

This is a book excerpt of *Jews in Hyperspace* by Clifford A. Pickover. For more information, see www.pickover.com.

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Jews in Hyperspace



Clifford A. Pickover

Jews in Hyperspace

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$$\left(\alpha_0 mc^2 + \sum_{j=1}^3 \alpha_j p_j c \right) \psi(\mathbf{x}, t) = i\hbar \frac{\partial \psi}{\partial t}(\mathbf{x}, t)$$

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No higher-dimensional intelligences were harmed during the writing of this book.

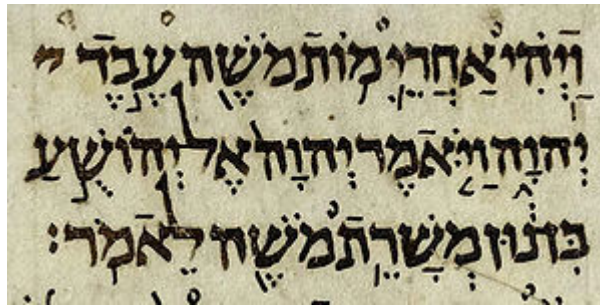
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Works by Clifford A. Pickover

The Alien IQ Test
Archimedes to Hawking
A Beginner's Guide to Immortality
Black Holes: A Traveler's Guide
Calculus and Pizza
Chaos and Fractals
Chaos in Wonderland
Computers, Pattern, Chaos, and Beauty
Computers and the Imagination
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Spiral Symmetry (with Istvan Hargittai)
Strange Brains and Genius
Sushi Never Sleeps
The Stars of Heaven
Surfing through Hyperspace
Time: A Traveler's Guide
Visions of the Future
Visualizing Biological Information
Wonders of Numbers
The Zen of Magic Squares, Circles, and Stars

“Every blade of grass has its angel
that bends over it and whispers, ‘grow, grow.’”
—Talmudic commentary, *Midrash Rabbah, Bereishis* 10:6



“Eternity—this refers to Jerusalem.”
—*Talmud: Berachot* 58a

“The question is what normal life means in Jerusalem, the world’s most coveted and contested city and Israel’s poorest and most pious one. Jews, Muslims and Christians have all held sway here at different times, and all have formed visceral, often exclusionist links to the place. Melville described Jerusalem as a city of “stony hills and stony hearts.”

— Ethan Bronner, *The New York Times*

Contents

- 1 Jerusalem
 - 2 Light
 - 3 Hinnom Sea
 - 4 Burial
 - 5 Sapphira Schächter
 - 6 Jewish Girls are Not Easy
 - 7 Rabbi Mordecai Akiva
 - 8 Growth
 - 9 Crack
 - 10 Bug
 - 11 Stuffed Kishka
 - 12 By the Rivers of Babylon
 - 13 Nephilim
 - 14 We are All Ghosts
 - 15 Tower of Babel
 - 16 Golem Stalagmites
 - 17 Western Wall Rising
 - 18 Are Ichthyosaurs Kosher?
 - 19 New Age: 1,010,011,010
 - 20 How this Book Came to Be Written
- About the Author

Jerusalem

“Whoever did not see Jerusalem in its days of glory, never saw a beautiful city in their life.” —Talmud: Succah 51b

Orthodox Jews were disappearing from Jerusalem. One moment they were praying at the Western Wall, and in the blink of an eye, they seemed to evaporate, occasionally leaving behind only their fur hats—their *shtreimels*—that sat like small, soft flying saucers, perched on stone pavement in the dwindling light.

These disappearances were never caught on camera—most Israelis believed them to be mere fairy tales, told to children at night to coax them to be good and obey the Torah laws. But Yitzhak knew the truth. He knew where some of these Jews had gone.

Following three bearded men down a cobblestone street fetid with donkey manure, squeezing through ancient alleyways, Yitzhak had learned of their collaborations with physicists from the Hebrew University of Jerusalem. Back then, there were just a few dozen of these passionate scientist Jews—perhaps heretics in their own community—feverish to build the Third Temple in Jerusalem.

Since the destruction of the Second Temple in 70 CE, some Jews had prayed to Yahweh to help them build a Third Temple. In fact, the Biblical prophets called for its construction, to be fulfilled in the Messianic Era. Today, the Jews’ challenge were the two grand Islamic structures—Al Aqsa Mosque and the Dome of the Rock—built on top of the Temple Mount in Jerusalem.

The construction project was madness of the worst kind. How could anyone have dreamed of building the Third Temple at the original location without creating religious war? The Dome of the Rock occupied the space where the Temple once stood—or at least some scholars said so. The State of Israel preserved access to these buildings as part of international obligations.

Yitzhak wondered for months how these select Jews planned to rebuild the ancient Temple without disturbing Islam’s holy places. But these Jews were especially determined—and they had physics on their side. They had found a way to access a fourth spatial dimension and thus build the Third Temple invisibly “above” the Temple Mount and “above” the Mosque in the direction of the fourth dimension.

This was hard to visualize, Yitzhak knew. But imagine a two-dimensional world in which its inhabitants are confined to a plane. They can only see objects in their planar world and move within the plane. An object above the plane, in the third dimension, is invisible to the inhabitants of this world—although it might cast a shadow onto the plane.

Yitzhak looked at the ceiling of his room. From the corner of the room radiated three lines, each of which was the meeting place of a pair of walls. Each line was perpendicular to the other two lines. Yitzhak tried to imagine a fourth line that was perpendicular to the

three lines. He could not, but this was what mathematics and physics required in setting up a mental construct involving four-dimensional space.

What does it mean for objects to exist in a fourth dimension? The philosopher Immanuel Kant considered some of the spiritual aspects of a fourth dimension: “A science of all these possible kinds of space would undoubtedly be the highest enterprise that a finite understanding could undertake in the field of geometry.... If it is possible that there could be regions with other dimensions, it is very likely that a God had somewhere brought them into being. Such higher spaces would not belong to our world, but form separate worlds.”



Maybe it was a perfect plan. The Third Temple was being built. Here. Now. Above the Temple Mount in an invisible, higher dimension. A few Jews could somehow access this space. How could that do any harm? How could that cause anger?

But Yitzhak did have his own nightmares. And, occasionally, people in Jerusalem were seeing shadows.... Hearing whispers....

Light

“Ten measures of beauty descended to the world; nine were taken by Jerusalem.”
—Talmud: *Kiddushin 49b*

“What the hell was that?” Yitzhak said.

“What?”

“For God’s sake,” Yitzhak said. “Look up!” He felt a lump in his throat. “There. A flash of light. Like a large bird on fire.”

Yitzhak gazed at the sky and then back at Marisha. The gathering clouds and mists from the bay turned her eyes into pools of gray fog.

“Maybe it was a trick of the light,” Yitzhak said. “A reflection from an airplane.”

Marisha shook her head and grabbed his arm. “No way.” Her eyes still scanned the sky, and she seemed short of breath. “It was close.” She gasped and bit her fingernail. She was missing half of the index finger on her deformed right hand.

Yitzhak felt Marisha’s remaining fingernails digging into his arm, and he tried to relax. “Let’s keep walking.”

She nodded, her eyes continually darting along the sky.

Yitzhak looked down at the Jerusalem sand full of shells, some intact, others cracked and corroded by time. Many shells were skeletons of their former beauty as if they had gone through indescribable tortures. Beyond the shells were bits of smooth glass, specimens of technological pride amidst bits of mandibles, claws, and seaweed.

He took Marisha’s hand, and she smiled uncertainly.

The autumn moon slowly rose on the horizon. Marisha stopped and leaned against an ancient olive tree that emitted strange rustling sounds from above.

“What is that sound?” she said.

“Nothing. Let’s go home.” Yitzhak imagined that the sounds came from ghostlike bats that were always watching, even though they could barely see through their tiny eyes.

Hinnom Sea

“One who stands [in prayer] in Eretz Yisrael [the land of Israel] should direct his heart towards Jerusalem; if he was standing in Jerusalem, he should direct his heart towards the holy Temple.”

—Talmud: *Berachot 27a*

Forget Haifa, Yitzhak thought. Forget Tel Aviv. Head south. Ignore the cities, the urban sprawl, the McDonalds, and the malls. Turn away from the thousand tons of Yavne manure and million gallons of Rehovot sewage heading toward the Mediterranean each day.

Yitzhak had always told his friends to close their eyes to the madness and fight their way south past the deserts and hills, past the fig groves and rookeries of shrikes and buntings. Come to the new, artificial seas surrounding Jerusalem—a bit of salt marsh, clumps of olive trees, a fine forest of cedars and balsam firs. When the pumps were in full gear like today, the sea whirled so fast that the seaweed and hermit crabs bounced along like dreidels on a festive Hanukkah table. The rising water whispered along the sand, and small snails moved again as the mother of life enveloped their drying bodies in blessed wetness.

Yitzhak dug his foot into the sand, and warm thoughts echoed in his mind. “This is my home,” he whispered. *This is my sanctuary, my coastal cathedral.*

The illusion of a natural seacoast, so far from the Mediterranean Sea, was nearly perfect. Jerusalem was situated on the southern spur of a plateau in the Judean Mountains. After the Great War of 2020, the Jews who remained had decided to bring more beauty to their ancient city by actually filling the once-dry valleys and riverbeds with water from the Mediterranean. It was a monumentally huge project—but today the Kidron, Hinnom, and Tyropoeon Valleys intersected in an area just south of the Old City of Jerusalem and were filled with water and with life.

“Your dad would have loved this,” Marisha said, pointing to Yitzhak’s cottage and small piece of land.

Yitzhak looked toward the faraway pines and saw meandering dunes and craggy shorelines. Little had changed in this part of Jerusalem since his father had arrived on the island years before. His father had been a fisherman. His grandfather once made a living trapping lobsters and crabs so prized by the less observant Jews.

“Dad was like me in many ways, except I left for school. I always knew I would come back. He didn’t—”

Marisha must have sensed Yitzhak’s hesitance to talk about his father’s death. She squeezed his hand. A welcome distraction. Yitzhak looked from Marisha to the water’s edge and beyond. This part of the Jerusalem was a tranquil place, teeming with life, mostly unspoiled despite an increase in local traffic farther to the north. It was hard to imagine that his portion of the artificial island was just a mile from Jerusalem’s Temple Mount.

“C’mon.” Marisha said. Yitzhak nodded, sniffing the autumn air, smelling the wonderful scents of pine and horsemint. He held her hand as they walked through the sand dunes. They were both barefoot, and the cool, wet sand tickled his toes.

Marisha tossed a Frisbee to Zahava, who left wet paw prints in the sand as she chased after the toy. Zahava was a golden retriever. Yitzhak smiled, thinking that Zahava was such an appropriate name for this fine dog—in Hebrew, zahava meant *golden*. He imagined Zahava curled up with him and Marisha by the fireplace on the cold winter nights.

Zahava stopped to sniff at the sand. To a dog, the shoreline must have seemed infinite, always with something new to explore—a strange scent, a running crab, the percolating sound the water made as it seeped into the sand.

Yitzhak watched an artificial wave cover Marisha’s feet.

Just for an instant, the water made him shiver. His pulse quickened. The shadows in the waves seemed unnatural. He peered into the low colorless waves, his image many times reflected as if he stood on the periphery of some gigantic crystal, alone in a field of darkness.

She ran after Zahava. “Bring it back,” she called, but Zahava ignored her and trotted off down the beach with the Frisbee in her mouth.

He studied Marisha, marveling at her long shiny hair. He rarely even noticed that half of her index finger was gone—the result of a terrorist attack when she was a toddler during the Great War.

She picked a snail shell from the sand. “How about I call my next book *Shell of Israel*? It’ll be about a young boy who collects seashells until his house is so full of shells that his family can barely move.”

Yitzhak smiled. “Sure to be a winner.”

“You certain?” Marisha said, tossing the shell into the water.

He shrugged. “You know better than me. You can’t count on advice for children’s books from a guy who studied physics and military history at Hebrew University.”

“You *were* bizarre,” she said, smiling.

He tickled her back. “You mean I’m more normal now?”

Since school, Yitzhak had returned to his roots, occasionally making attempts at living off the land, catching or growing a small portion of his own food. To make a little money, he sold some of his catches. His photographs of the new seashore were often welcome at the *National Geographic*, *Jerusalem Post*, and a variety of local publications.

Marisha ran after Zahava and the Frisbee. “Zahava, come back here!” Marisha threw up her hands in mock defeat.

Zahava barked playfully, splashing at the water’s edge. Occasionally a wave startled her, and she’d back away.

Marisha walked back to Yitzhak. “This dog is six years old. You’d think she’d slow down by now.”

“Not Zahava!”

Yitzhak looked up as dark birds rode the winds. They flew above his cottage, where he noticed that dozens of ospreys were perched along the gables. He liked the ospreys. The vultures, however, gave him the creeps. Sometimes they settled on the dead tree in his back yard. At night, they reminded him of dark vampires.

He stopped walking and watched the swollen sun collapse into a notch between the hills. Beautiful! The autumn sun burnt the waves to a golden brown, and the torpid yellow-tinted clouds hung over the waves like bronze reflections. Soon it would be dark, and they would start to head back home.

Yitzhak ran after Marisha. “Let’s go into Bet Shemesh tomorrow.” He smiled, thinking about this haunt of cruising yachtsmen, a few aging hippies, and a dozen fishermen. Yitzhak enjoyed the region’s confusing mix of ultra-orthodox Jews, quiet, hardworking fishermen, and affluent families living farther to the north.

Yitzhak started building a sandcastle that Zahava promptly destroyed. He looked up at Marisha. “When we’re in Bet Shemesh, let’s hit the new falafel sushi joint.”

“Yuck,” Marisha said, stroking Zahava’s thick coat. “Not for me.”

A few recent inhabitants of Jerusalem were from Japan. They searched for potentially lucrative vacation spots and exotic foods. The new diversity gave the island its appeal, and it was sufficiently large to contain a few farms, an incredible library, and some new Yemeni restaurants.

Marisha shook her head again. “Anything but gefilte fish sushi and chopped liver,” she said, picking up the Frisbee from the sand seconds before a dark wave would have swept it to sea. She wore a tank top, and as she bent down and twisted her hips, Yitzhak stared at her exposed back and belly. Even in the dim light, he could make out her tiny seahorse tattoo an inch below her belly button.

Marisha put her hands on her hips. “What are you staring at? Sailor, what do you want?”

Yitzhak smiled. “To play with your seahorse, of course.”

From somewhere in the sky came a strange rushing sound, like the sound of steam escaping from a teakettle. Thin needles jabbed through the clouds. Perhaps they were lightning bolts, but he imagined a vast creature, racing to mend the delicate fabric of reality. Small drops of rain momentarily tattooed cryptic patterns in the sand.

Zahava barked, and Marisha ran after her. Yitzhak decided to limber up his body by doing a few Pencak-Silat exercises. He had been practicing this graceful, Indonesian art for several years and found it strangely invigorating and relaxing at the same time.

“C’mon, Zahava,” Marisha said, waving the Frisbee.

Zahava sniffed at some seaweed and a dead crab.

A wave washed by, wetting Zahava’s feet, but she refused to move. Her tail stood stiffly in the wet air. Yitzhak stopped in mid-stretch. What the hell was she sniffing at so intensely?

“Zahava, what is it?” he said.

He jogged over to Zahava and was about to pull Zahava away from the smelly thing on the beach when he heard a screeching from the sky. He smelled a sudden burning odor. Seconds later something flashed down and tore a gaping hole in Zahava’s back. A rending thunderclap was followed by a sharp crunching sound—the sound of breaking bones.

Yitzhak was tossed back by the blast of the violet projectile but tried to keep his eyes focused on the dog.

Zahava was down, her steaming guts strewn on the sand along with blackened fragments of kelp. The projectile had torn through her body as if it were soft clay. Zahava—or the main part of Zahava—had disappeared in a great churning of crimson,

while fragments of bone and fur had flown upward into the fading sunlight like fireworks of flesh.

Marisha was on her knees—mouth open but silent.

Yitzhak could barely breathe. His ears rang. His consciousness momentarily shut down as if an invisible hand had reached over to him and tightened a valve.

Burial

“There are three gates to Gehinam [purgatory]—one of them is in Jerusalem.”
—Talmud: *Eruvin 19a*

“My God!” Marisha screamed. She ran toward the dog, saw its bloody remains, and vomited on the white sand.

Yitzhak stood and shook his head. The ringing in his ears gradually disappeared. He approached the dog more cautiously than Marisha and saw body fragments near the pit, charred and distorted almost beyond recognition. “Damn,” he gasped, but he couldn’t really hear his own voice. It felt as if someone else were screaming inside his head. He saw the bloodstains on the sand, the blood coming out of the dog’s ears, saliva in thick streams, a broken tooth embedded in the sand like a tiny Egyptian obelisk.

Then he blinked and breathed for what seemed the first time in minutes. His heart pounded. “Marisha, don’t go too close.” *Zahava. Oh, poor Zahava!*

The impact of the projectile had made an enormous hole. Sand and seashells had been flung violently in every direction. A thin, blue smoke rose against the night sky. Here and there were a few burning embers, but the moist sand quickly extinguished them, as if they were lights switching off.

Marisha knelt on the sand, her hands shaking. “This is insane! What the hell did—did this?”

Yitzhak shook his head. “A rocket from Gaza City?” His voice was a choked whisper. “Or maybe something that fell from a plane?” One of his first thoughts was of terrorism.

He looked up and saw a line of flame high in the atmosphere. Dozens of people must have seen it and perhaps even taken it for an ordinary falling star. Whatever it was, it left a scarlet streak behind it.

“A comet?” he said. The main tail in the sky was curved, with two shorter, straight ones protruding from the sides. Could this possibly be from the lights in the sky they’d seen earlier?

Yitzhak held Marisha in his arms. “You okay?” he said.

Tears welled in Marisha’s dark green eyes, and Yitzhak held her tighter. “I know,” he whispered. “I loved her, too.”

Marisha took a great deep breath. “What do we do? Call the police?” Her tears were like clear crystals on her face.

“Damn. Not much they can do now. It must have been a meteor. Nothing exploded. - You go back inside. I’ll get a shovel and take care of this.”

“You’re just going to bury her on the beach?”

“Have any better ideas?”

Marisha pressed her lips together.

“Look,” Yitzhak said. “The artificial tide will come in soon. I know I’m not thinking clearly. But by the time the police would have arrived, there wouldn’t be anything to see.”

Marisha nodded, and he took her hand. “C’mon,” he said.

They walked back to their small house, only five hundred feet from the water’s edge. Yitzhak did all he could to distract himself from the grotesque beach scene. He thought about Marisha, their home, simple things. He took deep breaths, but even simple thoughts turned ominous. He knew that the gnawing, relentless erosion of the sea would eventually threaten their home. Every year several feet of beach washed away in some places. One of the marshes was already swept away, and little grass grew to protect the dunes from being swallowed by the water and winds.

“I want to stay with you,” Marisha said, tugging his hand.

Yitzhak shook his head. “I’ll be quick. I don’t think you want to see... Zahava.”

She slowly nodded and let herself inside through the back door as Yitzhak went around the front to the garage. He nearly tripped over a hoe that he’d left in the nearby garden.

Think calm thoughts, he told himself. *Calm down.*

He unclenched his fists and looked at the front yard, which still had most of the topsoil he’d had hauled from town. He actually managed to grow some vegetables. Because his diet was supplemented by catches of white perch, oysters, crabs, and flounder, he only had to do food shopping every month or so. But now Yitzhak’s thoughts turned to more sinister things as he opened the garage and peered into its dark, musty interior.

There were scurrying sounds in the garage. Inevitably, some crab or snail or some other crawling thing would find its way in. The dirt floor of the garage gave the creatures ample opportunity to explore. He rarely parked his car in the garage because it was too cluttered with tools and fishing paraphernalia.

“There you are,” he said to a shovel leaning against the wall. It was one of those sturdy shovels he’d purchased at a flea market—good for digging through moist sand.

God almighty, this wasn’t something he looked forward to. His hands still shook. The sight of Zahava’s gaping wounds had revolted him. Never mind that he loved the dog. That emotion he would deal with later over the coming days. But it was the utter horror of the scene, a dog nearly cut in two, that scared the crap out of him. The curve of her white ribs made him think of all the horror movies he had watched as a kid. The ribcage reminded him of a prison and of torture.

He dragged himself back to the beach and saw dark movements over a rise.

“What the hell?”

Dozens of birds flocked around Zahava’s corpse. One huge gull was already perched on her shoulder. A white tern pulled the dog’s tail. Others pecked repeatedly with sharp bills. As Yitzhak approached, the birds gazed at him with menacing eyes, as if Yitzhak were intruding and they were accustomed to asserting their territory through swift movements of beak and claw. Their cries were harsh, their wings spread like prayer shawls on thin, rigid bones.

Yitzhak stared past them at the dog, so still, so lifeless.

The dead were defenseless, and the violation of the dog had only begun. The birds wouldn’t have stopped until every inch of the dog was chewed on and turned inside out.

All that would be left would be the hair and larger bones like the skull, but these, too, would inevitably be washed out to sea, the skull making a fine home for some crab or barnacle until the skull itself turned to dust from the relentless pounding of the surf.

Yitzhak ran at the birds, swinging his shovel like a madman. “Get away!”

The birds, not as fearless as they seemed, took off toward the sea, skimming the rocking waves. One of the terns rose high, pulled in its wings, and plummeted beak-first into the sea, probably in search of more food.

As Yitzhak looked at Zahava’s remains, he felt his stomach being lifted, as if somebody had a fishhook in his esophagus and was pulling. He could feel the pain as his eyes traveled along Zahava’s tattered ribcage to her dead eyes. For a moment, he could feel the eyes like hot pokers pressing into his flesh, as though their gaze had physical reality. He wanted to vomit and scream, but he forced himself to proceed with the burial task. The easiest thing was to get this over with, to take deep breaths of the sea air, and to listen to the sea talking quietly to itself among the rocks.

He plunged the shovel into the sand about six feet from the body. After ten minutes he had formed a sufficiently deep hole to hold Zahava’s tattered corpse. But he couldn’t bring himself to touch the body. Little by little, he gingerly pushed the corpse into the hole, using the head of the shovel. It landed with a dull thud.

He filled in the hole, his mind racing. *Good-bye, Zahava. You were a good dog.*

When he was done, he leaned on the shovel and kneaded his large shoulders. The muscles of his arms were tense but ready for more digging if required. He shivered in the breeze; his tee shirt was damp.

A small mound of sand above Zahava’s grave was all that remained. He supposed that by tomorrow even that would be gone, as the tide came in like a gentle acid and once again receded. Now the sand was blood-soaked, and a fiddler crab danced on the redness like a hungry pirate doing the tarantella.

The deep depression in the nearby sand reminded Yitzhak that he had no idea what had fallen from the sky. The hole was about the size of a basketball and located where Zahava’s body had been struck.

What *was* in that hole? He gazed into the hole, but it was too dark to see anything. Maybe the rumors were true, and some of the ultra-orthodox Jews had built the Third Temple in the fourth spatial dimension, using strange technologies that they had no desire to share. Some called these Jews “hyper-Jews” because of their access to higher dimensions, and others claimed that these hyper-Jews had made a deal with some non-human race for technology that would allow them to build into the higher dimension. It sounded insane. But what if the hidden projectile in the sandy hole had fallen from some higher-dimensional construction site and landed here in Yitzhak’s backyard?

“Everything okay?” Marisha called from the cottage.

Yitzhak looked at her figure silhouetted in the bright light from the kitchen. In that backlight, she looked like an angel.

“Okay,” he said. “Almost finished.”

“Every time I come out to help you, the phone rings. Old lady Abramowicz called and insisted she saw something fall from the sky. She—”

“Abramowicz?”

“You remember her. The lady with the pet octopus. She said something fell and hit our roof. I told her our roof is just fine.”

Yitzhak nodded. “Good,” he said. “Stay inside. I’ve already buried Zahava. I’ll be with you in a second.”

Yitzhak tossed the shovel onto the ground and went back to the garage for a flashlight. He had to see what had killed Zahava. Was it a piece of an airplane door?

By the time he returned to the depression, it had deepened to several feet. Perhaps the sand beneath the object had shifted or even melted under the heat of impact.

He stepped a little closer and pointed the flashlight into the hole. The bulb flickered for a second. “Don’t go out now!” he said, shaking the flashlight. The light stayed on.

Yitzhak gazed into the hole but could not clearly see the bottom. He *could* see that fiddler crabs had already ambled boldly into the pit. Spirals of scarlet, thin as spider webs, drifted along the sides. He didn’t dare stick his hand into the pit, but he felt a passionate longing to peer into it. With some trepidation, he walked around the hole, seeking some vantage point, continually looking at sandy mounds that hid the inside of the hole from view.

“What?” he whispered. Did it glow for an instant?

“Yitzhak,” Marisha called. “Aren’t you coming in? The phone keeps ringing. This time it was Mike Mendelssohn from Emek Refaim Street. The fisherman with the glass eye. He wants to know if we heard an explosion. I told him it was thunder.”

“Just ignore the phone.” Yitzhak could see her through the cottage’s large, open window. She was holding a wineglass; she had probably gone to the refrigerator and poured herself a glass of Yarden. Now he could see that she was slumped in a chair, her face saddened by the shock of Zahava’s death and perhaps by how close they had both come to dying.

Despite the horror of the last few minutes, Yitzhak retained his awe at Marisha’s beauty. Her eyes were cast down as she listened to Mazi Cohen’s “Ze Hakol Bishvilech”—“It’s All for You”—on their digital cube. Marisha had been a freak for Hebrew love songs for years, and he could tell from the sway of her body that the music has just started.

“Yitzhak?” she said.

“I’m coming—” he paused, knowing that Marisha would think he was nuts for exploring further. She’d tell him to wait until morning. But he couldn’t wait until morning. By then the sea would have filled in the hole with water and sand. “I’m just finishing up here,” he called. “Just checking the hole. It won’t take long.”

He saw a sudden flash of light. Steam came out of the pit in two distinct puffs that rose into the cool, moist sea-air. A fishy smell filled the air, accompanied by a hissing sound.

Yitzhak widened the hole rather than plunging his shovel directly into it, just in case the remains of the object were fragile. Whatever it was, he didn’t want to crush it with the shovel.

Many minutes passed, and he had still not found the object that had killed Zahava. He was at least four feet down and had to extend the width of the hole even more so that he could jump in and continue digging.

Yitzhak heard the rushing of waves, and he gazed nervously at the sea, which was lapping closer to the hole as the tide came in. He’d have to work fast if he didn’t want all his effort to go to waste. Even now, the walls of the hole were becoming wet, a trickle

here, a crumbling of sand there. Sometimes liquid oozed in as if he stood in the maw of an animal.

“What the hell are you doing?” Marisha said, her hands on her hips.

Yitzhak jumped. “You scared me!”

“It’s late. Do we really need to find out what this is?”

Yitzhak gestured to the waves. “I don’t have much more time.”

She shook her head. “Well, then let me help.”

“There’s another shovel in the garage.”

In minutes, Marisha returned and leapt into the hole with Yitzhak. At another time, Yitzhak would have found the setting almost erotic, their hot, sweaty bodies so close together that they continually bumped against each other and the wet, cold walls of the hole—as the pounding surf laughed in the background. But he didn’t have such feelings now. He was too tired, too emotionally shot.

“Let’s hurry,” he said. The waves were only a few feet away now.

He plunged his shovel into the sand with renewed vigor, not caring any more if he scraped the object they were searching for. “Dig faster!”

It was harder to remove the sand from the hole because the hole was so deep, the surface about level with their necks.

He looked up. “Watch out!”

One big wave poured into the hole, soaking them up to their calves. God, the water was ice cold.

Marisha wiped the sweat from her forehead. “Give it up.”

“Not yet!”

She tossed her shovel out of the hole. “Forget it. We’ve got to get out of here.”

He stooped. “Wait! I think I see it.”

Yitzhak bent down further and saw a protruding part of the object, which had the appearance of a dome, covered with a thick, scaly, ochre-colored encrustation. Yitzhak stretched out his hand, surprised at the mass’s size but even more astonished by the ovoid form, because most meteorites were irregularly shaped.

He put his hand near it. “Hot,” he said. In fact, the object was still so hot from its flight through the air that Yitzhak dared not touch it.

The object gurgled and then emitted a series of sibilants: Shh. Shh. Shh.

He ascribed these scratching noises from within the object to the unequal cooling of its surface. Could such a heavy thing be hollow?

Marisha pulled a lock of hair away from her face. “Do you think we should pull it out?”

He nodded. “We didn’t dig this hard for nothing.”

Yitzhak stood. The raucous seagulls were now preternaturally quiet. Without further hesitation, he plunged his shovel into the sand around the object. He continued digging with his hands, and in a few minutes, the object was cool enough for him to touch. A little extra digging revealed an egg-shaped object about a foot long.

He took a deep breath, “What the hell is this thing? What—”

For a second, the egg appeared to sit in a capsule of translucent white light as bright as fog on an autumn morning. He shook his head—the light disappeared, perhaps the partial product of his overworked imagination. It was hard to judge the color in the dim light.

“Here comes another,” Marisha yelled as a wave splashed into the hole, surrounding the egg and washing away the ochre encrustation that had covered it. Some small pieces flaked silently into the hole, but a large portion suddenly came off and fell onto the wet sand with a sucking noise that brought Yitzhak’s heart into his throat.

Yitzhak stared at the egg some more, almost paralyzed. “I’m a little nervous about touching it,” he said, standing still in the pit, stuck in a quicksand of curiosity.

“Yitzhak?” Marisha said.

He bent down. “Let’s get it out of here.”

“Let me help.”

They both bent down, thrust their hands into the sand and water, and carefully lifted the egg out of the hole.

“Holy hell,” Marisha said, gasping. “This thing is heavy.”

He nodded. “It must be at least twenty pounds.”

They heaved the egg onto the sand about a foot from the hole.

Yitzhak climbed out of the hole, and Marisha followed.

“Hey!” she screamed as the ground beneath her feet crumbled, and she avoided falling back into the dark pit only by a few inches. A large wave splashed into the hole.

Yitzhak pulled her hand. She regained her balance, but then stumbled again when the loose sand shifted beneath her feet.

“Damn!” she yelled, her foot slipping.

Yitzhak reached out to steady her, but they both lost their balance. Hand in hand, they fell into the hole, slid along the wet, sandy wall, and finally landed in a god-awful pile of decaying kelp that the water must have washed in. They hit the muck feet first and quickly sank in up to their knees.

Yitzhak quickly jumped. “Something’s moving against my feet!” Was something alive down there? Or was it just sand shifting beneath his weight?

“Arrgh,” Yitzhak cried and squeezed Marisha. “You okay?”

“Yeah,” she said, tears forming in the corners of her eyes. A piece of seaweed on her hair slid down her forehead like some horrible slug. It actually made a slurping sound. If Yitzhak’s raw emotions weren’t about to crash down upon him, he’d almost find it funny and laugh.

Marisha swiped at the invading seaweed. “Let’s get the hell out of here,” she said, trying to discipline her voice, to maintain complete control. She scrambled part way up the side of the hole.

Again Yitzhak thought he felt something move under his feet. “Oh, my God!” He was sinking deeper into the hole up to his waist. Slimy and squishy matter pressed all around him.

Saltwater washed into his mouth. The smell of sea life—crabs, mussels, and seaweed—was everywhere. “Jesus!”

“Take my hand.” Marisha had somehow managed to get out of the hole and was anchoring herself by holding with one hand on to the heavy egg. “I’ll pull.”

☆☆☆

After a few minutes, they rested on the beach next to the hole. Their breathing slowed to normal.

Marisha tapped on the egg. “This is incredible. What do you think it is?”

“Not sure. It’s obviously not a bird’s egg. Let’s bring it into the house and take a closer look.”

She raised a single finger. “You’re not putting that—that thing in our house.”

“It will be fine in the garage.”

Marisha hesitated. “You think it’s safe?”

Yitzhak shrugged. The egg was quiet, emitted no light, and was cool to the touch. “I don’t think it can do much damage now.”

Together they carried the curious object into the garage and placed it on Yitzhak’s heavy worktable, a two-inch slab of pine supported by thick wood legs. He found a light bulb in a cabinet, replaced the dead bulb in the overhead fixture, and placed some heavy wrenches around the base of the egg to make sure it wouldn’t roll off the table.

The garage was a large room with walls covered with antique floral and beige wallpaper. On one wall was a comical poster of a frog jumping from one lily pad to another with the caption, EVERY TIME YOU MAKE ENDS MEET, SOMEONE MOVES THE ENDS. The shelves contained an assortment of tools and Manischewitz wine bottles. In a corner of the garage were miles of floss given to him by Dr. Bloomberg, an eccentric dentist who would accept fresh fish as payment for dental services.

Marisha had sometimes teased him about the garage. “Whoever heard of a garage with wallpaper and curtains?” she had asked. Yitzhak explained that because he spent so much time tinkering in the garage, he preferred the cozy feeling the paper and curtains gave to the room.

Now Yitzhak listened to the egg, rapped on it with a stick, and got no response. He ran his fingers along the egg’s rough surface. “Doesn’t look like any egg I’ve seen.”

Marisha took the stick from Yitzhak. “Of course it doesn’t. Any normal egg wouldn’t come flying out of the sky and weigh this much.”

Yitzhak’s gaze traveled from one end of the egg to the other. Its color ranged from a pale blue to deep indigo, and changed slightly with the direction of view. Little grainy bumps and cavities seemed to be responsible for its star-like pattern of sparkles.

Marisha carefully touched the egg. “Do you think it will hatch?”

“Now you’re acting like it really *is* an egg.” He placed the palm of his hand on the rough surface. It felt a little like coarse cement. “Nothing seems to be moving inside.”

Yitzhak looked at Marisha, whose eyes were closed. “What’s wrong?” he said.

She winced. “Zahava... I keep thinking about her.” She reached for Yitzhak’s embrace.

“I know. I’m trying to block it from my mind.”

Marisha nodded and yawned. “We both are. Let’s leave this thing for tomorrow. I’m dead tired.”

Yitzhak agreed reluctantly. “Me too.” His adrenaline burst had faded. His mental circuits were so overloaded that nearly all he could think of was sleep.



That night, in bed, Yitzhak heard slurping sounds coming from the garage. He realized they were probably just the sounds of mud snails, sucking on the outside walls of the garage. He really should do something about that. Yitzhak found it particularly disturbing when they gradually traveled from the garage and into the kitchen cabinets. Inevitably, a few would end up in their bed. Perhaps some ecologically safe poison would reduce their numbers around the home. The snails bred quickly and were common on the

rocky shores of the island. They also filled shallow muddy bottoms along the banks of the tidal estuaries and among the roots of marsh grass where the water was only moderately salty.

Yitzhak found it hard to still his racing thoughts. Occasionally he heard the distant sound of small boats on the new Kidron Sea with its tight cluster of islands and three tiny towns. The wind increased, and he drew the covers around himself more tightly. When winds reached more than forty knots, people stayed in their homes and did not venture onto the water, because the sea's shallow waters were easily churned into dangerous waves.

He glanced at Marisha's face, trying to make this peaceful moment last forever. He moved closer to her. Shadows sprang up about him as if they were living creatures. The only illumination came from the green and red light emitted by the bioluminescent fungi coating the dead tree in his backyard.

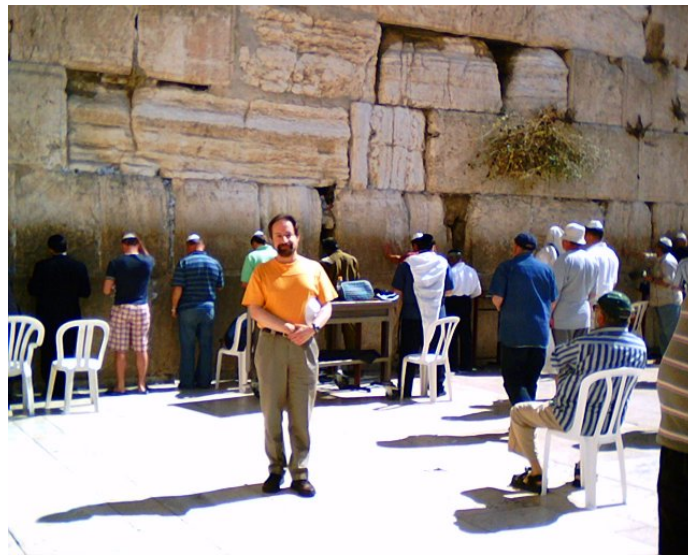
His eyes drifted to the windowsill on which fungal hyphae blinked cyan and blue. Foliose lichens were everywhere—on the trees, the rocks, even a bit on the bedroom windowpane. The colors reminded him of Christmas.

Thank you for reading this excerpt of *Jews in Hyperspace* by Clifford A. Pickover. For more information on the book, see www.pickover.com.

Come, my friends,
‘Tis not too late to seek a newer world.
Push off, and sitting well in order smite
The sounding furrows; for my purpose holds
To sail beyond the sunset, and the baths
Of all the western stars, until I die.
— Alfred Tennyson (1809–1892), “Ulysses”

How this Book Came to Be Written

Several years ago, I wrote a book about a mysterious egg falling from the sky, but was never satisfied that I had hit upon the proper setting and motivation. However, after my recent trip to Israel in which I explored the Old City of Jerusalem, the Dead Sea, and the ancient mountain fortress of Masada, I became especially curious about humanity's age-old quest for transcendence through religion, architecture, art, and literature. A passion seized me, and I resolved to understand the ramifications of building the Third Temple in Jerusalem. Some of the major themes in this book gelled while I stood at the Western Wall, portions of which Herod the Great constructed around 19 BCE and that date from the end of the Second Temple period.



I have published nonfiction books in the past on the topic of the fourth dimension. In fact, as I discuss in my Oxford University Press book *Surfing Through Hyperspace*, I know of no subject in mathematics that has intrigued both children and adults as much as the idea of a fourth dimension—a spatial direction different from all the directions of our normal three-dimensional space. Philosophers and parapsychologists have meditated upon this dimension that no one can point to but may be all around us. Theologians have speculated that the afterlife, heaven, hell, angels, and our souls could reside in a fourth dimension—that God and Satan could literally be lumps of hyper-matter in a four-dimensional space inches away from our ordinary three-dimensional world. Throughout time, various mystics and prophets have likened our world to a three-dimensional cage and have speculated on how great our perceptions would be if we could break from the confines of our world into higher dimensions.

Thus, the combination of my trip to Jerusalem, my interest in higher dimensions, my fascination with the ancient Jewish Temple, and a curiosity about finding a creative way to avoid religious strife, came together to form this book.

A note on terminology: The word Nephilim is a plural, and the singular form does not occur in the Bible. I have encountered various spellings of the singular form—Nephil, Naphil, Naphal, Nefal, and Nephel—and I do not believe an agreement has been reached as to the “correct” form to use in English.

The name Yitzhak means “he will laugh” (Genesis 21:6). In kabala, the name Yitzhak suggests the ability to transcend and perhaps even control the physical world.

Yitzhak’s martial art *Pencak Silat Satria Muda* has its origins in West Sumatra, Indonesia, and it contains aspects of the dances and of West Java. Silat can be traced back to the ancient Minangkabau civilizations of West Sumatra, where Pencak Silat started around the seventh century.

The Enochian language encountered by Yitzhak in the library has unusual historical underpinnings. Dee’s fascinating Enochian records are sufficiently detailed that some people are convinced they represent a genuine pre-Hebraic language. However, other researchers suggest that Enochian was a code Dee used to transmit messages from overseas to Queen Elizabeth. Many “believers” have asserted that the Enochian language predates all human languages and could be used to contact intelligences from other dimensions. Dee said he thought the language was once used to converse with the Nephilim, the giants of the Old Testament. The Enochian font in this book is freeware from the Digital Type Foundry.

The segment of ancient Hebrew letters displayed in this book is from the Aleppo Codex, a medieval manuscript of the Hebrew Bible (Tanakh), associated with Rabbi Aaron Ben Asher. The Masoretic scholars wrote these characters in the early 10th century, most likely in Tiberias, Israel. The text is from Joshua 1:1.

A note on cover images: The main image on the cover shows a portion of the Old City of Jerusalem as viewed from the Mount of Olives. The photographer is Wayne McLean, and the image comes from the Wikimedia Commons. For more information, see http://en.wikipedia.org/wiki/File:Jerusalem_from_mt_olives.jpg. The image of the four-dimensional Klein Bottle is also from the Wikimedia Commons and found at: http://en.wikipedia.org/wiki/File:Klein_bottle.svg. The lower image shows an Ashkenazi Jew of late 19th-century Eastern Europe by Maurycy Gottlieb.



I welcome feedback and suggestions for improvement from readers, as I consider this an ongoing project and a labor of love. *Jews in Hyperspace* reflects my own intellectual shortcomings, and while I try to study as many areas of science and fiction as I can, it is difficult to become fluent in all aspects, and I’m sure that this book will reflect my own personal interests, strengths, and weaknesses. I am responsible for the topics included in this book and, of course, for any errors and infelicities. Please contact me to provide criticism of this novel—or words of support—by using the email address at my Internet web page, www.pickover.com.

About the Author

Clifford A. Pickover is a prolific author and futurist, having published more than 40 books in 15 different languages. Exploring topics ranging from computers and creativity to art, mathematics, parallel universes, Einstein, time travel, alien life, religion, dimethyltryptamine elves, and the nature of human genius, his most recent titles include *The Math Book*; *Archimedes to Hawking*; *A Beginner's Guide to Immortality*; *The Möbius Strip*; *Sex, Drugs, Einstein, and Elves*; *A Passion for Mathematics*; *Calculus and Pizza*; *The Paradox of God and the Science of Omniscience*; *Surfing Through Hyperspace*; *The Science of Aliens*; and *Time: A Traveler's Guide*. In addition, he has authored more than 200 articles on topics in science, art, and mathematics.

Dr. Pickover received his Ph.D. from Yale University's Department of Molecular Biophysics and Biochemistry, having graduated first in his class from Franklin and Marshall College. Today, he holds over 50 U.S. patents for inventions dealing with computing technologies and interfaces.

Pickover is currently an associate editor for the scientific journal *Computers and Graphics* and is an editorial board member for *Odyssey*, *Leonardo*, and *YLEM*. He also writes the "Brain-Strain" column for *Odyssey*, and his website, www.pickover.com, has received more than a million visits. Dr. Pickover's primary interest is finding new ways to continually expand creativity by melding art, science, mathematics, and other seemingly disparate areas of human endeavor. Other hobbies include Ch'ang-Shih Tai-Chi Ch'uan, Shaolin Kung Fu, and piano. He owns a 110-gallon aquarium filled with Lima shovelnose catfishes and Florida gar, and advises readers to maintain a shovelnose tank in order to foster a sense of mystery in their lives. Look into the fish's eudaemonic eyes, dream of Elysian Fields, and soar.

To reach Dr. Pickover, visit pickover.com.