Highways, Byways, and Road Systems in the Pre-Modern World
Edited by Susan E. Alcock, John Bodel, and Richard J. A. Talbert

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About the Editors


John Bodel is W. Duncan MacMillan II Professor of Classics and Professor of History at Brown University. His books include Epigraphic Evidence: Ancient History from Inscriptions (2001), Archaeology and Family Religion in Antiquity: Gender and Generation (co-edited with Saul Olyan, Wiley-Blackwell 2006), and Side-by-Side Survey: Comparative Regional Analysis in the Mediterranean Region (co-edited with John Cherry, 2004).

Richard J. A. Talbert is William Rand Kenan, Jr., Professor of History and Classics at the University of North Carolina, Chapel Hill, where he has taken the lead in establishing the Ancient World Mapping Center. His books include Cartography in Antiquity and the Middle Ages: Fresh Perspectives, New Methods (2008), Geography and Ethnography: Perceptions of the World in Pre-Modern Antiquity (co-edited with Kurt A. Raaflaub, Wiley-Blackwell, 2010), Rome’s World: The Peutinger Map Reconsidered (2010).

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Catherine Julien, distinguished archaeologist and ethnohistorian of the indigenous cultures of the Americas, died prematurely on May 27, 2011. A reflection by her was the inspiration for this volume, and we dedicate it to her memory. The work that she so generously shared will live on.
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Notes on Contributors

**Susan E. Alcock** is Director of the Joukowsky Institute for Archaeology and the Ancient World, Joukowsky Family Professor of Archaeology, Professor of Classics, and Professor of Anthropology at Brown University. Her current research interests include the Hellenistic and Roman eastern Mediterranean and southern Caucasus, landscape archaeology, and the archaeology of memory and of imperialism. She received her PhD in classical archaeology at the University of Cambridge.

**John Bodel**, who received his PhD in classical philology at the University of Michigan, Ann Arbor, is W. Duncan MacMillan II Professor of Classics and History at Brown University. He specializes in the history and literature of the Roman empire, and has specific interests in epigraphy, Roman religion, slavery, funerals and burial customs, ancient writing systems, and the editing of inscriptions and literary texts. Since 1995 he has directed the U.S. Epigraphy Project, which gathers information about Greek and Latin inscriptions in the United States.

**Pierre Briant** defended his *thèse d’État* in ancient history at the University of Besançon. He holds a professorship at the Collège de France, Paris, focusing on the history and civilization of the Achaemenid world and Alexander’s empire. He is also director of the *Persika* series and of the website www.achemenet.com. A related interest is the historiography of ancient Persia and of Alexander, especially in the eighteenth century.

**Jennifer Gates-Foster** is an archaeologist and Assistant Professor in the Department of Classics, University of Texas, Austin. She received her PhD in classical art and archaeology at the University of Michigan, Ann Arbor. She has worked with pottery and other artifact types to explore material manifestations of cultural interaction between groups, particularly in the context of the Hellenistic and early Roman Near East, especially Egypt.

**R. Bruce Hitchner** is Professor of Classics and International Relations at Tufts University. He is a Roman historian and archaeologist with special interests in north Africa, southern France, and the Roman economy. He received his PhD in history at the University of Michigan, Ann Arbor.
**Catherine Julien** is Professor of History at Western Michigan University, Kalamazoo. She received her PhD in anthropology at the University of California, Berkeley. Her work centers on South America during the sixteenth century, before and after the arrival of Europeans, including the transition from Inca to Spanish rule in the Andes, and Inca genres used by Spaniards in narrating the Inca past.

**Nanny Kim** is a research fellow at the Institute of Chinese Studies, Heidelberg University. She received her PhD in Chinese history at London University’s School of Oriental and African Studies. Her current project in the research group “Monies, Markets and Finance in China and East Asia, 1600–1900” (directed by H. U. Vogel) explores transport technologies in the context of changing economic and ecological conditions. It draws upon sources for the transport of mint metals from the mines of southwest China to the Beijing mints. Results are to be published in *Mountain Rivers, Mountain Roads: Transport in Southwest China, 1700–1850*.

**Michael Maas** is Professor of History and Classical Studies at Rice University. He received his PhD in ancient history and Mediterranean archaeology at the University of California, Berkeley. His areas of research are the Roman empire and late antiquity. He edited *The Cambridge Companion to the Age of Justinian* (2005). Currently he is writing a book about Roman imperial ethnography.

**Pekka Masonen** is adjunct Professor of History at Tampere University, Finland. His research interests include Africans and the wider world before the nineteenth century; European exploration and images of Africa; and the precolonial history of Sudanic Africa. His book *The Negroland Revisited: Discovery and Invention of the Sudanese Middle Ages* was published in 2000. He received his PhD in history at Tampere University.

**Jason Neelis**, who received his PhD in Asian languages and literature at the University of Washington, is Assistant Professor for South Asian Religions at Wilfrid Laurier University, Canada. His research focuses on the historical and religious contexts of Buddhist inscriptions and manuscripts. His book *Early Buddhist Transmission and Trade Networks* (2011) retracts artery and capillary routes for Buddhist institutional expansion in the northwestern borderlands of South Asia.

**Michael Nylan**, who received her PhD in East Asian studies at Princeton University, is Professor of Chinese history at the University of California, Berkeley. Her recent research has focused on the “classical era” in China (304 BCE–316 CE), pursuing such themes as the northwest frontier areas, administration of the family, modes of persuasion in mid-Han (with particular attention to orality and writing technologies), and the thinker Yang Xiong (53 BCE–18 CE). She is currently completing two books, the first on theories of pleasure in early China, the second on the capital of late western Han Chang’an.
**Derek Ruths** is Assistant Professor of Computer Science at McGill University. He received his PhD in this subject at Rice University. His research focuses on the problems of modeling and predicting the behavior of interconnected living systems, from biological cells to human societies. Recently he has been considering how social groups form, how social media alter human behavior, and how human communities can be detected in online social networks.

**Justine M. Shaw** is Professor of Anthropology at the College of the Redwoods, Eureka, California. Her primary research areas are Maya sacbeob, regional settlement patterns, and water management systems, which she examines as principal investigator for the Cochuah Regional Archaeological Survey. She received her PhD in anthropology at Southern Methodist University. Her book *White Roads of the Yucatan* appeared in 2008.

**Adam Silverstein** received his PhD in Islamic history at the University of Cambridge, and has been a fellow of Oxford’s Centre for Hebrew and Jewish Studies, and university research lecturer in Oriental Studies. In 2011, he moves to King’s College, London, as senior lecturer in Jewish Studies and the Abrahamic Religions. He specializes in Near Eastern history and civilization, with particular reference to continuities and discontinuities between periods and peoples. He is the author of *Postal Systems in the Pre-Modern Islamic World* (2007) and *Islamic History: A Very Short Introduction* (2010).

**James E. Snead** received his PhD in anthropology at the University of California, Los Angeles, and teaches at California State University, Northridge. The pre-Columbian trail and road networks of the American southwest are among his principal research interests. His research is featured in two forthcoming publications, his book *Ancestral Landscapes of the Pueblo World* (2008), and a co-edited volume *Landscapes of Movement: Paths, Trails, and Roads in Anthropological Perspective* (2009).

**Richard J. A. Talbert**, who received his PhD in classics at the University of Cambridge, is William Rand Kenan, Jr., Professor of History and Classics at the University of North Carolina, Chapel Hill. His recent preoccupations have been mapping, worldview, and travel. He edited the *Barrington Atlas of the Greek and Roman World* (2000), as well as co-editing *Cartography in Antiquity and the Middle Ages: Fresh Perspectives, New Methods* (2008), and *Geography and Ethnography: Perceptions of the World in Pre-Modern Societies* (2010). His monograph *Rome’s World: The Peutinger Map Reconsidered* also appeared in 2010.

**Constantine N. Vaporis**, who received his PhD in East Asian studies at Princeton University, is Professor of History and director of the Asian studies program at the University of Maryland, Baltimore County. His books include
The Ancient World: Comparative Histories

The application of a comparative approach to the ancient world at large has been rare. This series, of which the current volume is the sixth, intends to fill this gap. It pursues important social, political, religious, economic, and intellectual issues through a wide range of ancient or early societies, occasionally covering an even broader diachronic scope. “Ancient” will here be understood broadly, encompassing not only societies that are “ancient” within the traditional chronological framework of ca. 3000 BCE to ca. 600 CE in east, south, and west Asia, the Mediterranean, and Europe, but also later ones that are structurally “ancient” or “early,” such as those in pre-modern Japan or in Meso- and South America before the Spanish conquest. By engaging in comparative studies of the ancient world on a truly global scale, this series hopes to throw light not only on common patterns and marked differences, but also to illustrate the remarkable variety of responses humankind developed to meet common challenges. Focusing as it does on periods that are far removed from our own time, and in which modern identities are less immediately engaged, the series contributes to enhancing our understanding and appreciation of differences among cultures of various traditions and backgrounds. Not least, it thus illuminates the continuing relevance of the study of the ancient world in helping us to cope with problems of our own multicultural world.


The current volume has its origin in a workshop held in 2008 at Brown University under the auspices of the Program in Ancient Studies (now the Program in Early Cultures) and the Joukowsky Institute for Archaeology and the Ancient World.
The papers given and discussed there in a stimulating atmosphere and under ideal conditions were later profoundly revised or rewritten and complemented by others that seemed needed to realize the concept and framework of this volume as they emerged during those discussions. I thank the organizers of the workshop and editors of this volume, Susan Alcock, John Bodel, and Richard Talbert, and the contributors for producing another excellent volume in our series.

Kurt A. Raaflaub
The present volume originates in the first instance from a 2006 workshop at Brown University that resulted in the publication of *Geography and Ethnography: Perceptions of the World in Pre-Modern Societies*, co-edited by Kurt Raaflaub and Richard Talbert for the former’s series *The Ancient World: Comparative Histories* (Wiley-Blackwell, 2010). Raaflaub, having taken the lead initially in proposing the geography and ethnography project, then endorsed with alacrity Talbert’s subsequent proposal for a related study of highways. The trigger for this suggestion was in fact a passing reference by Catherine Julien (a participant, it would turn out, at both conferences) at breakfast during the 2006 workshop to comparisons that the sixteenth-century Spanish conquerors of Peru made between Roman and Inca roads. The remark sufficed for Talbert to envisage at once how fruitfully such comparisons might be extended to pre-modern societies worldwide which developed overland transport and communication networks.

Raaflaub generously offered to sponsor this second conference, though in the end he could not participate himself. Susan E. Alcock and John Bodel, his colleagues at Brown and his successors as directors of the Program in Early Cultures (formerly Program in Ancient Studies), were pleased to be asked then to become involved.

Alcock and Bodel, following a tradition established by Raaflaub for the Program in Ancient Studies, built this conference into the curriculum of an undergraduate seminar they taught in spring 2008 on “Highways and Byways in Antiquity.” The students in this class attended and participated in the conference, and maintained the practice of each student “shadowing” a chosen speaker. The conference was a great success, and we are delighted that all those who presented (or sent) papers are represented in this volume, with the welcome addition of two chapters, one by Jason Neelis exploring the transmission of Buddhism across pre-modern Asia, the other by Justine Shaw on the Mayan *sacbeob* system. The chapter by Pierre Briant was translated from the French by John Bodel.

Gratitude is owed to many people for the productive conversations and smooth running of the event and this subsequent publication. First and foremost, of course, we thank the conference participants for their intellectual investment and good humor. We would like to acknowledge also the members of Alcock and Bodel’s
undergraduate seminar: Isa Abdur-Rahman, So Yeon Bae, Sarah J. Baker, Joseph Bobroskie, Evan Kalish, Christopher Kendall, Kathleen Loyd-Lambert, Carissa Racca, Devin Wilmot, and Jose Yearwood. Their dedication to the project enriched the conference for all its participants. For administrative support, thanks are due to Sarah Sharpe of the Joukowsky Institute for Archaeology and the Ancient World, as well as to the event’s sponsors at Brown: the Program in Early Cultures, the Joukowsky Institute for Archaeology and the Ancient World, the Department of Classics, the Office of the Dean of the Faculty, the Department of Egyptology and Ancient West Asian Studies, the Department of History, and the Program in East Asian Studies. Finally, we are grateful beyond measure to Lisa M. Anderson for her careful copy-editing of the volume, and to Bryan Brinkman for compiling the index.

Susan E. Alcock
John Bodel
Richard J. A. Talbert
Introduction

A distinctive and exciting feature of *The Ancient World: Comparative Histories* series in general, and of this volume and its predecessor *Geography and Ethnography: Perceptions of the World in Pre-Modern Societies* (Wiley-Blackwell, 2010) in particular, is its expansion of the spatial and cultural scope from the areas traditionally encompassed in studies of western civilization to the entire globe. Pre-modern societies, worldwide, developed systems of overland (and in some cases riverine and maritime) transport and communication: this observation might seem both basic and obvious. Yet we would argue that there has been not only a slowness to enumerate and describe the innumerable “highways” of these societies and their functioning, but even more a failure to evaluate them, and their social, cultural, and even religious importance, in any comparative fashion.

Such is the goal of the present volume. At the outset there appeared to be no comparable work available, although one admirable study has now appeared, *Landscapes of Movement: Trails, Paths, and Roads in Anthropological Perspective*, a 2009 set of twelve contributions co-edited by James Snead (a contributor to the present volume), Clark Erickson, and J. Andrew Darling. Pioneering and invaluable though this work is, it nevertheless focuses primarily on societies within the American continent.

Full, comprehensive global coverage is also, inevitably, beyond the capacity of the present volume in turn. Even so, the range of its fourteen contributions by an international team of scholars is extraordinary – India, China, Japan, the Americas, North Africa, Europe, and the Near East, spanning from the second millennium
bce to the nineteenth century. An early surprise, and challenge, was the repeated difficulty of identifying any scholar with the relevant interest in certain likely regions or cultures. In the case of West Africa, for example, all three co-editors’ combined efforts ended in failure. We faced the same prospect for Classical Era China. In this instance one possible expert of whom we had hopes, Michael Nylan, assured us that in any case there was next-to-nothing to be said about highways there. When we entreated her to attempt a contribution nonetheless, she kindly consented, and then reported three months later the discovery that there was in fact plenty to say, and of immense value and interest, as her chapter now richly demonstrates. Meantime, the established experts we found with greater ease (for Japan, for example, and the Roman empire) acknowledged that they had never envisaged, much less participated in, a comparative cross-cultural endeavor where the circumstances of the time and place familiar to them were set against those elsewhere. The volume’s vital comparative dimension enables it to cohere to a remarkable degree, and should encourage inter-disciplinary research aimed at developing the further potential of such approaches. Even more fundamentally, we hope that the volume will inspire inquiry into the highways of major pre-modern states where these have yet to be studied.

We set no single terminal date for the “pre-modern” period. Rather, the request made to contributors was merely that they should not extend their coverage into the stage at which mechanized forms of land transport, railroads in particular, were introduced. In much of China, for example, that development had still to occur as recently as the 1930s, according to a contemporary report quoted by Nanny Kim (p. 66): “Except where railroads or modern automobile service is available, travel is on foot, by sedan chair, on muleback, in two-wheeled carts, or by boat. Twenty miles a day is a good average.”

Even in parts of western Europe conditions might remain pre-modern far into the nineteenth century, as evoked by Giuseppe Tomasi, Prince of Lampedusa (1896–1957; see Gilmour 1988), of a summer journey made by his forbears from Palermo to Santa Margherita Belice in south-west Sicily during the revolution of 1860 (now possible by car in a couple of hours):

The journey had lasted more than three days and been quite appalling. The roads, the famous Sicilian roads which had cost the Prince of Satriano the Lieutenant-Generalcy, were no more than tracks, all ruts and dust. The first night at Marineo, at the home of a notary and friend, had been more or less bearable, but the second at a little inn at Prizzi had been torture, with three of them to a bed, besieged by repellent local fauna. The third was at Bisacquino; no bugs there but to make up for that the Prince had found thirteen flies in his glass of granita, while a strong smell of excrement drifted in from the street and the privy next door, and all this had caused him most unpleasant dreams; waking at very early dawn amid all that sweat and stink he had found himself comparing this ghastly journey with his own life, which had first moved over smiling level ground, then clambered up rocky mountains, slid over threatening passes, to emerge eventually into a landscape of interminable undulations, all the same color, all bare as despair. (Tomasi 1960, 50–1)
The dismissive reference to the nature and state of Sicily’s roads in 1860 can act as a caution against interpreting the “highways” of the present volume’s title at all strictly. “Highways” is intended here as nothing more than an elastic shorthand term. Naturally enough, those of a pre-modern culture may well not match what current western expectations take for granted, let alone even remotely resemble an interstate or transcontinental highway today. Indeed the sheer variety of highways across pre-modern cultures emerges as both remarkable and instructive. At one extreme they may even attain the width of a U.S. Interstate with a total of six lanes, as in the case of the seventy meter-wide grand imperial highways constructed in China’s capital regions – so wide, explains Nylan, that scholars disbelieved their recorded dimensions until recent archaeological discoveries confirmed them. Equally remarkable constructions for their deliberate design and obvious high cost are the Maya sacbeob causeway roads discussed by Justine Shaw, and the Inca highways discussed by Catherine Julien. Moreover, as both contributors show, in these two instances road construction was clearly only part of a more extensive remodelling of the landscape that served either to impress upon the population the proud grip imposed by a dominant power (Julien) or to unite kin groups and facilitate social integration (Shaw).

At the other extreme, despite the traffic passing between principal settlements, there might even be no road visible at all to the untrained eye – the most obvious cases, in this context, being the Egyptian deserts (the context of Jennifer Gates-Foster’s chapter) and the Sahara (discussed by Pekka Masonen), a desert conceived of by Arabic geographers and others as an ocean, with its oases as islands, and camels (only used widely after the Arab conquest) as ships for the perilous two-month crossing. Elsewhere, as the inclusion of “byways” in the volume’s title recognizes, a landscape was often more suitably penetrated and traversed by multiple paths rather than by highways. In discussing the diffusion of Buddhism from India to China through the region of the so-called Silk Road, Jason Neelis underlines the need for travelers to vary their routes in the face of “constant shifts in the high mountain terrain caused by the movements of glaciers, avalanches caused by earthquakes, rivers, and streams made difficult to cross by swollen snowmelt in the late summer, and extremely vertical topography” (p. 21). Equally extraordinary for its use of whatever available route might best fit its purpose is the private communication-network maintained for several centuries during the Geonic and Abbasid periods between the principal Jewish centers of learning in Iraq – at Babylon especially – and Jewish communities as distant as Spain and Central Asia. This network is discussed by Adam Silverstein, together with one developed later and operated from Egypt – so efficiently in fact that Egypt’s Fatimid rulers, who had no postal system of their own, even employed the Jewish service.

The modern western assumption that a road of any importance would be a state-sponsored, rather than a private, initiative is undercut by the insights into China offered by Nylan and Kim, and into Tokugawa Japan by Constantine Vaporis. In China during both the Classical Era and the Late Imperial period, local communities and prominent individuals can be seen to have played a major role in building
roads and maintaining vital infrastructure (bridges especially), while in Japan a network of unofficial byways grew up to allow movement by the many travelers who were liable to face restrictions and delays on the state highways. Undercut, too, by this volume is the further modern assumption that a road will necessarily be constructed to accommodate wheeled traffic. On the contrary, even cultures aware of the wheel might use it little or not at all on their roads. The point applies most strikingly to the Incas (the word “wheel” does not appear in Julien’s contribution), and also to Japan. As a result, the gradients on Inca highways could be far steeper than any to be found on a Roman road, and the Japanese Gokaidô did not suffer the damage done to contemporary European roads by carts. Maya sacbeob were even spared pack animals, because the Maya had no beasts of burden.

Surprising today – as they would also have been to ancient Romans – are the limitations placed upon the use of highways in several societies. North American drivers are familiar with toll roads and parkways restricted to certain types of vehicles, but in China, the grand imperial highways already noted were reserved for the sole use of the emperor (and were often hidden from view by walls or palisades erected on either side). On other highways in China during the Classical Era, official checkpoints regulated travelers so as (in Nylan’s words) “to control the flow of people, things, and ideas as much as possible, lest too much commerce and too much movement disrupt subject populations engaged in sedentary agriculture, the basis of stable rule within civil society” (p. 42). Japan’s Tokugawa government established a comparable scheme of regulation on its highways for similar reasons, moreover with a gendered bias that reflected a special concern to keep movement by women to a minimum. The lack of written testimony from the non-literate cultures of the Maya and the Inca makes it impossible to establish just what restrictions, if any, were placed upon use of their sacbeob and highways respectively. However, Julien is surely right to see some restrictions as likely in the case of the imperial Inca, and the forms and destinations of the Maya sacbeob suggest to Shaw that they were not designed for common uses or users. More broadly, Julien leaves no doubt that residence in the Chinchaysuyu district, through which a highway approached Cuzco, was itself a prestigious reward for loyal service to the Inca.

Regulation of highway users is a matter that leads into the larger issue of what “road systems” in the volume’s title may imply. There looms the danger that the modern mind may be unduly quick to perceive a system or network when perhaps none existed. Thus, in Snead’s view, improved documentation by archaeologists has now invalidated the notion that the roads of the Chaco Canyon in New Mexico formed a centralized system. There were, rather, many short, separate roads here, whose function often seems by no means, practical or otherwise, obvious; conversely, the roads that must have connected to many areas of critical resources used by the inhabitants of Chaco have yet to be identified.

Where the presence of a system is not in doubt, the modern mind still may too readily take for granted a degree of conscious planning and control. To be sure, several contributions do confirm such an assumption. In Classical Era China, as Nylan stresses, persistent concern with buttressing strong centralized authority
made the construction, maintenance, and smooth operation of the road system a priority for the emperor’s ministers; standard axle-lengths were even prescribed by Qin’s First Emperor “so that the empire’s carts and carriages could race along the ruts” (p. 37). The close insight offered by Pierre Briant into the network of Persian “Royal Roads” – with relay stations and royal warehouses sited along them at regular intervals for the benefit of authorized travelers – lends full conviction to his claim that “the road system itself formed an essential feature for military strategy and for the organization of territories” (p. 196). The same can be said of the Gokaidô system built and maintained by the Tokugawa shogunate with the primary aim of keeping Japan’s 260 or so local rulers (daimyo) in subjection. Elaborate regulation of route and timing governed the movements of each daimyo – accompanied by an entourage that could number up to several thousand – as he traveled to fulfill his legal obligation to wait upon the shogun at Edo every other year.

The Inca road system in turn bears all the marks of imperial authority and so too, it is commonly thought, does the Roman. In this latter instance, however, Richard Talbert queries whether Roman emperors exploited, or even envisaged, “their” system as an integrated whole. As rulers they exercised authority in a far less proactive manner than, say, their counterparts in Persia or China. If Roman officials were ever instructed to gather comprehensive data for the management and control of the empire’s road system, it is hard to detect any such records or maps being put to use.

Even so, whatever the level of the emperor’s understanding or of the authority he chose to exercise, there can be no doubt that the far-flung Roman road system did serve as an active force for social, economic and cultural change. Bruce Hitchner’s chapter is devoted to this impact, with special reference to urbanization and economic growth in south-east Gaul, as well as in areas of the province of Africa Proconsularis which today lie within Tunisia. The chapter by Michael Maas and Derek Ruths further develops the same theme by underlining the later importance of the road system for the spread of Christianity and pilgrimage, and – even with its upkeep neglected – for holding the empire together in the fourth and fifth centuries. Maas and Ruths propose lines for fresh research dedicated to clarifying the role of the connectivity furnished by Roman roads in fostering cultural, political, and linguistic change during Late Antiquity and beyond. The chapters by Neelis and Masonen offer important reminders that routes linking distinctly different cultures have the potential to influence the spheres at both ends, not merely at one. For example, while Arabic sources tend to present the role of black Africans in the trans-Saharan trade as unduly passive, in fact – as Masonen demonstrates – this trade raised the interest taken by the peoples of Sudanic Africa in the wider world, and their knowledge of it, to an impressive level.

A matter of indifference it may have been to Roman emperors that the roads within their empire functioned as a powerful force for change and development. Elsewhere, ironically, it emerges that even repressive efforts to control roads and their use might not succeed in preventing travel or arresting the social consequences of such movement. Tokugawa Japan, again, provides a most striking example. For
many common people there, peace and improved economic conditions made travel feasible and attractive, and they typically declared pilgrimage to be their purpose, because the regulations for pilgrims were the least restrictive. If there was strong likelihood of obstruction on the official highways, as women in particular had reason to fear, they could, and did, still resort to the private (and illegal) “side roads” or byways. By the late seventeenth century, commoners’ determination on the one hand, and less harsh supervision by the authorities on the other, formed the basis for a “culture of movement” manifested in an extensive and very varied travel literature, as well as woodblock prints and maps. Consequently (in Vaporis’ words), “by the end of the eighteenth century travel had developed into what seems like a national obsession” (p. 104). Regarded by the Japanese as a leisure pastime, a liberation from day-to-day restrictions and troubles, travel also unwittingly became as an influential element in the formation of a national identity.

In crossing landscapes, the experience of traversing an age-old route could clearly inspire travelers to articulate their sense of relationship both with the predecessors in whose footsteps they were following, and with the gods. Gates-Foster develops this theme in her treatment of the various types of inscriptions discovered at sites of ritual or topographic importance in Egypt’s Eastern desert; the theme recurs in Neelis’ chapter with reference to comparable inscriptions and petroglyphs found in the Silk Road region. Classical Era China, however, is the culture where the idea of the highway finds its fullest and most passionate expression. To quote Nylan, “The ‘path’ or ‘way’ or ‘road’ is unquestionably the most important metaphor in the early received writings composed in classical Chinese” (p. 45). Notably, the Chinese perceived roads as a force for evil as well as for good. Road construction (not to mention subsequent maintenance) could only add to the oppression suffered by the countless common people whose labor was required; at the same time it could even ruin the reputation of otherwise distinguished officials whose ambition to build a Straight Road eventually offended the gods of regions disturbed by such large-scale engineering. Roads in China (as everywhere) could bring banditry and disease, as well as extend invaders’ reach. For travelers to placate Road Deities was always essential, above all because to die on the road was most inauspicious.

Apart from a broad geographical and chronological scope, we would like to underline another sign of this volume’s diversity: the range of data sets employed. Many previous studies on road systems relied heavily on textual sources, be they literary accounts of elite travel, letters conveyed along postal routes, official government accountings, or epigraphic documents such as milestones; all remain essential elements, as the chapters by Briant, Kim, Neelis, Silverstein, and Talbert (just to touch on a few examples) demonstrate. In other cases, archaeological evidence offers the vast majority of what can be recovered and reconstructed of a society’s modes of travel (see, for example, Snead on the prehistoric American Southwest, Shaw on the Maya, or Julien for Inca evidence not derived from Spanish colonial sources). Material culture indices, apart from the actual remains of roads themselves, are also periodically invoked, for example with Vaporis’ use of
woodblock prints and maps, or the petroglyphs and graffiti of Gates-Foster and Neelis. What is encouraging, and common to many of the contributions, is the integration of several strands of data, with text and material evidence collaborating not only to provide specifics on an individual society’s “highways and byways,” but also to sketch the wider context in which those roadways functioned. Finally, we should note the novel experiment by Maas and Ruths of employing a computer algorithm to explore connectivity and “clusters” in Rome’s *Antonine Itinerary*. This work joins a growing body of interest in network analysis, variously defined and variously investigated, in the ancient world (e.g. Isaksen 2008; Malkin et al. 2009; Ruffini 2008; Ur 2003).

One aim of the comparative conferences in early cultures at Brown that give birth to volumes such as this is to stimulate new insights into similarities and differences among civilizations not regularly considered together. The “Highways” conference was no exception in this regard, and prompted the identification of four areas of current interest in research (among many possible others) in which the potential for cross-cultural and interdisciplinary dialogue seems especially rich: connectivity, integration and the landscape, religion and roads, and kings’ highways.

Connectivity unites many of the chapters, but four in particular test its theoretical and practical limits. Snead’s sharp review of scholarly misreading of poorly archaeologically documented Pueblo trails and Chaco roads in the American Southwest advocates an approach to connectivity that turns the focus away from points and lines toward archaeologies of movement and emplacement. Where the evidence is better and the scale larger, as Maas and Ruths demonstrate in their test-case analysis of the road system of the later Roman empire, the possibility exists of detecting through patterns of connectivity “clusters” of economic, social, or political significance that broadly correspond to the regional divisions (dioceses) of provincial organization at the dawn of late antiquity. No roads connected the North African littoral to Sudanic Africa, but the caravans that traversed the Sahara Desert from the eighth through the nineteenth century conveyed knowledge and goods in both directions. That the reciprocal nature of the exchange has not been better recognized is, as Masonen argues, largely because vectors of connectivity are seen largely from the perspective of the beholder. According to Talbert, Roman emperors and their upper-class subjects showed little awareness of or interest in the much vaunted road network on which their mastery of the world supposedly depended – until it was first conceptualized and graphically represented at precisely the time (ca. 300 CE) when the imperial itinerary on which the analysis of Maas and Ruths is based laid out the patterns of a coherent network largely corresponding to the then existing administrative divisions of empire.

Integration and social organization are less often recognized than travel and transport as essential functions served by many highways and road systems, but, as Hitchner argues, the well-maintained arteries and trunk roads of the western Roman empire during the first three centuries CE accomplished both: they brought provincial towns into the imperial community by stimulating local economic and
cultural growth and thus helped them to articulate their local identities against the backdrop of a global Roman culture. “Tawantinsuyu” for the Incas described the union of four conquered territories, the names of each referring simultaneously to an important polity and the road leading to it from Cuzco, the Inca capital. Julien shows how the reshaping of the landscape beside the Chinchaysuyu road as it neared Cuzco defined the concept of Tawantinsuyu for both the Incas and the peoples they annexed as one embracing both control of and respect for local landscapes. In late Imperial China (the focus of Kim’s discussion), where private contributions provided essential infrastructure for the imperial road system, euergetism and philanthropy enabled corporate entities and communities as well as individuals to establish both status and relationships with neighboring and distant peoples. The precise purpose of the causeways in the Mayan lowlands (sacebeob) analyzed by Shaw is unknown, but their construction, placement, and orientation all point to their symbolic (and possibly religious) function in linking elite clan groups or settlements to the central power.

Roads and pathways, emblematic of travel and journeys, generated their own cults, and they served as conduits and testimonials of religious community in ways that transcended their service as mere routes of pilgrimage. Nylan’s discussion of roads in the Classical Era in China begins with consideration of the potency of the road as a metaphor in early Chinese thought and concludes with a remarkable panorama of propitiatory cults to road deities and heroized road-builders, who paradoxically earned semi-divine worship (and social preferment for their descendants) for public benefaction, despite disturbing local gods and wasting human life. In the Egyptian desert, where the harshness of the terrain invited and inspired travelers to inscribe their mastery of it onto the landscape in the form of dedications of thanksgiving to protecting deities, the continuous use of certain roads throughout the Pharaonic, Ptolemaic, and Roman periods created the medium, as Gates-Foster shows, for a community of memory based on a commonality of physical experience. In later periods, religious migrations of persons and beliefs followed private, subsidiary routes that circumvented or superseded the formal public modes of travel and communication: so it was, according to Neelis, that Buddhist pilgrims and itinerant traders of South Asia beginning in the third century BCE left inscribed records in the form of dedicatory offerings at religious shrines (more than 50,000 petroglyphs and 5,000 inscriptions) along the capillary networks of paths by which they traversed the mountain ranges dividing the subcontinent from Central Asia and China; so too, according to Silverstein’s analysis, the legal rulings (responsa) and circular letters issued by rabbis from the Talmudic academies of Iraq to Jewish followers across Europe and West Asia during the early Islamic period traveled via a private Jewish mail service that was more efficient than the public post.

So-called “royal roads” – kings’ highways – stand apart from others in scale of infrastructure and strategic importance, although both may become subverted by the roads’ eventual use. Our contributors offer two classic examples, from early modern Japan and ancient Persia, that illustrate both the distinctive commonalities