

Chapter 2

How I Earned My First Crown and Dollar

2.1 The Story of the Author Kutílek

While attending high school, I had to write an essay on fate. Now, after more than half a century, my recollection is for sure not exact, but here I at least try to keep the atmosphere:

The famous economist Antonio Usurero, who missed the Nobel Prize by just the thickness of a hair, wrote in one of his books: “.... The most important affair in our life is from how we earned the first dollar in our childhood or as teenagers. This is a sort of prediction by fairies on our future fate and destiny. It is lasting forever and it is unavoidable.” Since we have been taught that the best brains of mankind are to be trusted, I am going to find out what will be my future profession.

I spent my best childhood vacations in a small Czech village *Hlinoviste* and the rough English translation will be either “Loam Site” or “Loam Pit” since loam is *hlina* in Czech. My grandma was the co-owner of a pub and of a small farm there together with my uncle, who was single at that time. During harvest my grandma and uncle were obliged to be in the field, but they had to keep the pub open for the old men of the village who were no longer farming, but nevertheless typical of how all farmers used to be – thirsty not only in the evenings but throughout the entire day. After I was given the keys of the pub and its cellar, my duty was to tap beer and cash the guests if they were leaving. Being a student in fourth grade and excellent at adding, subtracting, and simple arithmetic, I had no problems cashing the guests. If they paid by notes, it was an easy task for me to give their change back in smaller notes and coins.

When my grandma came back from the field, she found some of old guests still in the pub.

With his index finger pointing at me, one of the group of old men at the table reserved for regular guests said, “You have a perfect headwaiter!”

“Do you think so?,” asked my grandma with pride being felt in her voice.

“How old is he?,” asked the curious old man.

“About five,” answered my grandma, whose memory was chaotic when discussions were about age. Actually, she stopped counting my years when I was 5 years old.

“He is a genius,” exclaimed the thin old man, and all guests repeated in chorus: “Genius!” From this moment on I was the little genius for all guests from our village Loam Pit. When their bill was about three crowns and several hellers, they paid five crowns and they left me more than one crown tip and I was the best tipped waiter in the county side.

My fate is to be the headwaiter, I wrote at the end of the essay.

Our high school teacher was beautiful with a perfect makeup. All of my friends fell in love with her and the more we recognized our hopelessness, the cheekier we were. She asked me: “Where did you read about the economist Usurero? Never heard about him.”

“He is well known among professionals in theory of economy,” I was lying. I would never admit that I derived this imaginary name from the Middle English word *usurer* that means a lender of money at huge, unlawfully high interest rates. Knowing that the Latin *usura* means loan, I invented the Italian family name of Usurero by adding an “o” to the end of usurer. I also remembered from history that after Italians started banking, the somewhat dirty term bankruptcy stemming from Italian *banco rotto* meaning broken bench became a common word. In those times, bankers illustrated their ability and readiness for making loans by sitting on a box-banco containing available cash. They rotated the big box up and down to demonstrate the sad situation whenever cash was no longer available for more loans. While I was writing my essay at the high school, I decided to improvise the name of the economist as well as his well-known professional recognition.

I was pleased when she responded, “Strange name. But you wrote the essay well.”

After that, everybody at school started to call me *pingl*, a Czech vulgar expression for a trainee waiter.

It took me more than 10 years to recognize that my nonrealistic quotation of an imaginary Usurero was correct but in a different way than deriving my fate from my pub expertise. My imaginary Usurero predicted correctly that my lifetime fate would be related to the name of the village where my granny owned the pub. With that name being Loam Pit, my fate was not only linked up with loam but with all soils. Although I started my university study in civil engineering, division of water management, after I recognized what an important role soil plays in the hydrologic circle, I decided to shift my studies into the direction of soil hydrology and soil physics. It happened during the period when many basic equations of water flow in soils were formulated, and on many occasions, I felt like I was living in a scientific thriller as I watched all sorts of mathematical magic being performed by my slightly older colleagues. Because I wished to be a similar magician, soils and water together with their governing physical laws attracted my attention for the rest of my life. This is also why I decided to share my experience with lay readers in telling them about the really magical role of soil in all life forms on our planet Earth. My longtime and best friend Don Nielsen is not only accompanying me, he has often a leading role.

2.2 The Story of the Author Nielsen

During and following the Great Depression (1929–1939), I spent my early youth living in the developing town of Phoenix located within the arid, dusty region of Arizona in Maricopa County across which the dry bed of the Salt River has been existing for centuries. Today, my memoirs actually agree with the statement, “The most important affair in our life is from how we earned the first dollar in our childhood or as teenagers,” creatively derived by Kutilek who invented and fictitiously quoted a famous economist named Antonio Usurero.

While behaving and minding my parents and doing a few designated chores in and around our 2-bedroom wooden home, I never thought of working for money because my whims for occasional extra enjoyment were always bought with a few cents given to me by my parents. Some of my friends having rich parents were given weekly allowances to buy ice cream, candy, and junk. But without spending a penny, I enjoyed walking through uninhabited desert regions observing plant and animal life together and also picking up archeological artifacts from Hohokam Indians that I always found on different kinds of soil surfaces. During any of my treks, I often saw javelina, burros, coyotes, wolves, turkeys, buzzards, as well as smaller creatures such as turtles, lizards, rattlesnakes, horned toads, scorpions, tarantulas, ants, spiders, centipedes and millipedes, crickets, earthworms, etc. Having also frequently found archeological artifacts on and below soil surfaces, I saved arrowheads made of flint, stones shaped and used as tomahawks, various grinding stones and bone awls, pieces of turquoise jewelry, ceramic and adobe figurines, and fragments of decorated pottery.

As the depression gradually ended, my desire steadily expanded to enjoy costly activities. Without wanting to further empty the pockets of my parents, I sought any kind of a job to earn some money. Luckily, a part-time job suddenly appeared that I could do each day after school and on weekends. Surprisingly, the surroundings of my first paying job were similar to those encountered on my treks walking on dry soil through the dusty desert environment. Working indoors in a retail store filled with books, baggage, and suitcases that were continually being covered by dust blown into the store from unpaved streets and fallow soils in the sunbaked vicinity, I earned my first dollar repeating what I had already done for years outdoors in the desert. In both cases, I sorted, picked up, individually dusted off, and rearranged each of the objects. In the desert, they were living organisms or artifacts at or near the soil surface. In the store, they were books and baggage that I nicely rearranged after dusting each of them and also after removing lice and silverfish potentially harmful to the books as well as killing unwanted insects, spiders, and rodents.

My first full-time job also involved dusty conditions – digging and sampling soils across farmers’ fields to ascertain deficient levels of plant nutrients and also searching for unwanted pests that reduce crop yields. By the time I was about to finish high school, I was happy breathing dusty air while digging in dirt working with farmers. After telling my father, who was a farmer during his entire life, that I had decided to study agriculture in college, he gasped and emphatically said,

“Never! Do you really wish to follow my footsteps working every day from sunrise to long after it’s dark without ever having time or making enough money to take a decent vacation? I strongly advise you to study accounting, economics, or some topic to make money. Do not study agriculture and become a farmer like me.”

Two months later and convinced that I should strive to become a wealthy accountant or business manager, I entered college. During the first term I took these courses: accounting, economics, business mathematics, sociology, and history. By the middle of the term, I knew that I made a mistake even though I made excellent final grades in all five courses. By the following term, switching gears from money to science, I took botany, chemistry, entomology, geography, and geology. And 3 years later at a different university, I graduated with a BS degree in Agricultural Chemistry and Soils. But with that knowledge and experience gained in classrooms and laboratories and across various landscapes, the exact meaning, behavior, and importance of dust remained somewhat of a mystery to me in relation to the plant and animal life that I had observed in the desert as a youngster. Being curious, I continued my science-related education by exploring the impact of dust and soil particles on microbial communities living within desert topsoils. My exploration was enhanced by using newly available radioactive elements to determine critical levels of carbon, nitrogen, and phosphorus being manipulated by millions of soil microorganisms living in the vicinity of each and every root of a plant. Their dominance controlled the fate of each plant – its metabolism, growth, survival, and reproduction – as well as communities of plant species that thrived or were exterminated on each soil across the desert. Earning an MS degree in soil microbiology was exciting – it opened my eyes and improved my understanding of what I could not see as a teenager without a powerful microscope.

My curiosity continued regarding my early observations of various kinds of animal communities thriving in dust-laden arid regions without any obvious sources of readily available water. With the bulk of each of their individual bodies being composed of water that tends to evaporate daily, where did they find water in desert regions with rain limited to 1 cm per month? Such rainfall seldom provided enough water to accumulate in creek beds that remained dry throughout the year. Not understanding how water infiltrated into and migrated through desert soils nor how communities of micro- and macro-sized animals meandered through and between local hydrological regions of arid to humid environments, I switched my attention to the impact of soils and water on the diversity of animal life by studying soil physics – a combination of soil hydrology, mathematics, and physics conceptually integrated with the sun’s energy at the soil surface. Four years later, I earned the PhD in soil physics after analyzing infiltration and redistribution of water within five different field soils using the first homemade portable neutron soil water content measuring device; I continued my childhood habit of walking across the landscape and collecting historical artifacts from the soil. At that time, being nearly 30, married and a father, I was well on my way to fulfill the fictitious quote of Antonio Usurero.

Having lived in only two regions, the desert floor of Arizona and the corn belt of the USA, during the next 20 years I learned more about life on Earth by walking across and digging holes in soils developed under different climates on all continents

except Antarctica. Although each trip offered an opportunity to learn something new, every trip ended with my books, baggage, and suitcases needing a thorough dusting just as if I were still earning my first dollar in the bookstore.

Only halfway through my career and still learning, my academic life received a once-in-a-lifetime boost as a result of meeting Kutflek during an international scientific meeting. Although he may assert that when we met he belonged to a country in the underdeveloped part of the world of sciences, he was at that time and remains today a contemporary leader for explaining the evolution of plants and animals including *Homo sapiens* and their adaptability to the ever-changing conditions of soils and global climate. Before meeting him, it never occurred to me to seriously include long-term geologic processes associated with soil genesis, paleopedology, climate change, and archeology that had impacted contemporary soils and their living communities. And as I walked across and dug into dusty soil surfaces around the globe, I never thought of myself as being a member of the living community that I sought to understand.

The second half of my career, filled with many visits to outdoor environments examining soil profiles, fossils from the past, and artifacts stemming from prehistoric communities, was absolutely exquisite owing to my unique inspiration from frequent communications with my greatest personal friend, Kutflek. I even returned to Arizona to walk once again down to the bottom of the Grand Canyon, but at that time, to observe different geologically buried soil profiles, to study remnants of deteriorated Native American villages, and to pay more attention to the impact of the Colorado River eroding and cutting through a region that began to uplift 75 million years ago. And of course, each visit ended with the necessity of removing the dust that accumulated on my baggage and me.

As I recall my lifetime activities, I now believe that the statement attributed to Antonio Usurero by Kutflek was absolutely true – not fictitious. I was born in a dusty environment; earned my first dollar in the middle of a dusty room; spent my entire career studying the intricate complexities, movements, and reactions of dust in living and inert entities on the Earth's surface; and today still learn more about soil without focusing on activities to become rich or to make lots of money. I have always and happily followed an exploratory path directed into soils. I have no intentions to stop in the future until, like other living global organisms, my lifeless residues rejoice within the soil and other domains of the Earth's captivating environment.

Soil

The Skin of the Planet Earth

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2015, VII, 239 p. 83 illus., 14 illus. in color., Hardcover

ISBN: 978-94-017-9788-7