

1. “You Must Find Shlomo”

As soon as we arrived yesterday, I knelt and kissed the ground of the Land of Israel, ignoring my daughter Leah’s crack that I had completely flipped out. It was a torrid August morning, the air as dense as porridge, the heat fanned by a searing yellow wind blowing from the east across the Judean Desert. In spite of the weather, I was jubilant over the beginning of a dream come true. By spending my sabbatical with my family in Jerusalem, the focus and fount of my grandfather’s Orthodox religion, I hoped to revitalize my own Jewish roots, which I had allowed to atrophy in my decades-long distress over my mother’s desperate wandering and death.

The Arab cab driver who took us from the airport was an original. “So personally you are welcome to Palestine, family Salaam. Or was it Shalom?” He smoothed his bald pate with his palm. “This is where your most wild fantasies and most black nightmares are waiting to happen. Where shall my camel carry you to?”

I told him the address.

“It is excellent spot near the university without Arabs within sight. I offer the American bargain of fifty shekel, and for another five more, whatever you are needing to exterminate the journey’s dust and stench — mouthwash, rouge for the ladies and young ladies, armpit deodorizers with sweet smells, Sani-Wipes for the hands, face, neck, and feet. Where from do you nice people come?”

“Boston,” my wife Rebecca answered. “Boston, Massa.... ”

“I know your city and love your city. Mrs. Salaam-Shalom, are you believing my two cousins live there? The first drums for the Boston Symphony, the other is hooker.”

Rebecca and I both laughed, actually falling for his shtick. She kept pumping him with questions as we climbed the mountain to Jerusalem in stop-and-go traffic. Our two children, sitting stone-faced on either side of me in the back seat, hadn't said a word since we entered the cab. He slammed on the brakes to avoid a black-clad man chasing a goat across the highway. Was that an explosion? No, just a truck backfiring. Am I surprised that it's a real city with real people?

As two young soldiers sporting submachine guns waved us past a barricade, my wife asked, "What did you call the wind?"

"Hamsin, my darling American," he cackled. "It is bringing you fifty days of bad luck. Hamsin, the heat wind, the hate wind."

"I hate him!" our daughter Leah screamed. "I hate him! Is this what you took me away from my friends and my kitten for?"

"Shhh," I whispered. "We're almost there."

"Great. Then I'll be stuck with the brat. How can I escape from him?"

Micha sprang forward and gave her the finger. She lunged across me and slapped his face. When he screamed, "Fuck you!", she returned the curse.

We're renting the apartment of Nurit and Rafael Goren, doctors spending the year in California. After the cab driver helped us schlep our bags up the eight half-flights of stairs because the elevator was broken, I gave him the fifty shekels without a fuss. Except for his reference to Palestine and his comment about hamsin, I actually started liking the guy. While Rebecca was fumbling with the key in the lock, I pushed my shoulder against the door with all my force as I turned the handle, causing the door to burst open and me to fall in, banging my knee on the hard stone floor.

Two women inside rushed up to me. Yehudit, the thin, bespectacled one, shouted, “He’s bleeding, he’s bleeding. Do something.”

The other one, my age or maybe a bit older, was beautifully proportioned. Wearing a sun dress, armpits unshaven, aqua eyes, she guided me to a chair, washed off my knee with a soft cloth and a gentle touch, then fetched me a glass of orange juice thick with pulp. “He’s going to be fine,” she murmured to Rebecca.

The woman turned to me. “You must be the American professor, David Salem. I’m Ora Caspi, your next door neighbor.”

“It’s very nice to meet you.”

“Nurit told me about you. Drink, drink, and you’ll feel much better. She said you are very excited about this crazy city. But after a week at the most, it will start giving you ulcers too. I love Americans like you, so friendly, open, and free, not like us Israelis who worry over everything. Follow me and I’ll show the apartment to you and the family.”

She led us through. All the rooms were freshly painted, and the windows overflowed with light.

“Nice going, David,” Rebecca said. “It’s a fabulous place.”

“But you have to know the story,” Ora interjected. “Everyone here has a story. Rafael was born in 1939 and spent the first six years of his life in a cellar in Poland — well, more a crawl space underneath the floor. He had a rag permanently stuffed in his mouth to stifle his cries. So he survived the war and got out of Europe and came to Yerushalayim and grew up and got married and chose this bright apartment. Makes sense, doesn’t it?”

Ma and Pa, my grandparents, were lucky to have escaped to America years before the catastrophe. They came in 1922 with my mother Sarah, who was a few months old. But the family they left behind in the shtetl in Poland wasn't so lucky. The Nazis put a bullet into each of their heads, dumped the corpses into a lime pit, and bulldozed them under. Sarah returned to Europe sometime before the war and joined a relative there, but Ma never told me where, when, or who. Barely an adult, Sarah was caught there during the Holocaust, joined the partisans to fight the Nazis, met my father in a DP camp, returned to America in 1946 pregnant, gave birth to me, and died. I'm crying inside again because I don't know anything about her, the beautiful woman frozen at age fifteen in the photo I carry in my wallet. How many times have I pleaded with Ma to reveal more about my mother's life? We had a real scene on the morning of our departure for Jerusalem when I demanded that she talk, insisting that if I knew more, I might be able to find some answers in Israel — answers to what, I wasn't sure, but this is the land where your wildest fantasies, your blackest nightmares are waiting to happen. Ma locked herself in her bedroom, refusing to come to the airport or even to say good-bye.

An hour or so after we arrived at the apartment yesterday, Rebecca looked exhausted. She was chatting with Ora and Yehudit in the kitchen while I was unpacking my books on the living room floor. Micha chugged over to me. He's short and pudgy, his round head topped by a full growth of auburn hair. "We finally decided by tossing a coin," he said.

"Hey pal, come here." As I hugged him, the first time in weeks it seemed, he grinned. "What did you decide?"

“Who gets which room. She thinks she won because she got the bigger one. But mine has a much better view. I can see the university where you’re going to do more math.” He wiped the sweat off his forehead with the back of his hand. “Got to get back and fix it up. I forgot to tell you that I solved....”

A bang on the door startled us as a man, wearing nothing but a tight bathing suit, pectoral muscles and genitals bulging, pushed a huge, multicolored, octagonal painting into the apartment. I felt both intimidated by his body and excited that another Middle Eastern personality was entering my life. Beaming, he nodded his bald head toward each person present while Ora introduced him. “My husband Ron, artist, visionary, and lover extraordinaire.” This is the guy Rafael Goren warned me about.

“Welcome, family of King David Salem, potentate of probability and other profound principalities.” He bowed to the ground in front of me. “Your reputation, sire, precedes you. And this must be your queen with her fiery crown.” When he gestured toward Rebecca and pecked her on the cheek, I was hoping she’d knee him, but she only stared at him blankly.

Striding into the living room, Ron tore from the wall a somber painting, bordered in black, of a woman hiding her face. “This object reminds me of a Rafael Goren cancer tumor. To enlighten this apartment and our esteemed American cousins, for we all are one family, this is my goal.” Ron shoved the black-bordered painting behind the sofa and hung the octagon. After pinching my cheek and whispering that my soul was a care to him, my brain an inspiration, he departed, slapping Yehudit’s bony rear on the way out. Quite a change from the mathematicians I usually hang around with.

By early afternoon, as the unpacking progressed, the sunlight became more intense, exploding sparks of orange and red in Rebecca's hair. When she stood between me and the window, the shadows under her eyes disappeared and she looked almost like the woman she was when we married.

I walked over and kissed her. "The adventure begins."

"So when are we going to explore this wild town?"

As I was about to answer, Ora swayed by. "Nurit told me you do math."

"Yes, it's true."

"Then you must be weird. My first boyfriend was a mathematician. What did he do? Algebra, algebraic...." She looked off into the distance. "Algebraic topology. How could I forget? Functor was his favorite word. Functor. 'I want to functor you on the beach at midnight,' he used to croon. Very very weird."

"Ora, we really want to go out and explore. Another time maybe?"

"You have something to hide. I can feel it. Nurit commented on a book you wrote that gave you trouble. A real sob story. You can trust me, David. I know tsuris because I have lots of my own."

As we walked out the door, Micha grabbed his yellow yo-yo.

"Go, go. See if I care if you throw away the chance of your lifetime to unload your problems onto someone sympathetic. Don't get lost. And Rebecca, you'd better put your money inside your bra, or they'll rob you blind. Those streets and alleys are filled with vultures, child molesters, pimps."

Such bluntness, such intimacy. Is that what keeps this country together? Micha and I ran down the steps holding hands, left foot, right foot, left foot, right foot, in perfect synchronization.

“She was kidding, Dad, wasn’t she?” Leah asked as she caught up.

I nodded my head. “They love to exaggerate here. It’s been going on for thousands of years. It’s in their blood.”

“Thanks for the lecture, but you haven’t helped me at all. You can really feel a twelve and a half year old’s fears.”

“Of course she was kidding. She just likes to talk.” I kissed her. “I promise that it’s going to be fine. Okay?”

She grinned, unconvinced.

We took a bus to the center of town. The narrow sidewalks, steaming in the heat of the hamsin, were blocked by beggars jiggling coins in their cups. Graffiti on the walls: PLO KILL ALL JEWS in English, curlicues in Arabic, DEATH TO THE ARABS in red Hebrew script. It’s a tough town with passionate people. In front of a store crammed with scrap metal, an Arab hacked a tricycle to pieces, slivers of steel glistening on his sweaty olive skin. A scraggly dog snaked its way through the crowd of workers, mothers, tourists, soldiers, children. When Leah reached down to pet it, I pulled her away.

“Sorry, sir Dad,” she said. “I forgot the dog might have germs.”

The mutt pissed onto some rotten vegetables swarming with maggots in the gutter, barely missing her leg, then nonchalantly lapped at them.

“Smart dog,” Micha said. “It makes its own salad dressing.”

Leah cracked up. “Salad dressing? I bet it’s kosher. Hey guys, how come we’re all standing around? Let’s start moving.” She grabbed Micha’s hand and led us away.

Passersby chitchatted in Russian and Spanish while the mutt took a dump and a starving cat snarled. When we reached the corner, a furnace-blast of heat attacked us as the sun’s diamond stylus pierced my skull. This was the incandescent radiance Jerusalem was famous for, the same light that had inspired prophets and madmen for millennia and, more than twenty years ago, had changed my life when at the sweet sixteen birthday party of my wife to be the laser light of her smile pierced the shell encasing my adolescent soul. I knew to trust that light, which had brought me to Rebecca. What would the diamond light of Jerusalem bring me to now? To religion? To a calm acceptance of my math book? To secrets of my mother’s life and death?

In the searing sunlight, sleek tour buses, rickety trucks farting diesel exhaust, Mercedes taxis clogging the streets, honking, tourists and natives jabbering in a Babel of tongues. As we continued on Jaffa Road through the intersection with King George in this maelstrom of heat and pandemonium and white light, it was more than total sensory overload that overcame me. I was struck with the same conviction I always felt when I was on the verge of a major mathematical breakthrough. Something big was about to happen, I was sure.

When I told Rebecca I couldn’t remember the last time I felt so alive, she squeezed my hand and pointed ahead. Leah was trying to give Micha a piggyback, but he was too heavy, and giggling, limbs flailing, they fell into a heap. After two soldiers helped them stand up, we turned into Harav Kook Street.

Harav Kook, Betzalel, Herzl, Ramban, Henrietta Szold, streets in Jerusalem named for immortal figures in Jewish history. I wanted to shout because we were living here, in this city overflowing with significance, about which more has been written than any other place on earth, a vortex of commerce, combat, and communion with gods since before the time of King David and King Solomon. Pregnant women, just like those we were passing on Harav Kook Street right now, have been walking on this spot for thousands of years.

It was all this and more that was inspiring me. It was especially our proximity to holiness. About a mile down Jaffa Road from where we were standing, less than two miles from our apartment, one enters the Old City through the Jaffa Gate. David Street, the narrow thoroughfare heading east, is the boundary between the Armenian Quarter to the right and the Christian Quarter to the left, near the center of which sits the Church of the Holy Sepulcher, built over the last five Stations of the Cross. Here Jesus was crucified, entombed, and resurrected. As you continue east on David Street, the Moslem Quarter on your left, you pass through the Arab market and reach the Street of the Chain, from which a quick right turn leads you into the Jewish Quarter and the monumental plaza in front of the Western Wall, the focus of Jewish worship for two millennia because it's an intact remnant of the Second Temple, which soared above it on the Temple Mount until the Romans torched the Temple and Jerusalem in 70 CE, following the example of the Babylonians, who had torched the First Temple and Jerusalem in 586 BCE, acts of butchery bemoaned in the Book of Lamentations. Today the Temple Mount is crowned by the architectural splendor of the Dome of the Rock, the stones of which, a Moslem sage relates, were taken from the Garden of Eden. That structure was built on the holiest

site on the planet: the Foundation Stone upon which God created the universe, the summit of Mount Moriah where Abraham almost sacrificed Isaac, the site of the Holy of Holies in the First Temple and the Second Temple, the place from which Muhammed ascended to heaven on his winged horse. And now, in the summer of the seventh year of the ninth decade of the twentieth century, I, David Salem, a mathematician on sabbatical in the Department of Statistics at Hebrew University, have brought my family here.

At the end of Harav Kook, we crossed Haneviim, the street of the Biblical Prophets, and continued up Ethiopia, home of the Ethiopian Church and one of the most charming streets I've ever seen. During our short visit to Jerusalem in December almost four years ago, we didn't come this way. Behind the high stone walls I saw huge villas, their white marble stone suntanned with an elegant, light chocolate crust. Along the narrow sidewalk less than a foot wide, a trio of Arab women walking ahead of us slowly swayed beneath trays of bread, pastry, and spices balanced on their heads.

Dodging an old man dragging a rusty cart heaped with oranges, we soon reached the border of the ultra-Orthodox enclave of Me'ah She'arim, a journey back to the religious ghettos of Poland, what Ma must have escaped when she and Pa came to America, infant Sarah in her arms. When I pointed out a sign warning women about modest dress, Rebecca said she didn't care. "It's the rebel in me," she announced proudly. We entered the narrow streets. They were all dust and dirt, nothing growing, choked with people and lined with two-story ramshackle hovels threatening to collapse onto our heads. The walls were pasted over with posters that held the crumbling stones together. Micha, wide-eyed, was taking it all in.

“I definitely don’t like this place,” Leah muttered, arms crossed and hugging her waist so that her small breasts protruded. Our girl is growing up.

We were engulfed by a sea of black as the men of the quarter pushed by, all looking the same. Here we were sweating in the sauna of midsummer Jerusalem while the men were garbed in long black coats, black stockings, and black hats, out of which side curls protruded like narrow cigars. Peeping nervously at their watches and clutching their holy books, they rushed off to fulfill one or more of the 613 commandments. Their sickly yellow complexions repelled me.

Strangely, I was also attracted to them, probably because of my Orthodox upbringing. When I was young, I loved going with Pa to his synagogue every Shabbat morning. The music of the prayers and the cantor cloaked in his royal purple robe and sable hat intoning Shmah Yisrael and Pa’s friend, the crippled man with one blind eye, chanting the Torah in his booming baritone — they swept me into the royal palace of what the rabbi used to call the Congregation of Israel, linked by an unbroken chain of tradition with the Prophets, Joshua, and Moses, who received the Torah at Sinai from God’s own hand.

Brilliant, hypersensitive Ma, having been denied an education in her youth only because she was a woman, looked on my religious activities with contempt. Soon after I became bar mitzvah, she started working on me. David, she harangued, your mother left our home in America because she was Jewish and died because she was Jewish. Tell me more, I insisted. I want the truth and not in riddles. Why did my mother leave? Where did she go? How did she die? Ma never answered me, tormenting me with the thought that I was participating in the religion that, in her words, had murdered my mother. When I

finally abandoned Judaism for mathematics, Pa accepted it as God's will and prayed I would return one day. Maybe that day is now. Just like in Pa's synagogue, everyone in Me'ah She'arim knows his place. No mountaintops here and no poetry, but also no abyss. For these people, the Torah lights the only path.

One of the men in black walked up to us. Instinctively, I stood between him and Leah. "I should like to introduce myself," he said with a thick Yiddish accent. "I am a member of the Modesty Patrol."

"So where's your badge?" Micha said, who was playing with his yo-yo.

The man licked his lips. Cut off from the rest of his face by a dark full beard flecked with bread crumbs, they seemed to have a life of their own. "You must tell these daughters of Israel" — Lips pointed to my wife and daughter without looking at them — "that their naked flesh" — they were wearing shorts and sleeveless blouses like a number of other tourists — "has the possibility to inflame the passions of our young men."

As Rebecca snickered, Leah screamed out, "Are you nuts or something? It's fucking hot. We never have this weather in Boston."

"This is not for arguing," Lips retorted. "Either this vulgar daughter of Israel and her mother may return home to their Boston Diaspora or better, they are invited to return after sleeves cover their forearms and cloth covers their shins. Look around you."

The women of the quarter were walking by as they dragged their broods of children behind them. They all wore wigs and ashen long-sleeved dresses that reached down to the ankles. We'd broken the rules, and we'd been caught. When Lips wagged his finger in the direction from which we had come, we silently retreated. This is a city where you have to know your limits.

Leah snapped at me, “I’m holding you directly responsible for this major embarrassment.”

“Yes, it was my fault, and I’m really sorry.” Back in Boston she had a boyfriend and a kitten, and I took her away.

Back down the hill to Jaffa Road and then up Ben Yehuda, named for the founder of the modern Hebrew language. Inside a sandwich shop a gaunt old man grabbed two pieces of pita bread, smeared the bottoms with dollops of hummus, and stuffed them with falafel and vegetables. He thrust the concoctions in the faces of the children, who munched the sandwiches happily as we walked over to a café and ordered drinks. I was happy to see Leah relax. At the next table lolled a soldier, submachine gun in one hand, girlfriend’s hand in the other. Opposite them a middle-aged man strummed on a guitar while singing a tune about this city, which the sages, the medieval map makers, and the mystics all agreed was the heart of the world, the navel of the universe. The guitarist stuck out his palm, and I plopped down a shekel.

When the woman sitting with the soldier tossed back her head and laughed, I couldn’t stop staring. Though older, she looked just like my mother in the wallet photo I carry around. Oval face, eyes deep set and alive, the right one slightly larger than the left, thick brown hair falling over her shoulders, high cheekbones and bony chin. I fantasized that this woman was my cousin, who would be able to reveal secrets about my mother’s life and death. In this land where your wildest fantasies are just waiting to happen, stranger events have occurred than sitting next to a cousin you never met while sipping iced cappuccino in a café on Ben Yehuda. But before I got up the nerve to speak with her, the others finished their drinks, and we grabbed a taxi that whisked us home.

In mathematics my research specialty is the theory of large deviations, which focuses on the probabilities of rare events; the more unlikely the event, the larger the deviation from the expected behavior or norm. The usual examples I give my students are getting 100 heads in 100 tosses of a coin, a large deviation from the expected behavior of 50 heads, or finding all the phone circuits busy when you want to speak with your mother on Mother's Day. But now my Middle Eastern quest has given me a new example: sitting next to a cousin I never met while sipping iced coffee on Ben Yehuda. And within this large deviation event, there lurks an even larger one. I fantasize that this cousin is the granddaughter of the relative with whom my mother lived in Europe and through this relative knew all the details of my mother's wartime adventure.

Last summer I was on the verge of completing the most ambitious project of my career: a research monograph on large deviations, my grand synthesis of probability theory and statistical physics, a tapestry woven with the golden thread of entropy. I had spent years sifting through the many guises of entropy for its true identity: entropy as a measure of randomness or uncertainty or chaos; entropy as a measure of information — information gained = uncertainty lost; entropy as a measure of the capacity of a system to undergo spontaneous change; entropy as the exponent in the decay rate of large deviation probabilities.

After I had discovered the true entropy, the immutable core, my vision of the concept became so clear that the book almost wrote itself. Chapters on coin tossing and dice, the three levels of large deviations, convexity, the passage to infinite dimensions to unify the theory, thermodynamics, the ideal gas, magnetic systems, phase transitions. When I sent the final manuscript off to the publisher, it was a golden palace soaring

above this planet of dirt and disease and dreck, its foundation of axioms supporting walls of propositions flanked by towers and turrets of elegant theorems expressing eternal truths. I boasted to Rebecca that the book would change our lives.

But my palace collapsed.

Three months later, as I was poring over the galleys, I tried my best to follow the editor's advice to just look for typos. But I couldn't help checking the proof of a main theorem, which exhibited an elegant interplay between convexity and probability. I forgot the reason behind an assertion and called an expert, who after explaining it remarked that the proof seemed to be based on a geometric construction. What if the line to which you refer passes to the other side of the origin?, he asked. I couldn't answer on the spot and spent an hour rethinking it, but I was still not sure. So I called a friend, who asked why I had constructed the proof this way. He dictated a much shorter proof that involved a step I had used elsewhere in the book. Should I revise?, I wondered. Everything was connected to everything else. Then he questioned a related proof, which I had taken from another text without really understanding it. Or maybe I had then but didn't now, going round and round in circles through propositions and definitions I had checked a dozen times already, back to the main theorem I had started off with. I'm still not sure about it.

This was just one day in an ocean of days that almost drowned me with worries as I checked and rechecked each theorem and proof. The book offered no way to escape because I had to expose the essence of every concept because the book, to live forever, had to be perfect. But each question I asked spawned ten more. I was the sorcerer's apprentice, and the sorcerer was mad. My mind couldn't comprehend what the same

mind had assembled in this multi-hundred page monster. How did I survive the ordeal of the galleys? Only with the help of my beloved wife, who kept me focused on the typos.

I, David Salem, am one of the world's best known researchers in large deviations, a subject having applications to statistics, biology, information theory, physics, and numerous other creative outpourings of the human spirit. But I am overwhelmed with fear. Since *Entropy, Large Deviations, and Statistical Mechanics* was published, I haven't opened it, so afraid am I of finding a mistake.

When I announced to Ma that we would be spending my sabbatical in Jerusalem, she screamed, "You must not leave me. I have already lost my daughter and can't bear to lose my grandson."

Holding back tears, Pa was calm. "It is God's will that you go. I give you my blessing."

I love you, Ma. I love you, Pa. You and Rebecca and the kids are the world to me. I must convince you that this trip is right, that discoveries will be made that will change all of our lives, that coming to Jerusalem will help me understand that perfection is unattainable, even in math, the paragon of human reasoning.

The telephone rings. 5:17 a.m., the dawn of our third day in Jerusalem. I'm sitting in the living room, books and clothes everywhere, unable to sleep as the events of the past two days, past two years, past two lifetimes collide in my mind in a maelstrom of incoherence. I will not answer the phone at 5:17 a.m. It rings again. Is this a dream? I pick up the receiver.

"This is Ma. I love you and miss you. I hope the flight was good."

"How are you? Are you okay? Is Pa?"

“How can I be okay? The floodgates of memory have burst open.”

“What do you mean?”

“His name was Shlomo Solowiejczyk.”

“Who are you talking about?”

“I’m talking about Pa’s brother in Vilne, the man who seduced your mother to leave the safety of America to be engulfed by the war and the Nazis and the murder of our six million people, eventually to die herself.”

Her words are a kick in my gut. “Why are you dumping this on me now when you never told me anything before?”

“I know he’s there, and you must find him. He destroyed your mother’s life and must not be allowed to carry his secrets to the grave.”

“I don’t understand. I just don’t understand.”

“David, you must find him. I am very old, and I have suffered very much, and there is much more you must discover before I die.”