

ROAD
THROUGH
TIME

ROAD THROUGH TIME

The Story of Humanity on the Move

Mary Soderstrom



University of Regina Press

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Printed and bound in Canada at Marquis. The text of this book is printed on 100% post-consumer recycled paper with earth-friendly vegetable-based inks.

Cover design: Duncan Campbell, University of Regina Press

Text design: John van der Woude, JVDW Designs

Copy editor: Elsa Johnston

Proofreader: Kristine Douaud

Indexer: Siusan Moffat

Map: Julia Siemer

Cover art: (*front cover*) Pleistocene human footprints from the Willandra Lakes, southeastern Australia. / Istockphoto; (*back cover*) Buzz Aldrin's bootprint from the Apollo 11 mission July 20, 1969. Image credit: NASA

Library and Archives Canada Cataloguing in Publication

Soderstrom, Mary, 1942-, author

Road through time : the story of humanity on the move / Mary Soderstrom.

Includes bibliographical references and index. Issued in print and electronic formats.

ISBN 978-0-88977-477-3 (softcover).—ISBN 978-0-88977-478-0 (PDF).—

ISBN 978-0-88977-479-7 (HTML)

1. Roads—History.
 2. Roads—Social aspects—History.
 3. Travel—History.
 4. Human beings—Migrations.
 5. Social change.
 6. Civilization.
1. Title.

TE145.S63 2017 388.109 C2016-907590-7 C2016-907591-5

10 9 8 7 6 5 4 3 2 1



University of Regina Press, University of Regina

Regina, Saskatchewan, Canada, S4S 0A2

tel: (306) 585-4758 fax: (306) 585-4699

U O F R PRESS

web: www.uofrpress.ca

We acknowledge the support of the Canada Council for the Arts for our publishing program. We acknowledge the financial support of the Government of Canada. / Nous reconnaissons l'appui financier du gouvernement du Canada. This publication was made possible through Creative Saskatchewan's Creative Industries Production Grant Program.

Canada Council
for the Arts



Conseil des Arts
du Canada

Canada

creative
SASKATCHEWAN

This one's for Lukas.

Some of the travel described in this book was indirectly funded by the Conseil des arts et des lettres du Québec. I am very grateful for its support.

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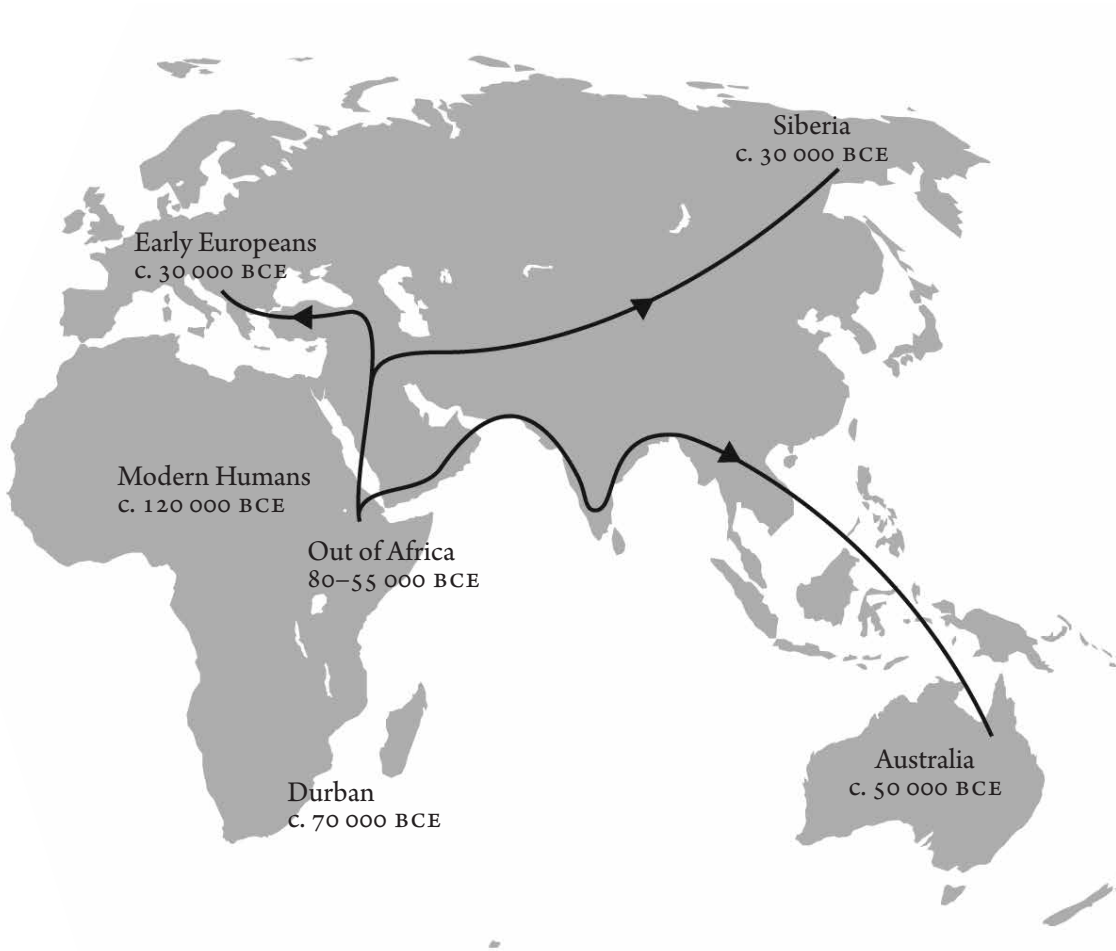


EARLY HUMAN MIGRATIONS

All dates are very approximate.

Paths are suggestions of routes.

Cartography: Julia Siemer, University of Regina, 2016.



Chapter One

ON THE ROAD, I

PEOPLE'S EYES LIT UP WHEN I TOLD THEM I WANTED TO WRITE a book about roads. Ah, yes, nearly everyone said, you're going to do another *On the Road!* Since its publication in 1957, Jack Kerouac's beat generation classic has become emblematic of the romance of the road, of inviting paths taken or not taken.

Some of these people have known me since I was young in the San Francisco Bay Area and wore black stockings and turtlenecks, long hair, and political buttons. They may even have seen me once or twice when I ironed my frizzy red hair to make it hiply straight.

Others just knew that I've always read everything I could get my hands on, and that I followed my interests wherever they led me. Obviously, all of them expected a book that tried to be as edgy and adventurous as Kerouac's, with some facts thrown in.

I agreed that *On the Road* would have been a great name for my book, but I wanted to write something in a different register from Kerouac's sprawling chronicle of a hipster's wanderings. What interested me were the tracks that humans have made over time. I'd written two non-fiction books about cities and transportation, and become increasingly convinced that the roads we build determine our future.

Roads are vectors for change and exchange, the most enduring monuments we have built. In the last century and a half, their proliferation and transformation from simple routes for pedestrian or animal traffic to motorways have had disastrous effects on the environment, our consumption of resources, and our health.

But I'd never read *On the Road*, and I didn't put it on the reading list as I began my research. It was too light, too "fictional," too far away from the roads I wanted to talk about. My idea was to start with an account of a road trip I took when I was ten with my mother and sister, which opened my eyes to a world much larger than the familiar one where time is measured in minutes, seconds, and hours.¹ Then I'd go on, giving a virtual tour of the roads that humans have travelled since a small band left Africa thousands of years ago. The book would end with another bus trip, this time through South America where a new highway demonstrates many of the dangers of our obsession with roads.

However, the paths we take often have twists and turns. Certainly, mine has. Despite a childhood and youth on the West Coast where the car was king, at twenty-six I came east to another country, another culture. Since then you might say I've become a born-again pedestrian. For decades, I've lived in one of North America's most walkable cities, Montreal. On my travels, I've trudged down country roads in Tanzania, strolled through the streets of Paris, Lisbon, and Singapore, and backpacked in mountains on both sides of North America. Roads have become a passion, and to my surprise, once I began to read Kerouac's book, I discovered that it is far more relevant to serious reflection about roads than I expected. Same thing for Cormac McCarthy's dystopian novel *The Road*, while I learned much from Le Corbusier's *The City of To-morrow and Its Planning* and the ancient epic *Gilgamesh*. We'll get to them all in good time, but to begin, let us return to those two summer days in the mid-1950s when my mother, my sister, and I rode the Greyhound bus from the southwest corner of the United States almost to its northwest corner.

What I remember particularly was leaving Southern California as the bus crept along the Grapevine and crossed Tejon Pass. On the north side, the highway switched back and forth, but the name did not come

from its vine-like circuitous route. Instead, it was inspired by the wild grapes found by Native Americans and Spanish explorers when they followed a cleft in the hills to the pass. By the time we travelled the road, grapes were few and far between, and the road's transformation into an eight-lane freeway clogged with traffic had just begun.

The moment that sticks in my mind occurred when we had been on the road for about ten hours. I was bored, and tired of sitting. My mother, in the seat in front of me next to my sister, who had already been carsick a couple of times, was not inclined to be sympathetic when I complained that the upholstery made the back of my legs itch. "Stop kicking the seat," was all she said.

Then the man next to me said: "Look out the window." It was half a command, and the first thing he'd said to me since we left Los Angeles. I stared at him. I wasn't supposed to talk to strangers, but did that include your seatmate on a long trip? I didn't know, but I did look out the window, because there was nothing much else to do.

I saw layers of rocks slanting upward like one side of a giant "A." They were purple, rusty brown, colours that balanced between the rich and the repellent, hinting of both royal robes and dried blood. They were beautiful and unsettlingly strange, unlike anything I have ever seen before.

I must have said something, but I have no recollection of what, just as I have no idea who the man was, no memory of what he looked like. What I do know with absolute certainty is that he introduced me to the first road through time I encountered.



Mary and Laurie, the girls who took the road trip in the 1950s.

Photo: Author's collection

“Pretty impressive, aren’t they?” he said. “Each layer was laid down a long, long time ago at the bottom of some sea,” he added.

I didn’t believe him. At home in San Diego, we lived near a beach backed by cliffs where you could see layers of rock. Sedimentary rocks, my mother said. Climbing on them, she and I had found a few fossil shells in the horizontal bands.

But these rocks were almost standing straight up and down.

“No,” I said to the man on the bus. “That can’t be. Rocks like that are supposed to be flat.”

“Ah,” he said. “That’s one of the wonders of the earth.”

He talked about earthquakes—I’d felt three, but never anything very big—and the effect of small movements adding up over time, about mountains being thrust up, and how the earth was very, very old.

When the bus stopped next—at Bakersfield, a half-hour for supper in the scruffy Greyhound cafe—I asked my mother about what he’d said. She nodded, yes, that kind of thing happened, and then told me to take



“I saw layers of rocks slanting upward like one side of a giant ‘A.’ They were beautiful and unsettlingly strange, unlike anything I had ever seen before.”

Photo: Karnak Ridge, Nevada / Timothy H. O’Sullivan, 1867 / Public Domain

my sister and save places at one of the tables while she waited in line to place an order for coffee, milkshakes, and hot dogs.

Then we went back on the road, continuing north on Highway 99. But my life took a slightly different heading from then on, which has led me to this point where I want to talk about roads and time and change.

Ever since humans stood up and walked they have left tracks across the landscape. From the footprints that a trio of prehumans left in soft volcanic ash 3.6 million years ago in East Africa to a newly completed inter-oceanic highway in South America, we change things wherever we travel. These marks—be they dirt trails or concrete highways—frequently outlast the societies that built them. Even though we linger only a flicker of time in the history of this planet, the effects of our travel long outlive us.

Humans are engineered to think in short stretches of time, however, so the potential consequences of our actions in the long run almost always escape us. How can we reconcile our own sprints through time with the marathon we ought to consider? That is the double subject of *Road through Time*.

To explore this question, a map of where such an adventure might take us is necessary.

In “Bottleneck on the Road from Eden,” this book will take a look at the way our ancestors travelled on foot for unbelievably long distances. Beginning with the tricky crossing from Africa to the Eurasian continent, we’ll discover how humans were fruitful and multiplied, peopling most of the rest of the earth in perhaps twenty thousand years.

Humans’ impact on the landscape was minimal for eons, until they mastered fire, tamed beasts of burden, began to grow crops, and defaced the forest that bordered the plains where they had prospered. “Into the Trees” tells this story.

As population centres grew and trade increased, the paths people took wore more deeply into the land. Because trade goods had to be transported by animals or humans, only the very precious were worth the effort. “The Things They Carried” tells the story of these trade routes, beginning with the Obsidian Roads and the Lapis Lazuli Road in Asia.

With increasing population and excess production, more complicated social organization meant greater inter-group conflict. “Warriors’

Roads” explores the routes built by emperors from Persia to the Andes, vestiges of which we can see today, and along whose tracks many of us still travel.

Although this is a book about roads, travel by water must not be ignored. It goes back as far as those first steps out of Africa, but it came into its own as trade demand increased. Without help from machines, goods and people are easier to move on water than over land. “Across the Water” tells how sea and river trade routes developed, and how canals were built where rivers didn’t run, until the great population crescendo that saw millions of people take to ships to exploit and settle new-found lands.

This New World wasn’t uninhabited, despite what explorers from Europe thought. “Mystery Roads” follows the paths taken by adventurers out of Asia into the western hemisphere. This is a story that new scientific techniques are rewriting.

“The Revenge of the Road” chronicles the massive road building of the nineteenth and twentieth centuries, including the growth of cities, and dependence on, first, railroad and then internal combustion vehicles.

In “Speeding,” we collide with the disaster wrought by our roads and the vehicles that run on them. Our sprawling cities designed—or redesigned—for the automobile are a big part of the problem. Two ways to deal with this challenge are explored in visits to Curitiba and Brasília in Brazil.

The book ends with “On the Road, II,” aboard a second trip by bus, this one across the Andes from Cusco, Peru, to Rio Branco, Brazil, on the new Inter-oceanic (or Transoceanic) Highway. From footpaths to roads opening up wilderness, the trip gives a front-row seat on massive changes taking place throughout the world. In the distance, we’ll see the end of our collective travel on this fragile planet or, conversely, a future that will allow us to continue moving onward.

FIRST, THOUGH, A FEW THOUGHTS ABOUT TIME. In cities it is easy to forget the most basic signposts of time’s passage. There is a difference between night and day, and in most places, the earth’s progress around the

sun is reflected in the length of day itself. But at night, the moon and stars are now swept away by artificial light radiating from millions of sources. Rarely does the full moon catch your attention, while the stars that you can see can be counted on one hand.

The night of our bus ride north, though, was an introduction to the glories of the night and the full moon. By then we'd worked our way to the front of the bus. My mother had persuaded other passengers that if they didn't want a car-sick child sitting near them, they should let her and my sister take the seats by the door where my sister could look out the windshield and hopefully not get sick again.

That left me on my own, two or three rows back, with a seat to myself where my mother told me to stretch out and sleep. We had hours and hours before us. It would be the early afternoon before my grandfather would come and pick us up at the small town bus stop that he and my mother had worked out was closest to where my grandparents lived.

The night was hot, the bus windows were open, and even though the windshield had been carefully cleaned at the last stop, it was already splattered with remains of dozens of flying insects that had collided with it as we sped along. The road itself was nearly empty, except for the long haul trucks and a few passenger vehicles driven by insomniacs or people in a great hurry to get some place. This was the northern end of the valley, the flat, fertile heart of California. Boring scenery, some would say.

The Sacramento River drains this part of the Central Valley and the northern Sierra Nevada mountains. As we'd driven north earlier in the day there had been a few places where we could see the mountains dimly to the east. Now in the darkness, they were invisible out my window.

My mother had said to be quiet if I couldn't sleep, and for awhile if I craned my neck I could see the red glow of her cigarette as she sat quietly with my sister. Then she quit smoking too, and the bus rolled along with its load of exhausted travelers. But enforced inactivity made me restless, and when all was silent, I crept forward until I was sitting on the top step of the stairs into the main level of the bus, almost next to the driver. Ahead I could see the road going straight for what seemed like forever.

Or so I thought.

The driver realized I was there, and he shot a quick look at me. “Come down here so you can get a better look,” he said.

I remember hesitating: my mother was always after me to not get in the way, and certainly if I took the two steps down, I might be. Yet it was an invitation, and I had nothing else to do.

So I stepped down cautiously into the second revelation of the trip. When I looked up, the white dome of Mount Shasta faced me, completely lit by the full moon which had just about reached the zenith. It was the most beautiful thing I had ever seen, even more wonderful than the rocks.

I don’t remember what happened next, perhaps I gasped, perhaps I exclaimed something. My mother heard me at some point and hissed for me to go back and sit down. The driver shot me a quick smile. I don’t remember what else.

Except ... except that the vision of the moonlit mountain comes to me at the oddest times—it has for years. It’s the thing that I think of first whenever anyone mentions the moon and the stars, and how we are governed by them.

This vision and indeed that whole trip are examples of the elasticity of perceived time, an excellent point to reflect on humanity’s place in



Mount Shasta, one of the volcanoes that have shaken the earth since well before humans began making roads.

Photo: Caia Cupito / Ore-Cal Re&D / Released for Use in the Public Domain

the universe, which is seemingly timeless and yet is divided by us into discrete sections.

Years, months, weeks, days, hours, minutes, seconds—those were the divisions humans long ago agreed to use to consider time. However, two other kinds of time have become important in the last century. The first is the discovery of marvelously small units of time, which are measured by the vibration of atoms in certain elements. The second is the time that has passed since events took place tens of thousands or even millions of years ago. The two are linked because changes in atoms can be used to determine when events in the deep past happened. This in turn gives an idea of how long ago something took place—for example, when a volcano erupted, or a stone tool was made, or a piece of wood was burned into ashes—and so, of how far the world has travelled on the road of time since then. As this book proceeds, there will be many references to dating by these means.²

KEROUAC PROBABLY WOULDN'T HAVE CARED MUCH ABOUT THAT sort of dating, nor about the deep past. Dating women was more his thing, and his world was lived full tilt. He wrote the first draft of *On the Road* practically non-stop in three weeks on a 120-foot scroll of paper, and throughout his life he purported to live for the moment.

Too bad he used that title though, I thought, when I finished the plan for my book. It could describe what I wanted to do, although his story and mine had almost nothing in common, I was sure. No point even in reading it.

Then, in the summer of 2013, I chanced to see that one of Jack Kerouac's many women had just died. Bea Kozera was ninety-two, and, even though their romance lasted only a couple of weeks, they remained in contact for a time afterward. She had no idea of his renown, however, until a researcher found letters from her in the Kerouac archives and contacted her three years before her death. Her children and grandchildren were surprised to learn of the connection. They saw her as someone devoted to her family and her second husband, and who had worked hard to raise herself out of the poverty of a farm worker's life.

Yet, the obituaries said, she and Kerouac met in the same Bakersfield bus station where my mother, my sister, and I had our supper. He thought she was going in the other direction, and was delighted to find her across the aisle from him when he got on the bus that then climbed the Grapevine on a hot summer night. The two weeks of romance that followed was an emotional turning point in his life.³ Just as importantly, what he wrote about it—called “the most heart-rending part” of *On the Road* by one critic⁴—was excerpted in *The Paris Review* and led directly to an offer from Viking Press to publish the whole novel.

Greyhound bus! Grapevine! His trip and mine must have occurred within a few years of each other. What a coincidence!

After resisting for so long, I decided I had to take a look at the book, if only to read what he’d written about that trip. There isn’t much: a couple of pages, the bus “groaning up” the Grapevine, how “cute” she was. Then this: as they went down into the “great sprawls of light” on the Los Angeles side of the mountains, he saw “the whole mad thing, the ragged promised land, the fantastic end of America.”⁵

What a picture! On the road where I learned about the past, Kerouac rushed forward toward a future where people don’t smoke on buses but frequently can’t breathe the air because of pollution. Where winding routes have been transformed into superhighways. Where everything is linked, and the information superhighway allows me to Google “Kerouac” and “Grapevine” and come up with a page reference in his book.

Where the detritus accumulated during the travels of our collective past may bring us to the End of Days.