

THE WONDROUS NEW YORK TIMES BESTSELLER

ALAN LIGHTMAN



EINSTEIN'S DREAMS

A NOVEL

"A MAGICAL, METAPHYSICAL REALM. . . .
CAPTIVATING, ENCHANTING, DELIGHTFUL."

—MICHIKO KAKUTANI, *NEW YORK TIMES*



• 3 MAY 1905

Consider a world in which cause and effect are erratic. Sometimes the first precedes the second, sometimes the second the first. Or perhaps cause lies forever in the past while effect in the future, but future and past are entwined.

On the terrace of the Bundesterrasse is a

striking view: the river Aare below and the Bernese Alps above. A man stands there just now, absently emptying his pockets and weeping. Without reason, his friends have abandoned him. No one calls any more, no one meets him for supper or beer at the tavern, no one invites him to their home. For twenty years he has been the ideal friend to his friends, generous, interested, soft-spoken, affectionate. What could have happened? A week from this moment on the terrace, the same man begins acting the goat, insulting everyone, wearing smelly clothes, stingy with money, allowing no one to come to his apartment on Laupenstrasse. Which was cause and which effect, which future and which past?

In Zürich, strict laws have recently been approved by the Council. Pistols may not be sold to the public. Banks and trading houses must be audited. All visitors, whether entering Zürich by boat on the river Limmat or by rail on the Selnau line, must be

searched for contraband. The civil military is doubled. One month after the crack-down, Zürich is ripped by the worst crimes in its history. In daylight, people are murdered in the Weinplatz, paintings are stolen from the Kunsthhaus, liquor is drunk in the pews of the Münsterhof. Are these criminal acts not misplaced in time? Or perhaps the new laws were action rather than reaction?

A young woman sits near a fountain in the Botanischer Garten. She comes here every Sunday to smell the white double violets, the musk rose, the matted pink gillyflowers. Suddenly, her heart soars, she blushes, she paces anxiously, she becomes happy for no reason. Days later, she meets a young man and is smitten with love. Are the two events not connected? But by what bizarre connection, by what twist in time, by what reversed logic?

In this acausal world, scientists are helpless. Their predictions become post-dictions. Their equations become justifica-

tions, their logic, illogic. Scientists turn reckless and mutter like gamblers who cannot stop betting. Scientists are buffoons, not because they are rational but because the cosmos is irrational. Or perhaps it is not because the cosmos is irrational but because they are rational. Who can say which, in an acausal world?

In this world, artists are joyous. Unpredictability is the life of their paintings, their music, their novels. They delight in events not forecasted, happenings without explanation, retrospective.

Most people have learned how to live in the moment. The argument goes that if the past has uncertain effect on the present, there is no need to dwell on the past. And if the present has little effect on the future, present actions need not be weighed for their consequence. Rather, each act is an island in time, to be judged on its own. Families comfort a dying uncle not because of a likely inheritance, but because he is loved

at that moment. Employees are hired not because of their résumés, but because of their good sense in interviews. Clerks trampled by their bosses fight back at each insult, with no fear for their future. It is a world of impulse. It is a world of sincerity. It is a world in which every word spoken speaks just to that moment, every glance given has only one meaning, each touch has no past or no future, each kiss is a kiss of immediacy.

• 11 MAY 1905

Walking on the Marktgasse, one sees a wondrous sight. The cherries in the fruit stalls sit aligned in rows, the hats in the millinery shop are neatly stacked, the flowers on the balconies are arranged in perfect symmetries, no crumbs lie on the bakery

floor, no milk is spilled on the cobblestones of the buttery. No thing is out of place.

When a gay party leaves a restaurant, the tables are more tidy than before. When a wind blows gently through the street, the street is swept clean, the dirt and dust transported to the edge of town. When waves of water splash against the shore, the shore rebuilds itself. When leaves fall from the trees, the leaves line up like birds in V-formation. When clouds form faces, the faces stay. When a pipe lets smoke into a room, the soot drifts toward a corner of the room, leaving clear air. Painted balconies exposed to wind and rain become brighter in time. The sound of thunder makes a broken vase reform itself, makes the fractured shards leap up to the precise positions where they fit and bind. The fragrant odor of a passing cinnamon cart intensifies, not dissipates, with time.

Do these happenings seem strange?

In this world, the passage of time brings increasing order. Order is the law of nature, the universal trend, the cosmic direction. If time is an arrow, that arrow points toward order. The future is pattern, organization, union, intensification; the past, randomness, confusion, disintegration, dissipation.

Philosophers have argued that without a trend toward order, time would lack meaning. The future would be indistinguishable from the past. Sequences of events would be just so many random scenes from a thousand novels. History would be indistinct, like the mist slowly gathered by treetops in evening.

In such a world, people with untidy houses lie in their beds and wait for the forces of nature to jostle the dust from their windowsills and straighten the shoes in their closets. People with untidy affairs may picnic while their calendars become organized, their appointments arranged, their accounts balanced. Lipsticks and brushes

and letters may be tossed into purses with the satisfaction that they will sort themselves out automatically. Gardens need never be pruned, weeds never uprooted. Desks become neat by the end of the day. Clothes on the floor in the evening lie on chairs in the morning. Missing socks reappear.

If one visits a city in spring, one sees another wondrous sight. For in springtime the populace become sick of the order in their lives. In spring, people furiously lay waste to their houses. They sweep in dirt, smash chairs, break windows. On Aarberggasse, or any residential avenue in spring, one hears the sounds of broken glass, shouting, howling, laughter. In spring, people meet at unarranged times, burn their appointment books, throw away their watches, drink through the night. This hysterical abandon continues until summer, when people regain their senses and return to order.

• 14 MAY 1905

There is a place where time stands still. Raindrops hang motionless in air. Pendulums of clocks float mid-swing. Dogs raise their muzzles in silent howls. Pedestrians are frozen on the dusty streets, their legs cocked as if held by strings. The aromas of

dates, mangoes, coriander, cumin are suspended in space.

As a traveler approaches this place from any direction, he moves more and more slowly. His heartbeats grow farther apart, his breathing slackens, his temperature drops, his thoughts diminish, until he reaches dead center and stops. For this is the center of time. From this place, time travels outward in concentric circles—at rest at the center, slowly picking up speed at greater diameters.

Who would make pilgrimage to the center of time? Parents with children, and lovers.

And so, at the place where time stands still, one sees parents clutching their children, in a frozen embrace that will never let go. The beautiful young daughter with blue eyes and blond hair will never stop smiling the smile she smiles now, will never lose this soft pink glow on her cheeks, will never

grow wrinkled or tired, will never get injured, will never unlearn what her parents have taught her, will never think thoughts that her parents don't know, will never know evil, will never tell her parents that she does not love them, will never leave her room with the view of the ocean, will never stop touching her parents as she does now.

And at the place where time stands still, one sees lovers kissing in the shadows of buildings, in a frozen embrace that will never let go. The loved one will never take his arms from where they are now, will never give back the bracelet of memories, will never journey far from his lover, will never place himself in danger in self-sacrifice, will never fail to show his love, will never become jealous, will never fall in love with someone else, will never lose the passion of this instant in time.

One must consider that these statues are illuminated by only the most feeble red

light, for light is diminished almost to nothing at the center of time, its vibrations slowed to echoes in vast canyons, its intensity reduced to the faint glow of fireflies.

Those not quite at dead center do indeed move, but at the pace of glaciers. A brush of the hair might take a year, a kiss might take a thousand. While a smile is returned, seasons pass in the outer world. While a child is hugged, bridges rise. While a good-bye is said, cities crumble and are forgotten.

And those who return to the outer world . . . Children grow rapidly, forget the centuries-long embrace from their parents, which to them lasted but seconds. Children become adults, live far from their parents, live in their own houses, learn ways of their own, suffer pain, grow old. Children curse their parents for trying to hold them forever, curse time for their own wrinkled skin and hoarse voices. These now old children also

want to stop time, but at another time. They want to freeze their own children at the center of time.

Lovers who return find their friends are long gone. After all, lifetimes have passed. They move in a world they do not recognize. Lovers who return still embrace in the shadows of buildings, but now their embraces seem empty and alone. Soon they forget the centuries-long promises, which to them lasted only seconds. They become jealous even among strangers, say hateful things to each other, lose passion, drift apart, grow old and alone in a world they do not know.

Some say it is best not to go near the center of time. Life is a vessel of sadness, but it is noble to live life, and without time there is no life. Others disagree. They would rather have an eternity of contentment, even if that eternity were fixed and frozen, like a butterfly mounted in a case.

•15 MAY 1905

Imagine a world in which there is no time.
Only images.

A child at the seashore, spellbound by her first glimpse of the ocean. A woman standing on a balcony at dawn, her hair down, her loose sleeping silks, her bare feet, her lips. The curved arch of the arcade

near the Zähringer Fountain on Kramgasse, sandstone and iron. A man sitting in the quiet of his study, holding the photograph of a woman, a pained look on his face. An osprey framed in the sky, its wings outstretched, the sun rays piercing between feathers. A young boy sitting in an empty auditorium, his heart racing as if he were on stage. Footprints in snow on a winter island. A boat on the water at night, its lights dim in the distance, like a small red star in the black sky. A locked cabinet of pills. A leaf on the ground in autumn, red and gold and brown, delicate. A woman crouching in the bushes, waiting by the house of her estranged husband, whom she must talk to. A soft rain on a spring day, on a walk that is the last walk a young man will take in the place that he loves. Dust on a windowsill. A stall of peppers on Marktgasse, the yellow and green and red. Matterhorn, the jagged peak of white pushing into the solid blue sky, the green valley and the log cabins.

The eye of a needle. Dew on leaves, crystal, opalescent. A mother on her bed, weeping, the smell of basil in the air. A child on a bicycle in the Kleine Schanze, smiling the smile of a lifetime. A tower of prayer, tall and octagonal, open balcony, solemn, surrounded by arms. Steam rising from a lake in early morning. An open drawer. Two friends at a café, the lamplight illuminating one friend's face, the other in shadow. A cat watching a bug on the window. A young woman on a bench, reading a letter, tears of joy in her green eyes. A great field, lined with cedar and spruce. Sunlight, in long angles through the window in late afternoon. A massive tree fallen, roots sprawling in air, bark, limbs still green. The white of a sailboat, with the wind behind it, sails billowed like wings of a giant white bird. A father and son alone at a restaurant, the father sad and staring down at the tablecloth. An oval window, looking out on fields of hay, a wooden cart, cows, green and purple in the

afternoon light. A broken bottle on the floor, brown liquid in the crevices, a woman with red eyes. An old man in the kitchen, cooking breakfast for his grandson, the boy gazing out the window at a white painted bench. A worn book lying on a table beside a dim lamp. The white on water as a wave breaks, blown by wind. A woman lying on her couch with wet hair, holding the hand of a man she will never see again. A train with red cars, on a great stone bridge with graceful arches, a river underneath, tiny dots that are houses in the distance. Dust motes floating in sunlight through a window. The thin skin in the middle of a neck, thin enough to see the pulse of blood underneath. A man and woman naked, wrapped around each other. The blue shadows of trees in a full moon. The top of a mountain with a strong steady wind, the valley falling away on all sides, sandwiches of beef and cheese. A child wincing from his father's slap, the father's lips twisted in anger, the

child not understanding. A strange face in the mirror, gray at the temples. A young man holding a telephone, startled at what he is hearing. A family photograph, the parents young and relaxed, the children in ties and dresses and smiling. A tiny light, far through a thicket of trees. The red at sunset. An eggshell, white, fragile, unbroken. A blue hat washed up on shore. Roses cut and adrift on the river beneath the bridge, with a château rising. Red hair of a lover, wild, mischievous, promising. The purple petals of an iris, held by a young woman. A room of four walls, two windows, two beds, a table, a lamp, two people with red faces, tears. The first kiss. Planets caught in space, oceans, silence. A bead of water on the window. A coiled rope. A yellow brush.

• 8 MAY 1905

The world will end on 26 September 1907.
Everyone knows it.

In Berne, it is just as in all cities and towns. One year before the end, schools close their doors. Why learn for the future, with so brief a future? Delighted to have lessons finished forever, children play hide-

and-see in the arcades of Kramgasse, run down Aarstrasse and skip stones on the river, squander their coins on peppermint and licorice. Their parents let them do what they wish.

One month before the end, businesses close. The Bundeshaus halts its proceedings. The federal telegraph building on Speichergasse falls silent. Likewise the watch factory on Laupenstrasse, the mill past the Nydegg Bridge. What need is there for commerce and industry with so little time left?

At the outdoor cafés on Amthausgasse, people sit and sip coffee and talk easily of their lives. A liberation fills the air. Just now, for example, a woman with brown eyes is speaking to her mother about how little time they spent together in her childhood, when the mother worked as a seamstress. The mother and daughter are now planning a trip to Lucerne. They will fit two lives into the little time remaining. At another table,

a man tells a friend about a hated supervisor who often made love to the man's wife in the office coatroom after hours and threatened to fire him if he or his wife caused any trouble. But what is there to fear now? The man has settled with the supervisor and reconciled with his wife. Relieved at last, he stretches his legs and lets his eyes roam over the Alps.

At the bakery on Marktgasse, the thick-fingered baker puts dough in the oven and sings. These days people are polite when they order their bread. They smile and pay promptly, for money is losing its value. They chat about picnics in Fribourg, cherished time listening to their children's stories, long walks in mid-afternoon. They do not seem to mind that the world will soon end, because everyone shares the same fate. A world with one month is a world of equality.

One day before the end, the streets swirl in laughter. Neighbors who have never spo-

ken greet each other as friends, strip off their clothing and bathe in the fountains. Others dive in the Aare. After swimming until exhausted, they lie in the thick grass along the river and read poetry. A barrister and a postal clerk who have never before met walk arm in arm through the Botanischer Garten, smile at the cyclamens and asters, discuss art and color. What do their past stations matter? In a world of one day they are equal.

In the shadows of a side street off Aarberggasse, a man and a woman lean against a wall, drink beer, and eat smoked beef. Afterwards, she will take him to her apartment. She is married to someone else, but for years she has wanted this man, and she will satisfy her wants on this last day of the world.

A few souls gallop through the streets doing good deeds, attempting to correct their misdeeds of the past. Theirs are the only unnatural smiles.

One minute before the end of the world, everyone gathers on the grounds of the Kunstmuseum. Men, women, and children form a giant circle and hold hands. No one moves. No one speaks. It is so absolutely quiet that each person can hear the heart-beat of the person to his right or his left. This is the last minute of the world. In the absolute silence a purple gentian in the garden catches the light on the underside of its blossom, glows for a moment, then dissolves among the other flowers. Behind the museum, the needled leaves of a larch gently shudder as a breeze moves through the tree. Farther back, through the forest, the Aare reflects sunlight, bends the light with each ripple on its skin. To the east, the tower of St. Vincent's rises into sky, red and fragile, its stonework as delicate as veins of a leaf. And higher up, the Alps, snow-tipped, blending white and purple, large and silent. A cloud floats in the sky. A sparrow flutters. No one speaks.

In the last seconds, it is as if everyone has leaped off Topaz Peak, holding hands. The end approaches like approaching ground. Cool air rushes by, bodies are weightless. The silent horizon yawns for miles. And below, the vast blanket of snow hurtles nearer and nearer to envelop this circle of pinkness and life.