As noted, Wells does an admirable job in synthesizing the secondary literature and exploring case studies that demonstrate the historical processes which brought Atlanta (and most of the rest of this country) to its current predicament. In so doing, however, Wells sacrifices an opportunity to include more cultural factors into his analysis. It is a tired and inaccurate cliché to say that environmental history ignores human beings for the benefit of nature (a cliché, I’m sure, that Wells’ mentor could recall from some of the more caustic scholarly reviews of *Nature’s Metropolis*). While *Car Country* samples widely from people who fashioned America’s automotive infrastructure – including road designers, traffic engineers, civic reformers, and manufacturers – the same cannot be said of actual drivers (who don’t even merit a mention in the index). For the most part this is not a problem. The central focus of *Car Country* remains on land-use patterns and these are well-documented. But the omission of drivers is more problematic when Wells describes the country’s *early* reaction towards the personal passenger car. Here we are left with only the author’s modern anxieties to stand in for nearly a century of radically diverse usage and driving conditions. As this book amply demonstrates, driving *before* 1940 was far different from conditions experienced by contemporaries today. To borrow from Wells’ use of personal narration, while I’ve purchased a number of cars over the past forty years my emotional investment in those automobiles has changed markedly. My experiences and expectations in these early years as a young, single driver were far different from those that I held as a married, father of two or, now, as an empty-nest couple. That fact that these perceptions changed – that I once saw my car as a public declaration of independence but now see it as merely an inconvenient and expensive necessity – does not make my early infatuations any less significant to my

driving history. By extension, the same can be said of this country's embrace of the automobile before 1940. This concern is magnified by Wells' clichéd dismissal of the "quite simple" love affair thesis – which posits that an early infatuation with automobility warped this country's reaction to the growing perils of mass automobile use – or, alternatively, the "conspiracy thesis" – which contends that powerful economic interests killed viable alternatives to the automobile (xxii). Given the intense and widespread euphoria engendered by early car use (one now completely alien to our modern sensibilities), the relative lack of attention paid to the expressed experiences by drivers, and the number of pages that Wells dedicates to the period before the Second World War, there remains a troubling gap between his iron-clad assurance that "Americans drive because in most places the built environment all but requires them to do so" (xxxix) and the reasons cited by many drivers before 1940. My respect for Wells' book isn't diminished by this omission; he succeeds admirably in answering the questions that the text poses. It does, however, suggest that scholars still have some distance to travel if we are truly to engage in and understand the arrival of car country.

Comments by Martin V. Melosi, University of Houston

Observations on *Car Country*:

An Understanding of, but Not Necessarily a Celebration of, a New Space Paradigm

Several years ago I gave serious thought to writing a book on the automobile and the environment. I had written two essays for a web-based project entitled, “Automobile in American Life and Society,” for colleagues at the University of Michigan, Dearborn. One essay focused on the environmental costs of cars from manufacture to scrap heap, that is, the environmental implications of acquiring the resources and fashioning cars on the one hand, and the problem of derelict vehicles on the other. The second essay focused on how automobiles and automobile transportation shaped cities. With this start, it seemed a relatively direct step to a book on the more general topic of the automobile and the environment writ large. Then came Tom McCarthy’s *Auto Mania: Cars, Consumers, and the Environment* published by Yale University Press in 2007. I thought the game was over. There was no use pursuing my book idea if McCarthy beat me to it. While I admire the book greatly, it turned out to be more about consumers and automobiles than the impact of automobiles on the environment. My hopes for my own book, therefore, were not dashed, and I began to think about resurrecting the idea built around my two essays.

Then came Chris Wells’ *Car Country: An Environmental History* published in Bill Cronon’s Weyerhaeuser Series at the University of Washington in 2012. Before reading it, I told myself “Lightning didn’t strike with McCarthy’s book, why should I be worried about Wells’ book.” And I began to read *Car Country* with an eye to how much ground Chris would cover that would trample my hopes again. Frankly, Chris left plenty of room for a cradle-to-grave examination of automobiles and resource use, the environmental costs of manufacturing cars, the fateful decision to prefer internal combustion engines over steam and electricity, automobile salvage and reuse, and the monumental problem of the disposal of vehicles and their components. On the other hand, some of the issues I explored in my essay about how automobiles shaped the city go to the heart of the matter (and beyond) in Wells’ splendid account.

After all, *Car Country* is “an environmental history” of the car, not a study of the “automobile and the environment.” The distinction is considerable. The former makes the car the shaper of events, the changer of the land, and the creator of a culture. The latter places cars in a comparative relationship within the environment—an actor to be sure, but not necessarily the transformative technology or the landscape remodeler that Wells suggests. In a fascinating way, Wells’ automobile is almost animate because of how significantly it morphs human behavior and human action. The resultant automobile landscape is something that it never was before. This is not Jekyll-and-Hyde tensions, with one side pulling against the other for the soul of the man. It is the story of creation of sorts, a paradigm shift requiring a leap from one world to the next.

This all sounds a little fuzzy if one has not yet read the book. Wells states his thesis best in the Epilogue: "After 1956, Car Country quickly became the nation's signature landscape: sprawling, single-use, low-density, and bound together by an overwhelmingly car-oriented transportation system." (289) He adds that "To take an agricultural metaphor, Car Country is a monoculture, a landscape designed to maximize the benefits of car-based mobility." (289) But in doing so, "The arena of Car Country's greatest successes has been its chief liability." (289) In my mind, these statements assert the essence of the book, and what makes it stand out as an environmental history. Other historians have spoken to the technological and cultural implications of the automobile; the latter has been a favorite topic. Scholars outside of history even more so have taken account of the materiality of an automobile-dominated world. Architectural historians and environmental designers have treated the built environment growing around the rising use of cars and trucks. Geographers have mapped land-use changes resulting from the emergence of automobile transit. Collectively, the scholarship on automobiles is massive. But Chris Wells' shift to looking at the details of the automobile landscape as it relates to a changing mindset of how we see our world and navigate through it is highly original.

In some recent work comparing environmental history and historical geography, I made the observation (not shared by some of my learned colleagues in geography, however) that "Environmental historians acknowledge the importance of 'place' in their work, not necessarily its centrality, but may employ less well-defined ideas of 'space' than their geographer colleagues, interconnecting place and space a bit too casually and treating them in a loose, generalized manner, somewhat akin, perhaps, to the ways in which some geographers treat time. Projecting out from an analysis of the land itself, which is so much more common for geographers than historians, is rarely a vital part of environmental historians' research."⁵ *Car Country* contradicts that statement, and is why the book is a unique contribution not only to automobile history, but to the history of the built environment.

Any good author wants to convince his/her readers of the soundness and correctness of the basic arguments. Why write a book otherwise? The very best authors want to provoke readers to think about, speculate about, and even question basic assertions as laid out for them. *Car Country* does that by offering a point of view and a point of reference reinforced throughout the study. We get a look at automobiles from a bird's eye view hovering above a changing landscape. But one always must ask, How universal is the appraisal? What exceptions might we expect? Clearly, *Car Country* is most persuasive in the context of the United States, but not so much in some other societies and cultures. Hard as it is to believe, there are even places in the U.S. where the car culture is not fully settled. Car culture may surround the Bob Marshall Wilderness but it most likely won't invade it. Obviously, that

⁵ "Environmental History and Historical Geography: An (often) Excellent Relationship?" *Historical Geography* 19 (November 2013): 13.

extreme example takes nothing away from the general argument, but it does raise the question about necessary preconditions that lead to the immersion into a car country. The establishment of an American car culture, in addition, seems particularly path dependent with little opportunity to turn back. Must conditions for the move toward this new paradigm elsewhere in the world be built on the same preconditions and in the same temporal order?

This brings us to periodization. While 1956 is a reasonable ending date, it is still somewhat arbitrary. Not all places reach car-country status at the same time and in the same way. Must we rely on the iconic role of the Interstate System to dominate the periodization? This seems a little too pat. Why not dwell a little more on the necessary preconditions? The front end of the periodization, especially the reasons for the move toward a car country, also needs some additional reflection. Were arterial roads or early road building, for example, completed with broad transit ideas in mind? Was gasoline refining spurred by automobile use or the expectation of automobile use? In the Prologue, particularly, questions about cause and effect (chicken or egg?) that move modern society to a car country status are too clearly affirmed. Indeed, the results of an expanding automobile population can be seen on the map, but how that happened can be in question—and might even vary from place to place.

Raising these questions is not nit picking, but a clear expression that Chris Wells has struck a note with his book. *Car Country* shows environmental history in a very good light. It also elevates the discussion of a central technological and cultural feature in modern life. The chance to consider and ponder the questions raised in the book is exhilarating.

Comments by Thomas Zeller, University of Maryland

What do environmental historians have to say about the automobile? A look at an important 1993 textbook for American environmental history draws a blank: the automobile, omnipresent as it was in the late 20th century, appears not to have been a salient research topic at the time. In a second edition of the same book from 2005, however, primary sources by Henry Ford and Dwight Eisenhower point to the prominence of cars and roads and excerpts from historians' writings provide interpretations.⁶ In his fin-de-siècle survey *Something New Under the Sun* (2000), John McNeill nominated the automobile for a position as "a strong candidate for the title of the most socially and environmentally consequential technology of the twentieth century" (310.) Yet, it almost feels as if environmental historians have been slow in adopting automotive-related themes into their research. The cohort of card-carrying and car-studying environmental historians is still relatively small. A Tata Nano would not hold them all, but a small bus would probably suffice.

One member of this group is Christopher Wells. His important book *Car Country: An Environmental History* ably supports the scholarly entry of automobiles into the environmental historiography. The book is an indication of this scholarly trend, a summation of the work that has been done, and a signpost for more research to be done.

Wells's goal is quite ambitious: Covering 80 years of automotive history from 1880 onwards, he aims to understand why the United States has become such a car-dependent country. Other scholars and commentators have asked the same question, but Wells focuses on what he calls the "built landscape" (xxv) or the "landscape's physical arrangement" (xxvi.) This particular tool allows him to employ the tools of an environmental historian by analyzing spatial change over time. In other words, Wells is interested in the physical underpinnings of the automotive world: roads, highways, strip malls, suburbs, and parking lots. In a nutshell, the author argues that government planners and politicians created or helped to create such car-friendly structures, thus enabling the rise of the automobile as a very important mode of transportation by the mid-20th century and the crushingly dominant one by the late century. In the 2000 Census, one out of two U.S. residents was classified as living in a suburb,⁷ and most of these suburbanites relied on

⁶ Carolyn Merchant, *Major Problems in American Environmental History: Documents and Essays* (Lexington, Mass.: D.C. Heath, 1993); Carolyn Merchant, *Major Problems in American Environmental History: Documents and Essays* (Boston: Houghton Mifflin, 2nd ed., 2005), 397-400, 404-407, 421-424. The 2012 edition continues this trend.

⁷ U.S. Census Bureau, *Demographic Trends in the 20th Century*, 2002, p. 7, available at <http://www.census.gov/prod/2002pubs/censr-4.pdf> (accessed 9 June 2014.)

automobiles to get around for work, school, shopping, and leisure. More often than not, buying the proverbial quart of milk necessitates a car ride.

But why is this the case? Historians and observers who argue that the automobile enabled car-friendly landscapes have it backwards, according to Wells: “A better explanation is that cars made suburban development possible, but mushrooming suburban developments made cars essential” (286.) Without saying so, *Car Country* rejects ideas of technological determinism: Cars did not create auto-dominant suburbs. Instead, Wells identifies federal agencies such as the Bureau of Public Roads and the Federal Housing Administration as setting policy and planning guidelines for states and local communities. This is a salutary approach. Auto-dependent suburbs did not arise because they had to, but because of policy, politics, and planning guidelines. Wells examines the degree to which these technopolitical decisions were the results of debates and disagreements between politicians, civil engineers, and others. In addition, these ensembles of houses, cars, and roads are relatively recent. While many factors were at play, the most important iteration of these auto-landscapes depended upon the 1956 Interstate Highway Act, which made the federal government the primary financier of these costly infrastructures—states now received 90% of the construction costs. The results were the concomitant and interrelated booms of interstate highways and car-oriented suburbanization.

Historians who are familiar with publications on cars, roads, and automobilities will recognize some strands of the argument. Historians of cities, technology, politics, and planning have created a literature that is almost as sprawling as its subject. Rather than simply synthesizing existing scholarship, however, Wells presents his own interpretation by highlighting the spatial and environmental preconditions and effects of these developments. *Car Country* is a place where the environmental restraints of terrain, distance, and weather matter less and less and the human-built infrastructures matter more and more. In other words, the landscape of automobility is yet another human effort to overcome environmental constraints—a theme which is familiar to environmental historians studying other fields such as agriculture, forestry, or urbanization.

But where are the individuals in these processes? Another environmental historian, Tom McCarthy, surveyed U.S. automotive history a few years ago and emphasizes that the rise of automobiles and efforts to tackle their environmental problems were, to a considerable degree, a matter of consumer choice.⁸ In comparison, a reader of Wells’s account comes away with the impression that, by the end of the twentieth century, fewer and fewer Americans could choose whether they would want to live in *Car Country* or public-transit country. Government, voters, and consumers that came before them had already made the choice for them, to put it pointedly. Somewhat simplified, McCarthy is more interested in automobiles and pollution

⁸ Tom McCarthy, *Auto Mania: Cars, Consumers, and the Environment* (New Haven: Yale University Press, 2007).

while Wells spends more time dealing with roads and land-use questions. The two books complement each other, offering insights into different parts of the environmental history of automobility.

Wells's analysis is convincing and his command of the primary and secondary literature admirable. While many first academic books hone in on a limited case study, Wells surveys 80 years of automobile and road history in the United States on less than 300 readable and often engaging pages. This is a virtue: The book lends itself to classroom use and I can easily envision many fruitful discussions with both undergraduates and graduate students about it. But the particular format also involves occasional trade-offs of breadth for depth. This is inevitable, and it would be quibbling to argue over specific details of Wells's summaries.

More to the point, though, Wells's central argument about the creation of landscapes dominated by automobile use is part of a larger environmental history of the automobile that he presents. Urban horses, leaded gasoline, soil treatments for road building, the regulation of jaywalking, the Ford Motor Company's ill-fated effort to establish a rubber plantation in Brazil, the history of zoning law, and other topics are all touched upon. While these issues are interesting and many of them are fascinating in their own right, it is not always clear how their discussion relates to the main point about changing land-use regimes associated with automotive suburbs. In the end, though, the author's mastery of the considerable literature and his ability to foreground the human and contingent forces in the creation of a car-dominated United States will be certain to engage many readers.

Car Country is the kind of book that graduate students in environmental history looking for a dissertation topic can use to survey the field, encounter a useful interpretation, and identify lacunae of research beyond the scope of the book. Historians of technology will encounter an interpretation that differs in approach and result from their own. I wonder, though, whether it would have been fruitful for Wells to enter a scholarly conversation with historians of technology such as Paul Edwards. When contemplating the historical role of infrastructures, Edwards reasoned: "Thus to construct infrastructures is simultaneously to construct a particular kind of nature, a Nature as Other to society and technology."⁹ Would Wells agree? Are these auto-landscapes properly understood as analytical others? Answering such a question might broaden the appeal of the book even more.

On another level, I would hope that historians of mobility and transportation and historians of technology will hear the book's message about the environmental dimension of automobility clearly. *Car Country* is one of the few surveys of cars and

⁹ With a reference to Bruno Latour, this is one of Paul Edwards's argument in his Paul N. Edwards, "Infrastructure and Modernity: Force, Time, and Social Organization in the History of Sociotechnical Systems," in *Modernity and Technology*, ed. Thomas J. Misa, Philip Brey, and Andrew Feenberg (Cambridge, Mass.: MIT Press, 2003), 189.

roads putting their environmental dimensions (for the most part) front and center. Other books in the field pay attention to these issues, but less systematically so.¹⁰ Yet, some of the most important legacies of 20th-century automobility were undoubtedly environmental, beginning with the obvious one of air pollution and not ending with more subtle changes in the ways in which we see the environment.

In addition to historians, social scientists have been discovering and elaborating upon what they call “automobility,” a term encompassing cars, roads, and ways of living. (As it turns out, the term does not endear Wells.) The term “mobilities” provides the framework for research on walking, driving, and other ways of movement; the journal “Mobilities” is now in its ninth year.¹¹ All of this is to say that Wells’s book is timely. While he stays clear of deeper engagements with the methods or jargon of these social scientists, I can only hope that they will pay attention to his book as they further their research agenda and inevitably depend upon historical research to make their cases. For several academic disciplines, this book is an important step (or, rather, freeway drive) forward.

¹⁰ Brian Ladd, *Autophobia: Love and Hate in the Automobile Age* (Chicago/London: University of Chicago Press, 2008).

¹¹ For examples, see Mimi Sheller and John Urry, “The New Mobilities paradigm,” *Environment and Planning A* 38, 2, 2006, 207–226; Tim Cresswell, *On The Move: Mobility in the Modern Western World* (New York: Routledge, 2006); Peter Merriman, *Mobility, Space and Culture* (London: Routledge, 2013).

Response by Christopher W. Wells, Macalester College

In the many years that I spent working on the manuscript that finally became *Car Country*, I became fairly adept at describing my work in progress as if it were a tangible thing rather than the sprawling mess of index cards, research files, half-formed ideas, and partially drafted chapters that “it” actually was. At times the book felt more like an imaginary friend than an intellectual project: people had to take my word that it even existed, and could only engage it by discussing it with me. I’m still getting used to the idea that it is now a real book, and that others can read it without needing me to arbitrate. In this context it is both thrilling and humbling for three scholars whose work I admire to give *Car Country* their sustained attention, and to be able to respond to their ideas in this forum. My sincere thanks to Jacob Hamblin for organizing this roundtable, and to David Blanke, Martin Melosi, and Thomas Zeller for taking the time to read the book and to contribute such thoughtful reviews.

One of my goals in writing *Car Country* was to offer a new, environmentally inflected synthesis of the well-developed literature on the history of automobiles in the United States, so it delights me that David Blanke singles out this aspect of the book for “special praise.” I am glad, too, that he sees the value of the book’s argument, and especially its account of how Americans invented, tested, and developed incentives for new car-dependent landscapes in the decades before World War II—and then enshrined them as the almost universal constant of postwar development patterns. As he notes in his review, the first half of the preceding sentence requires a prologue and six chapters to develop and substantiate, and the portion after the dash demands just a chapter and epilogue. The straightforward reason for this balance is that the book’s argument required a substantive reinterpretation of the pre-World War II period, which in turn required wide-ranging treatment. The final chapter, on the other hand, discusses postwar patterns that are likely to be more familiar to most readers, and then recasts them in light of the evidence and interpretations developed in the heart of the book.

Blanke concludes that *Car Country* “succeeds admirably in answering the questions that the text poses,” but also offers an insightful (and entirely warranted) critique. *Car Country*’s focus on the evolution and spread of car-dependent landscapes, he notes in highly politic language, “sacrifices an opportunity to include more cultural factors.” Indeed, I chose quite deliberately to minimize discussion of a major cultural dimension: drivers’ relationships with their cars. Two reasons motivated this decision. First, there was the somewhat lame reason of self-preservation, which demanded drawing a line somewhere to keep the project manageable. The fact that an excellent, substantial literature exists focusing on the cultural history of both automobiles and drivers, including Blanke’s excellent *Hell on Wheels*, made it

somewhat easier to leave this topic to others.¹² Second, and more substantively, a major goal of the book was to highlight the relationship between present-day patterns of car ownership and use in the United States and the overwhelming dominance of car-dependent landscapes. If one accepts the evidence that car-dependent landscapes generate significantly greater car use than landscapes where car-dependent features are less dominant, then an interesting historical question emerges. How did car-dependent landscapes become the dominant template for organizing the United States?

It may seem like splitting hairs, but my “iron-clad assurance that ‘Americans drive because in most places the built environment all but requires them to do so’ (xxxix)” really is a claim—written in the present tense and offered up in the prologue—about contemporary Americans, not a historical claim about those who lived during the period before 1940 when Car Country was still being invented. Both then and now, people often have had good reasons to want to drive whether they must or not, and a large literature unpacks the ways that status anxieties, the freedom of the open road, gender conventions, and racial disparities shaped individual decision-making about driving.¹³ There is now even good scholarship on the cultural dimensions at work among those who *fought* the growing influence of cars—cultural and otherwise—in American life.¹⁴ Clearly, understanding *why* Americans drove as much as they did in the first four decades of the century, before car-dependent landscapes had become anything like “normal,” requires careful attention to culture, and Blanke is absolutely correct to point this out.

The salient point for me, given the aims of the book, was whether examining these dimensions in more detail would help me answer my question. Again, how did car-dependent landscapes become the dominant template for organizing the United States? I could not find clear connections between the changing personal relationships that people had with their cars and why car-dependent landscapes became the basis for new development in the United States, though I remain open to the possibility that compelling interpretive possibilities lie in this direction. That substantial numbers of people drove, and in the process put pressure on those in charge of the country’s road and street infrastructures to keep pace, gets major attention in the book. Offering a nuanced interpretation of *why* all those people

¹² David Blanke, *Hell on Wheels: The Promise and Peril of America’s Car Culture, 1900-1940* (Lawrence: University Press of Kansas, 2007).

¹³ For some notable examples, see Tom McCarthy, *Auto Mania: Cars, Consumers, and the Environment* (New Haven: Yale University Press, 2007); Blanke, *Hell on Wheels*; Virginia Scharff, *Taking the Wheel: Women and the Coming of the Motor Age* (Albuquerque: University of New Mexico Press, 1991); Cotten Seiler, *Republic of Drivers: A Cultural History of Automobility in America* (Chicago: University of Chicago Press, 2008).

¹⁴ Brian Ladd, *Autophobia: Love and Hate in the Automotive Age* (University Of Chicago Press, 2008); Peter Norton, *Fighting Traffic: The Dawn of the Motor Age in the American City* (Cambridge: MIT Press, 2008).

drove would certainly have enriched the book, but investing serious effort in this direction seemed unlikely to change what I think are the best answers to the book's primary question. Weighing the topic's potential benefits and liabilities, I decided to leave it to others who will hopefully find it more generative than daunting.

Two other relatively minor points in Blanke's review also deserve comment. First, I see Blanke's point when he describes *Car Country's* argument as "strongly deterministic," since it rests on a strong causal relationship between car-dependent landscapes and heavy car use. On the other hand, I want to push back against the label "deterministic," since it is such a highly charged term in our profession, and would suggest "causal" as an alternative. I am quite comfortable arguing that landscapes structure the choices of their inhabitants, and that car-dependent landscapes make behaviors like driving easy for most people and behaviors like walking, cycling, or taking the bus comparatively much more difficult. Yet I would not argue that car-dependent landscapes *determine* behavior. The residents of *Car Country* can—and sometimes do—go out of their way to get places in a way other than driving, but usually only by paying substantial additional costs of time, convenience, and personal safety. Second, the connections that Blanke sees between the prologues of *Nature's Metropolis* and *Car Country* are spot on. What might not be obvious is that the similarities are less an intentional imitation as they are a product of my decision to follow a particularly helpful piece of writing advice. Discussing *Nature's Metropolis* in his graduate seminar, Cronon once explained that he wrote his distinctive prologue as a way to resolve a bout of writer's block. Later, when I found myself hopelessly stuck in my own writing, I decided in desperation to see if adopting a personal tone and voice and focusing on my individual connections to the topic might get me going again. I had no intention of *using* what I wrote, but I liked it enough that it eventually made its way into the manuscript. More importantly, it got me unstuck.

Speaking of stuck, I blanch in retrospective horror at the idea that I could have discovered that Martin Melosi had designs on a project even in the general vicinity of mine. I can laugh about it now, but I cannot imagine how I would have reacted if I had known that he was even vaguely considering such a book! I was already well aware that Tom McCarthy was working on the general topic of automobiles and the environment, and his work had a profound effect on how mine evolved. He finished his dissertation three years before I finished mine, and *Auto Mania* made it into print five years before *Car Country*. When Thomas Zeller notes that the "two books complement each other, offering insights into different parts of the environmental history of automobility," I can say that this was very much by design. I scrapped entire lines of inquiry because McCarthy got there first, but also pursued answers to questions that I might not have thought to ask otherwise. In particular, the distinction that Melosi draws between "an environmental history" of cars and car-dependent landscapes on one hand, and "a study of the 'automobile and the environment'" on the other, grew at least in part from the fact that I was triangulating against McCarthy's work—always a few steps ahead of mine—to find uncharted terrain. In this case I found it by starting not with cars and drivers, but

with car-dependent landscapes. “Projecting out from an analysis of the land itself,” as Melosi puts it, proved to be the single most important key to writing the book.

All of this strikes me as a great example of what people mean when they describe scholarship as an extended conversation that makes everyone’s ideas better. Had Melosi published a book alongside McCarthy’s while I was still working on *Car Country*, I suspect I would have had a less high-minded reaction. But I will be honest: with my own book safely in print, I am glad that I have “left plenty of room” for others—including not least Melosi!—to contribute to the conversation. That he finds “the questions raised in the book ... exhilarating” is the highest praise I could have hoped for.

Praise aside, Melosi asks two big questions. First, can events in the U.S. help explain events in other countries? Or, put slightly differently, “[m]ust conditions for the move toward this new [automotive] paradigm elsewhere in the world be built on the same preconditions and in the same temporal order?” Here my answer is an unequivocal “no.” Other countries have not embraced the construction of car-dependent landscapes with anything approaching the scale or uniformity that the United States did in the decades after the Second World War. I would certainly argue that in some places and at some times, a commitment to building car-dependent landscapes has dramatically shaped patterns of car use in other countries. The present-day development of new Chinese cities offers one compelling example, and the faithful construction of Brasília according to a car-dependent master plan offers another. But in each case the patterns of development have followed their own logic and responded to their own contextual needs. The choice to rely on car-dependent patterns of development is the only constant in what are otherwise widely varying circumstances in which some countries have decided to build car-dependent landscapes on various scales and with various levels of commitment.

Second, Melosi ruminates on when I decided to end my narrative. “Must we rely,” he asks, “on the iconic role of the Interstate System to dominate the periodization?” Questions about periodization are important to consider, and I entertained a number of options. In the end, though, I framed the final section of the book as 1940-1960, in part as a deliberate attempt to decenter 1956 and the Interstates, if only by a handful of years, and in part to present the Interstates not as the *cause* of car-dependent landscapes but as part of the *culmination* of a much longer process that first invented Car Country and then made building it a cornerstone of national policy. To this end, the topics in the final chapter include trends in housing, retail, transportation (including declining transit ridership along with the Interstate Act), the suburbanization of offices and industry, and exploding automobile ownership and use. The Interstate Act necessarily looms large over any discussion of postwar patterns of car-oriented infrastructure development, but I tried hard to dissuade readers from attributing to it an unwarranted singular influence. Perhaps I should have made this point more forcefully in the text.

Like Blanke, Thomas Zeller calls attention to the book's synthetic goals, noting as well that "Wells presents his own interpretation by highlighting the spatial and environmental preconditions and effects of these developments." Also like Blanke, Zeller wonders about some of the book's omissions, asking what role individual drivers might have played in the processes I describe. I trust that my explanation in response to Blanke on this point can stand in for my answer to Zeller. In addition, like Melosi, Zeller labels the decision to start with the landscape rather than cars themselves a "salutary approach." My only objection here is that Zeller graciously fails to call attention the role that his own pioneering work played in pointing other scholars, myself included, in this direction.¹⁵ I found it a salutary approach indeed.

Zeller's most substantial critique is that *Car Country* does not engage as directly with "mobilities" historians or historians of technology as it might. I would also add geographers and social historians to this list. In keeping with the earlier theme of scholarly exchange as a form of conversation, these omissions give me no pleasure. Anyone combing the footnotes of *Car Country* will find strategic bridge-building to each of these particular literatures and modes of inquiry, but the references are admittedly less extensive than they could have been—though as I write this I can imagine my editor tut-tutting me for expressing even a retrospective desire to expand the book's end matter, which might euphemistically be described as "plump." I will have to take solace in the idea that I wrote *Car Country* to be as accessible as possible, and that doing so might make it easier for others to see connections and applications to other scholarly conversations than the ones that I myself highlighted. If the omissions are generative for others, they will weigh less heavily on my mind.

In conclusion, I would like to offer a final thanks to everyone involved in this roundtable for their time and insights. It is a great relief, having spent so much time with an imaginary friend, to hear word from afar that said friend is now no longer imaginary but out in the world, standing on its own two feet, and sparking a conversation or two!

¹⁵ Christof Mauch and Thomas Zeller, eds., *The World Beyond the Windshield: Roads and Landscapes in the United States and Europe* (Athens, OH: Ohio University Press, 2008); Thomas Zeller, *Driving Germany: The Landscape of the German Autobahn, 1930-1970* (New York: Berghahn Books, 2010).

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