

My Adventures on the Road

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It is Sunday afternoon. Looking out the window, I see the snow-covered ground of the university campus across the street. The temperature is slightly above zero centigrade. By and large this has been a warm winter for Chicago, thanks to El Niño (which is doing a lot of mischief in other parts of the country). Then a few days ago the snow came back with a vengeance, and cut electricity from homes of three hundred thousand people. Fortunately we were spared the trouble.

I am watching The Lawrence of Arabia on an educational channel. I have seen it before, but I am happy and relaxed and enjoying it today because I have just made a progress in my work. The beautiful and romantic vastness of the Arabian deserts, the handsome and contrasting faces of Peter O'Toole and Omar Sharif have awakened in me the memory of the excitement I had experienced when I was crossing the American continent by train for the first time some forty-five years ago. In my youth I always had a yearning for a vast, endless and featureless landscape. Perhaps it was because I had grown up in Fukui, where you see mountains everywhere. But to tell the truth, it was a bit of disappointment for me to discover that even the prairies of the Midwest were not so flat or featureless. From the train's windows I could see only a few miles away. The terrain is not so even. Clumps of trees or lines of woods are always blocking the horizon. Still it is true that I have ended up living in the Midwest. I feel most comfortable here. I do not like the East Coast which is too crowded, or the West Coast (meaning California) where things go to extremes in either direction. The people in the Midwest are more friendly and less sophisticated than on either side of the continent. It is the land of farmers, and I am certainly from the back side of Japan.

I will write more today. I feel like talking about my adventures, misadventures, and mishaps. I have had many of them in my life. In my teenage days my father once took me and a colleague of his to climb Hekosan. (My father taught at today's Koshi Koko.) This colleague of his had bad eyesight which slowed down our pace quite a bit. The sun set before we could climb down to the village, and we got trapped in a pitch-dark ravine. We could not see each other, and stayed there motionless until past midnight when we noticed the lights and shoutings of a rescue party down the stream.

I have had many reckless adventures and mishaps since I came here. Some are physical, some are social, and some are even political. I do not like to talk about the latter two on paper, so I will talk about one of my more innocent incidents on the road. I have driven across the continent several times, and visited all the States except North Dakota and Alaska. Most of the time the whole family of four travelled because it was the custom, as it is now, for physicists to spend the summer months at another university or a research institute, sometimes in the East, sometimes in the West, and sometimes in the Colorado mountains. I love driving. It is most relaxing for me to drive on long stretches of highways. I do not mind driving all day; it is not so boring to me who is doing the driving, although I cannot speak for the rest of my family trapped in the rear seats of the car.

The year was 1970. That summer I was planning to attend a big international conference in Kiev and a smaller one at the Niels Bohr Institute in Copenhagen before it. During my absence my family wanted to spend the time with our friends in Sacramento, California. So we decided to drive to California first, then I would take a plane from San Francisco to Europe.

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The American continent is roughly 3000 car miles (5000 km) wide. Chicago and Denver divide it into three equal parts, each 1000 miles wide. There are various routes to get to the West from Chicago. This time we would take Interstate 80. It is a busy trunk highway linking New York, Chicago, and San Francisco. Our Oldsmobile was pretty new, but somehow there were problems from the beginning. Warning lights tended to come on to indicate trouble in the cooling system. From my experience I suspected the thermostat or the water pump, but the mechanics could not locate the problem, so we drove on. If you are not sightseeing on the way, you can cover about 500 miles (800 kilometers) a day in nine to ten hours of driving, including lunch and gas (and toilet) stops. First you cross the state of Illinois, which is nearly 200 miles of mostly corn fields from its eastern end where Chicago is. As you cross the Mississippi, which does not look so big, you notice a change in topography and vegetation. It is Iowa now. Each state has its own character which you cannot fail to notice. You drive up and down the beautiful rolling green hills. You will notice the Amana factory of refrigerators by the roadside, run by a religious sect. There is also the headquarters of the nationwide highschool achievement test. The Maharish-Maheshi University, run by the well-known guru of India, should be somewhere in Iowa. A physicist I know is a supporter of the guru, and once he tried to induce me to join them. At the end of the day you reach Omaha at the eastern end of Nebraska, known for an insurance company bearing that name, and spend the night in a motel. You have just covered the first 500 miles.

The next day is the most boring. You have to drive on an endless and monotonous continuation of farmland alongside the Platte River for 450 miles. This is part of the historic Oregon Trail in the days of the pioneers who trekked their wagons to the West. You are also going to follow their steps now. One of the farm towns you pass is called Gothenburg. (They

do not use the word village in America) Strange, it is the name of a city in Sweden. I was there once for a conference, and visited the Volvo factory there. Did Swedish farmers come here? Then there is another town called Ogallala, obviously an Indian name. An uncle of my wife's would build a small factory of electric parts there some years later. (I do not know how of all places he chose this small obscure town.) As you keep on driving, the farmhouses get scarcer and scarcer. The land seems to be rising slowly, the farmland changing to grazing land. When Nebraska is finally behind you, Cheyenne is an hour's drive away in the state of Wyoming where you would spend the night.

Wyoming is the land of cowboys, the entire state is nothing but rolling grazing land, with a population of Fukui-ken. (Nowadays they seem to have software industry, too.) The famous Yellowstone Park is at its northwestern corner, but you are going along the southern part of the state for 400 miles on the third day. The land gets wilder and wilder. In the middle of nothing, there is a car stop called Little America, a reminder of the settlement of the same name which the explorer Byrd once set up in Antarctica. Then you enter the state of Utah, the land of the Mormons (and of biotechnology nowadays). But you have to cross the final hurdle of mountain passes to reach Salt Lake City, as the Mormons did in the last century as refugees from religious intolerance in the East. (On my first train ride across the continent, a Mormon gentleman treated me to lunch on the train. A Mormon is supposed to try to recruit people to the Mormon church whenever possible. He told me that the Mormons do not drink coffee. Instead they take postum, which I found tasteless.)

Next day we left Salt Lake City, drove along the shores of the Great Salt Lake into the Salt Lake Desert, a completely flat and straight 40 mile strip of highway built on an ancient lake bed that has dried up. It was midsummer, and the heat was above 40 degrees. The road was

filled with yellow dust, but the traffic was pretty heavy. I was driving rather carefully lest we got in trouble with our car. Suddenly a tiny Volkswagen past me with a zip. In a moment of anger, I stepped on the accelerator in order to overtake the offender. But suddenly the accelerator went numb, and the engine ceased to respond. I noticed the car thermometer shoot up. Fortunately I also noticed the end of the desert coming, and I was able to coast my car to the finish. As soon as I stopped the car on the roadside and opened the hood, a stack of smoke and fume fiercely shot up. Somebody came to inspect our car, said that the engine was ruined by overheating.

The place was a small settlement called Wendover at the western end of the state, made up of perhaps 20 houses lining the highway. On the north side it was flanked by jagged rocky hills , but the south side was open desert area. Our car was taken to the only service station there. They told me what the problem was. The radiator hose had burst open at its connection, the engine got overheated, the bolts that fastened its bulkhead to the cylinders stretched and loosened, causing the bulkhead to warp. They would have to regrind the interface and put them together back again, and replace some parts. But the necessary parts would have to be brought in from Salt Lake City. I would surely miss my connection to Europe, but there was no choice.

For three days we stayed in a motel there. In the daytime we had to remain in the motel room because it was too hot outside. In the evening when it got a bit cooler, we ventured out. Five minutes of walk on the highway to the west up a gentle grade, and we came to the Nevada border, beyond which we found a few houses of slot machines where we tried our luck.

Nevada, with its famous Las Vegas, is a state that lives on gambling. We also heard thunderlike

rumblings and saw flashes in the sky far to the south in the desert, but it was not a thunderstorm. The area was an Army proving ground, and they were testing bombs. Today part of the area is used by my colleagues at the University of Chicago to catch gamma rays coming from outer space.

After three days our car was ready. Before we left Wendover, however, I could not resist taking our car off the highway into a part of the Salt Lake Desert called Bonneville Flat, the place where automobile speed records are set from time to time (the most recent being a few months ago). Then we crossed into Nevada, a state with nothing but deserts of white sands, coming to any settlement to speak of only every few hours. 400 miles later and past Reno, the divorce town, we finally entered California. We began to see green fields as we gradually descended to the rich Sacramento valley. It was very hot there, unlike San Francisco which was still 100 miles away.

I was in low mood. I had lost my plane connection and the will to do the travel to Europe. Why don't I forget about the conferences and enjoy California? So we all stayed in the home of Mr and Mrs *I*, our host couple. The husband was a California nisei, a brooding artist, philosopher and high school teacher; his paintings reminded me of El Greco. The wife was from Japan, a striking beauty with the character of a comedian. They met when they were studying at the Art Institute of Chicago, where my wife also met them. I remember she looked so breathtakingly pretty that I had a hard time taking my eyes off of her when she first came to our house. It was mid-August. There was a large population of Japanese-Americans in the area. We went to a lively bon festival. (Once I joined a bon-odori in Chicago way back in the 50s when there were still a fair number of isseis in Hyde Park where my university and our home are located.) Mr. *I* took us boys to the Sierra Nevada mountains to

fish and camp in his favorite hideout. I carried with me a portable telescope which I had bought with the prize money I had received that year. He told me that often he would stay there completely alone for a week. We saw no people around our camp site, but also unfortunately few fish to catch in a small lake nearby, even though we got up at 4 o'clock. Then he took us to a ghost mining town that had flourished in the days of California gold rush. I knew that the famous Albert Michelson, the first American Nobel Prize winner and the first physicist brought to the University of Chicago when the university was opened in the 1890's, also had grown up in one of such mining towns.

The return trip to Chicago was rather uneventful. Although our car again developed a little trouble in Nebraska, we made it back on schedule. But there is one thing I regret to this day. Before leaving Chicago, I had sent in to Copenhagen the text of my lectures I was going to give there. It contained an important idea about what people call string theory today. I put it down rather casually because it was just lectures and I did not have to worry about what the referees would say if I submitted it to a regular journal. Even if I could not deliver the lectures myself, the lecture notes would be published later, I thought. So after coming back to Chicago I did not make further efforts to expand on the idea and submit it to a journal. Unfortunately the organizers of the conference did not publish the expected lecture notes. Nevertheless my idea somehow caught the attention of the people who saw my manuscript. It is thanks to the good will of my fellow physicists that my name is attached to the idea which was never published or lectured on, and most people have not seen the manuscript even if they quote it. (Now it is in the volume of my collected papers.) I wish I had written a bona fide article in a journal. But at that time my mood was too low to do that. I recall that around that time the federal science budget met a big cut due to the problems created by the Viet Nam War.

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Suddenly many young physicists found themselves jobless. I was asked by the president of the American Physical Society, a fellow particle physicist, to survey the unemployment situation among postdoctoral people in particle physics. I found that some of them were driving taxicabs. This must also have contributed to my sense of gloom.

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