Storming Heaven

LSD & The American Dream

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Endnote Errors: "no trek through virgin jungle …" *Yage Letters,* pp. 28-29. and "he shook a little broom …" *Yage.* pp. 28-29. and "I have always based my life ..." *FB, p.* 64. cannot be located in original text.

Table of Contents

Prologue: An Afternoon In The Sixties 1

Book One: The Door In The Wall 8

1. A Bike Ride In Basle 8
2. The Cinderella Science 15
3. Laboratory Madness 23
4. Intuition And Intellect 28
5. The Door in the Wall 38
6. Out In The Noonday Sun 40
7. The Other World 49
8. Noises Offstage 63

Book Two: Pushing The Envelope 73

9. Slouching Toward Bethlehem 73
10. Starving, Hysterical, Naked 81
11. Wild Geese 98
12. The Harvard Psilocybin Project 110
13. What Happened At Harvard 128
14. The Politics of Consciousness 137
15. The Fifth Freedom 148
16. Horse Latitudes 158
17. Pushing the Envelope 166
18. The Boy Most Likely To Succeed 176
19. Turn and Face the Strange 188
20. In The Zone 202
21. Psychotic Reaction 217

Book Three: The Pure Void 230

22. The Counterculture 230
23. The Alchemist 244
24. The Next Step 252
25. It Came From Inner Space 265
26. Too Many Gurus 275

Epilogue: An Afternoon In The Eighties 285

Bibliography i

Prologue: An Afternoon In The Sixties

During the night the rain and fog moved inland; by morning the air was sharp and clear. From the top of Nob Hill you could see the houseboats of Sausalito; Marin, in the distance, was a hazy shimmer.

It was going to be hot, going to be one of those fine winter days when the mercury suddenly climbs and for a few hours San Francisco becomes tropical, the golf links jammed with hackers, the Bay crowded with boats; the perfect sort of day to load the kids into the car and drive to San Simeon, to finally visit Randolph Hearst's baronial whim; the perfect sort of day to dig out last summer's bathing suit and catch a few rays, which was what the students at San Francisco State were doing.

It was January 14, 1967, a Saturday, and in parts of the Bay area elements from another, less integrated America, were also making plans: there was going to be a party in the park today, a curious affair with an extravagant name, *A Gathering of the Tribes for the First Human Be-In*.

The park was Golden Gate Park, one of those imperial parks built in the closing decades of the last century, with something for everyone, museums, lakes, bicycle paths, fly casting pools, a buffalo paddock with a herd of sleepy bison, a Japanese garden. On a sparkling Saturday like this, the Golden Gate should have resembled a twentieth-century version of George Seurat's epic painting, *La Grande Jatte*, but something had happened in the past few months to alter the ambiance. Just up the street, a short stroll away, was Haight-Ashbury, the home of the hippies, and the hippies, unencumbered by the Protestant work ethic, were treating the park as though it was their own special backyard.

They were everywhere, panhandling, singing, performing little existential playlets that were incomprehensible to everyone but themselves. They'd turned a nondescript slope near the tennis court into a perpetual love-in, although in these innocent days the form still lacked a name: what you saw, between serve and volley, was a shifting accumulation of—what? A European, registering the carnival costumes and the cheerful, almost dignified self-absorption of their wearers, might have credited the hippies with being another branch of the gypsy tribes of Romany. And in many of the externals they would have been correct. But in actual fact the bodies lolling on the grass next to the Golden Gate's tennis courts belonged to the educated sons and daughters of white middle-class America. They had, to use their own terminology, dropped out. In the stubborn fashion of children, they wanted nothing to do with the adult culture. That's what the Gathering of the Tribes was all about: it was a celebration of this rejection, and a partial first step toward building an alternative.

Although the possibility of the Be-In had been floating around the Haight-Ashbury for months, it was only in the last couple of weeks that the concept had jelled and notices had been sent to the local press announcing that an epochal moment was about to occur. "Would you believe Timothy Leary and Mario Savio?" enthused the hippies' favorite newspaper, the San Francisco *Oracle*.

> Allen Ginsberg and Jack Weinberg? Lao Tzu and Spartacus? Berkeley's political activists are going to join San Francisco's hippies in a love feast that will, hopefully, wipe out the last remnants of mutual skepticism and suspicion.[1]

Which was echoed in even more ecstatic strophes by the Berkeley *Barb*, the preferred read of the activists:

> When the Berkeley political activists and the love generation of the Haight-Ashbury and thousands of young men and women from every state of the nation embrace at the gathering of the tribes for a Human Be-In at the Polo Field in Golden Gate Park, the spiritual revolution will be manifest and proven. In unity we shall shower the country with waves of ecstasy and purification. Fear will be washed away; ignorance will be exposed to sunlight; profits and empire will lie drying on deserted beaches … .[2]

Added to this were thousands of posters—one showing a bearded Hindu *sadhu* gazing beatifically out at the observer, another featuring a Plains Indian cradling a guitar instead of a rifle—that blotted out the usual screeds advertising rock acts at the Fillmore.

More than a few respectable citizens must have contemplated that gnomic *a gathering of the tribes* and wondered, with a twinge of unease, what in hell was going on in their fair city.

It sounded like something the Indians might have held before riding off to massacre Custer.

What in hell … ? was a question a lot of Americans were asking in the first perplexing months of 1967. Unlike other periods of national crisis, the economy was healthy; the GNP, up a third in the first five years of the decade, was climbing steadily, and Wall Street was in the initial stages of what would later be called the Go Go Years. *Conglomerate* was a word on every broker's lips, as was *synergy*. Aside from some racial strife and, a bit of dissension over our Indochina policy, we were also in good shape domestically. The New Frontier had segued into the Great Society without appreciable loss of momentum. In fact, LBJ, with years of legislative chits to draw on, was proving a far better salesman than JFK had ever been. Among liberal intellectuals it was generally believed that we were becoming a classless society, perhaps the first in history, material abundance having rendered the Marxist critique obsolete. In *Political Man*, Seymour Martin Lipset had magisterially declared that "the triumph of the West ends domestic politics for those intellectuals who must have ideologies or Utopias to motivate them to political activities."[3]

Yet, seemingly at the very moment of triumph—of realizing what Robert Frost, in his 1960 inaugural poem, had called an Augustan Age—the whole thrust of our national purpose was being denounced and rejected in language that had gotten Lenny Bruce jailed just five years earlier. And this critique wasn't coming from the International Communist conspiracy or the John Birch right wing or any of a dozen familiar ideological groups—it came from those adorable adolescents who spent over $10 billion a year on consumer products, and of whom Clark Kerr, the Chancellor of the University of California at Berkeley, had once said: "The employers will love this generation … . They are going to be easy to handle."

American Teenagers: one moment they were playing baseball and attending sock hops and the next they were racing down the Negro streets at dawn, screaming, hysterical, naked, or at least that's the way it seemed.

Even as late as 1965, had you suggested that America's well-heeled young might rise up and attempt to pull down the Republic, you would've been laughed from the room. *Time*, in January of that year, found a generation of conformists: "almost everywhere boys dress in madras shirts and chinos, or perhaps green Levis. All trim and neat. The standard for girls is sweaters and skirts dyed to match, or shirtwaists and jumpers plus blazers, Weejun loafers and knee socks or stockings."[4] When a young Harvard psychologist named Kenneth Kenniston came to write about these kids, he painted a portrait of rudderless teens adrift in a world of material abundance and spiritual poverty. Kenniston called his book *The Uncommitted*. Three years later, his thesis in ruins, he would rush back into print with *The Young Radicals: Notes on Committed Youth*.

A lot of writers, forced to contemplate the noisy confusion that has since coalesced in the phrase *the Sixties*, turned to a poem by the Irish poet William Butler Yeats, which contained these evocative lines:

> *… the centre cannot hold;*
> *Mere anarchy is loosed upon the world,*
> *The blood-dimmed tide is loosed, and everywhere*
> *The ceremony of innocence is drowned:*
> *The best lack all conviction, while the worst*
> *Are full of passionate intensity.*[5]

Yeats delivered those lines in a poem called "The Second Coming," which was ostensibly about the return of Christ, although most of the poem, the meat of it, imagined the Antichrist, bestirring itself after "twenty centuries of stony sleep," moving its slow thighs across the desert:

> *And what rough beast, its hour come round at last,*
> *Slouches towards Bethlehem to be born?*

For a lot of Americans, that image, the rough, slouching beast, captured perfectly the unease they felt whenever they contemplated their children. Indeed the only editorial change the poem needed to be completely contemporary was the location: for "Bethlehem," read "San Francisco."

What was it about America's sixth-largest city that made it, in the second half of the twentieth century, the Paris of discontent? Alan Watts, a minor but valued player in our story, thought it was the Bay Area's Mediterranean climate, which acted as a natural vaccine against the virus of Puritanism. Others attributed it to San Francisco's tradition of tolerance. Long a haven for those persecuted during America's frequent spasms of intolerance, it probably boasted more Wobblies, anarchists, communists, beatniks, mystics, and eccentric freethinkers per square mile than all the other cities put together. But of equal, if not greater, weight was the simple geographical fact that San Francisco was the Queen City of California, and California, as the magazines and sociologists never tired of pointing out, was the future impinging upon the present. Everything was bigger, newer, better, faster, shinier in California; it was the jewel in technocracy's crown. On the back of the American dollar bill is a picture of the reverse side of the Great Seal of the United States, showing a three-quarter completed pyramid, along with the legend, *novus ordo seclorum*, a new order of the ages. California was where they were finishing the top of the pyramid. So it was only fitting that it was there that the exodus from "normalcy" began.

Allen Ginsberg appeared on Haight Street shortly before eleven, a talmudic presence with his flowing beard and bald head. He was wearing blue beach thongs and a crisp white hospital orderly's uniform, and as he strolled toward the park he was greeted with affection. Ginsberg was the closest thing the hippies had to a universally accepted hero. Others, like Tim Leary, Alan Watts, and Ken Kesey, had their partisans, but Ginsberg was adored by all. He was a link with the past, a survivor of the Beat movement, which was the most obvious cultural precursor of what was happening in the park today.

The previous evening a few of these elder statesmen had met in Michael McClure's Haight-Ashbury apartment to hammer out an agenda for today's festivities. Aside from Ginsberg, sitting cross-legged on the floor, his bald crown gleaming in the candlelight, there had been Gary Snyder, the Zen poet of Kerouac's *The Dharma Bums*; Lenore Kandel, a belly dancer and author of some lubricious lyrics called *The Love Book*; plus Lenore's boyfriend. Freewheeling Frank, the Secretary of the San Francisco chapter of the Hells Angels; plus McClure, looking professorial with his pipe; plus a local character named Buddha, who was the Be-In's official master of ceremonies.

How to juggle the assorted political speakers, poets, spiritual leaders, and rock bands into a seamless whole without destroying the Be-In's overarching purpose had been the central topic. For several years Ginsberg had been lobbying for a new form of spiritual-political theatre. Don't just march and wave placards, he had urged the New Left from the pages of the Berkeley *Barb*. Dance to the Oakland Army Terminal, sing, hand out flowers, celebrate life. The New Left would ignore him, but not the hippies. Tomorrow, America would experience its first indigenous *mela—mela* being Hindi for a gathering of holy seekers.

The planning had gone smoothly until they reached the topic of Tim Leary. Was Leary to be considered a poet, and therefore entitled to only seven minutes at the microphone, or was he a genuine prophet, deserving of unlimited time?

"Tim Leary's a professor," one of them had said in a tone implying that professors don't talk, they lecture.[6]

Ginsberg had suggested that Leary get the allotted seven minutes, which, after all, was all he was going to get.

"Is Leary a prima donna?" someone else had asked.

"Man, I don't think so—after all, he's taken acid."

"Leary just needs a little of the responsibility taken off him," Ginsberg had replied. "Seven minutes, and anyway, if he gets uptight and starts to preach, Lenore can always belly dance."

"Man, I'd just as soon no one says a word tomorrow," Buddha had said. "Just beautiful silence. Just everybody sitting around smiling and digging everybody else."

Whereupon Ginsberg had started chanting *hari om nama shivaya*. which was a Hindu mantra to Shiva, god of destruction, creation, and cannabis. And his voice, "full of throbs and melodies" had lifted the others to their feet and the meeting had adjourned as everyone swayed and danced in an ecstasy that was untranslatable to someone who wasn't attuned to what was happening in the Haight-Ashbury.

"That one big street, Haight Street, running from about Masonic to Clayton, was just packed with every kind of freak you could imagine. Guys with Mohawk haircuts, people walking around in commodore uniforms, you know, the hat with the fuzz all over it. Everything! You couldn't believe it. It was an incredible street scene."[7]

That was a hippie talking. A middle-aged journalist, after spending a few exhausting months there, remembered the Haight this way: "the madness of the place, the shouts, the chasing, the gunning bikes, the chaotic, occasional screams of girls running has convinced people that the Haight is a rare species of insane disorganization."[8]

Which is to say the Haight was one of the few genuine street scenes in America, albeit a street scene filled with what appeared to be Gilbert & Sullivan extras, pirates, and sheiks, all talking as though they had wandered out of a mystical P. G. Wodehouse novel. Dissect a typical hippie monologue and you found elements of Zen, Hinduism, existentialism, McLuhanism, and mysticism, mixed with equal amounts of alchemy, astrology, palm reading, a belief in auras, and a diet that consisted of rice and grains. The rational and the irrational, the scientific and the mystical rubbed shoulders with alarming intimacy.

Lining Haight Street, which ran in a flat line for several miles, were all sorts of esoteric shops, places like the I-Thou Coffee Shop or the Print Mint, with its staggering inventory of day-glo posters; places like the Psychedelic Shop with its racks of literature, its meditation room, and its enormous bronze gong, which dominated the sidewalk like a local Big Ben. Later there would be a bus tour for the curious, operated by the Gray Line, a company with a history of capitalizing on San Francisco's excesses, having run a similar excursion through the North Beach.

"We are now entering the largest hippie colony in the world," the tour guide would exclaim, urging everyone to the windows. "We are now passing down Haight Street, the very nerve center of a city within a city … marijuana, of course, is a household staple here, enjoyed by the natives to stimulate their senses … . Among the favorite pastimes of the hippies, besides taking drugs, are parading and demonstrating, seminars and group discussions about what's wrong with the status quo; malingering; plus the ever present preoccupation with the soul, reality and self-expression, such as strumming guitars, piping flutes, and banging on bongo drums."[9]

The hippies responded by holding up mirrors so the tourists could look at themselves.

But we are getting ahead of ourselves. The tourists, including the mob of reporters who made the Haight a media port of call in the Sixties—Saigon being another—came later, after the Gathering of the Tribes for the First Human Be-In called attention to just how fast the social fabric was ripping in San Francisco. On this sparkling Saturday, the word *hippie* was barely a year old. Like beatnik, peacenik, etc., it was one of those semiderogatory diminutives that journalists love to coin. The hippies hated it. They preferred either freak or head, names illustrative of their belief that they represented an evolutionary advance, a mutation of the species, a "hopeful monster" to use one geneticist's description.

Journalists bumping into this odd notion generally discounted it as part of the cultural static that was fuzzing the lines of communication between what was becoming known as the straight world and this new configuration, which some were beginning to call a counterculture. Consequently they missed the story. To put matters bluntly: the hippies were an attempt to push evolution, to jump the species toward a higher integration. To exaggerate only a little: they were a laboratory experiment that had either gone awry or succeeded brilliantly—a difference of opinion that stands at the center of this story, and one that will still be standing when this book is finished.

Stop for a moment and think of the last hundred years as a symphony, a grand orchestration of crescendos and fugues, a tangle of melodies, one of which, a very faint but haunting refrain, goes like this: we are doomed unless a way can be found to speed up evolution, to consciously push the smart monkey to a higher level, to renew the assault on the gods, which was the secret purpose of all religions. But can we consciously evolve ourselves? Does a magic trigger exist that is capable of shooting the species forward a few increments? Is there a door in the mind we can pass through? And if there is, does a key exist capable of opening that door?

In the middle years of this century, out of nowhere, an answer to these questions emerged. There was a key to the door, and it was a drug, or rather a family of drugs—the psychedelics—and in particular LSD, which the hippies called acid partially on account of its usefulness in burning off that Greco-Judaic-Christian patina, and mostly because the drug's technical name was d-lysergic acid diethylamide, a mouthful even for Mary Poppins. According to the hippies, LSD was the glue that held the Haight together. It was the hippie sacrament, a mind detergent capable of washing away years of social programming, a re-imprinting device, a consciousness-expander, a tool that would push us up the evolutionary ladder. Some even claimed LSD was a gift from God, given to mankind in order to save the planet from a nuclear finale.

Not that the average hippie bothered with the metaphysics of that melody that filled his ears. Very few knew that the phrase *cosmic consciousness* had been coined as long ago as 1901 by a Canadian psychologist named Richard Bucke to describe the evolutionary stage beyond self-consciousness, the domain of Jesus and Buddha, Blake and Whitman, to name just a few of those whom Bucke believed were species forerunners of cosmic consciousness. It was gratifying but immaterial that in the January issue of *Playboy* Julian Huxley could be found speculating on what role LSD might play in man's future evolution. The hippies didn't care, because they were living within one of those revolutionary moments that seem beyond time and history, a moment that Hunter Thompson described as "a fantastic universal sense that whatever we were doing was right, that we were winning … . And that, I think, was the handle—that sense of inevitable victory over the forces of Old and Evil. Not in any mean or military sense; we didn't need that. Our energy would simply prevail. There was no point in fighting—on our side or theirs. We had all the momentum; we were riding the crest of a high and beautiful wave … ."[10]

In a decade devoted to excess and oddity, LSD and the movement it spawned stood apart as one of the oddest and most misunderstood episodes. Which was both fitting and ironic. Had you gone to a public library on that sparkling Saturday in January 1967, and looked up *d-lysergic acid diethylamide* in the appropriate abstracts, you would have found thousands of citations. Few drugs had been studied so extensively. However, had you taken the further trouble of parsing through several dozen of these papers, you would have discovered a complete absence of formal conclusions. There were hunches and hypotheses and horror stories and glowing reports and experiments that worked for some but not for others. But there was no consensus. Every type of madness, every type of parapsychological phenomenon, every type of mystical, ecstatic illumination, Jungian archetypes, past lives, precognition, psychosis, satori-*samadhi*-atman, union with God—it was all there, in the scientific record.

Reading through the monographs, you could sense the confusion that LSD had created in the scientific community, when, using it as a deep probe into the unconscious, it had stirred up something that looked very much like their archenemy, the mystic religious experience! What was that doing in there? And what did it mean if all it took was 300 millionths of a gram of LSD and you could produce the most profound sort of religious epiphanies in carpet salesmen and dentists? Was the visionary core of religion—enlightenment—merely an aberration caused by a malfunction of our neural chemistry, brought on by drugs or fasting or fevers or a blow to the head? Or were the mystics correct? Was the Kingdom really inside us all the time, wired into the brain, waiting … ? Fascinating questions, but difficult to get a handle on. Try describing the taste of ice cream to someone who has never had any, and multiply that difficulty by a thousand, and you will get some idea of how hard it was to describe what it felt like to be one with the universe, to know that you existed on a multitude of levels, and not just on the puny one called I. So many things happened in the psychedelic state that just couldn't be expressed in language.

But all this, from the perspective of the average American, was beside the point. The real problem wasn't that the science story had turned into a religion story, it was that the religion story had somehow turned into a cultural revolt. The psychedelic experience might be as difficult to describe as the taste of ice cream, but it had still attracted an enthusiastic and dangerous bunch of salesmen. First and foremost was Dr. Timothy Leary, who had been booted out of Harvard because of these drugs. Whether the psychedelic movement would have happened without Dr. Leary is a matter of debate, but there can be no question that he defined its public style, churning out pamphlets, books, and records that equated LSD with the discovery of fire and the invention of the wheel. Dr. Leary was irrepressible. After Harvard fired him, he opened a retreat in upstate New York, where he catered to scores of young professionals eager to explore the Other World. Then, in September 1966, he founded the League for Spiritual Discovery, a sort of religion cum social movement whose purpose, he told audiences, was to "change and elevate the consciousness of every American within the next few years. Slowly, carefully, and beautifully, you can learn to drop out of American society as it is now set up." The League's slogan was the soon to be infamous "tune in, turn on, drop out."[11]

The biography of Ken Kesey was equally spectacular. By age thirty he had published two highly praised, highly successful novels, a literary debut unmatched since the days of Hemingway and Fitzgerald. But then he had given up literature to create, using LSD, a new kind of art form, which he called the acid test. Kesey became a latter-day Johnny Appleseed, yoyoing up and down the California coast, throwing a series of multimedia drug parties. The largest of them, the Trips Festival, had occurred almost a year ago, in early 1966, when ten thousand psychedelic revelers had crowded into San Francisco's Longshoreman's Hall for a weekend of outrageous celebration.

Kesey and Leary weren't the only ones beating the psychedelic drum. On the radio the Beatles could be heard singing "*turn off the mind … float downstream* … a phrase they had borrowed from one of Tim Leary's books, while he in turn had borrowed it from the *Tibetan Book of the Dead*. Then there was Allen Ginsberg. A few weeks earlier Ginsberg had suggested to a Boston church congregation "that everybody who hears my voice, directly or indirectly, try the chemical LSD at least once; every man, woman and child American in good health over the age of fourteen … that everybody including the President and his and our vast hordes of generals, executives, judges and legislators of these States go to nature, find a kindly teacher or Indian peyote chief or guru guide, and assay their consciousness with LSD."[12]

Drop acid and change yourself, change yourself and then change the world.

It was clear to the adults that something awful was happening. LSD didn't expand your consciousness, they warned in newspapers and magazines and TV spots, it made you crazy, it probably damaged your brain cells, and it was illegal to boot. Use it and you'd either end up a vegetable or a criminal. But the kids didn't seem to be listening. If your way of life is sanity, then give me crazy, they were saying, which led a lot of people to revise their estimate of Godless communism as America's number-one enemy.

The hippies actually seemed to think they could subvert America with flowers and a few bags of the most powerful psychochemical ever discovered. How absurd! And yet they seemed so sure of themselves, they really seemed to believe that within ten years America would be a totally turned-on country, full of bodhisattvas instead of bankers … . It was laughable, but nobody was laughing.

Like all moments of high drama, the psychedelic movement was part tragedy, part comedy, one of those rich tapestries of coincidence and misdirection that bolster our belief that fiction is often a pale reflection of reality. What if Albert Hofmann hadn't listened to his inner voice? What if Aldous Huxley hadn't read that particular issue of the *Hibbert Journal*? What if Robert Graves hadn't passed on an obscure reference to his friend the New York banker. What if the CIA … you could play the what-if game for hours.

Not that the hippies bothered. They had better things to do on this beautiful Saturday in 1967. Today they were all going to be at the Human Be-In, where it was rumored Owsley acid would flow like wine. Today they were going to party. The revolution, which was really just an evolution, could wait until Monday; give the empire another day of grace before it was dragged up onto the beach and left like the obsolete piece of flotsam it was.

What did a day or two matter when you were riding a high and beautiful wave.

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[1] "Allen Ginsberg and Jack Weinberg …" San Francisco *Oracle,* Vol. 1, No. 5, np.

[2] "When the Berkeley political activists …" Berkeley *Barb,* Jan. 13, 1967.

[3] "the triumph of the West …" Godfrey Hodgson, America In Our Time, p. 293.

[4] "almost everywhere boys dress …" Landon Jones, *Great Expectations,* p. 69.

[5] "The centre cannot hold … . slouches towards Bethlehem …" Yeats, *Selected Poems.*

[6] "Tim Leary's a professor …" Jane Kramer, *Allen Ginsberg in America,* pp. 5-6.

[7] "that one big street …" Peter Joseph, *Good Times,* p. 133.

[8] "the madness of the place, the shouts …" Nicholas Von Hoffman, *We Are the People Our Parents Warned Us Against,* p. 30.

[9] "we are now entering the largest hippie colony …" *Saturday Review,* August 1967, p. 52.

[10] "a fantastic universal sense …" Hunter S. Thompson, *Fear and Loathing in Las Vegas,* p. 68.

[11] "change and elevate the consciousness of every American …" *New Yorker,* Oct. 1, 1966.

[12] "that everybody who hears my voice …" Jesse Kombluth, ed.. *Notes from the New Underground,* p. 69.

Book One: The Door In The Wall

1. A Bike Ride In Basle

Had you asked your average hippie about beginnings, you would have discovered there were as many as there were hippies—everyone had a favorite chronology. Some preferred to begin the psychedelic story all the way back at the *Rig Veda*, the ancient Hindu text that spoke of the ecstatic visions obtainable from the plant soma; others began with the mystery cults of ancient Greece and the Middle Ages—the Rosicrucians, the Alchemists, the Illuminati. The lure of higher consciousness had exercised a fascination across the centuries, and whether it was Athenians being initiated at Eleusis, or Balzac and Baudelaire smoking hashish at the Club des Haschischins, the hippies recognized them all as parents.

But if the psychedelic story had a hundred beginnings, at some point all the plot lines converged on Basle, Switzerland, at a few minutes before five on the afternoon of Monday, April 19, 1943.

Straddling the Rhine River near the spot where the Swiss border brushes those of France and Germany, Basle was a city of spires and bridges, banks and industry, the flower of which were the three huge chemical combines that lined the river: Hoffman-La Roche, Ciba-Geigy, and Sandoz. Our story concerns this last company, Sandoz Pharmaceuticals, and in particular one of its research chemists, a Doctor Albert Hofmann.

With his cropped hair and spectacles, Albert Hofmann looked exactly like what he was: a thirty-seven-year-old bourgeois intellectual family man. He had joined Sandoz in 1927, shortly after graduating from the University of Zurich, and not too long after Sandoz had begun bolstering its traditional product line—herbicides, insecticides, and dyes—with drugs.

The pharmaceutical business in the late 1920s was an exciting place for a young chemist to apprentice. Everyone in the industry was scrambling after the same clues, sifting the chemical possibilities like archeologists working adjacent digs, hoping to End a better antibiotic, a safer headache pill; hoping to discover the next sulfanimide, which was generally considered the first wonder drug. Sandoz had invested part of its research hopes in *Claviceps purpurea*, better known as ergot, a fungus that grew on diseased kernels of rye. Although it had folk medicine uses in childbirth (it speeded up uteral contractions) and abortions (same reason), ergot was principally famous as the cause of St. Anthony's Fire, one of those demiscourges that had afflicted mankind since the invention of agriculture. Swallowing ergot-contaminated rye caused one's fingers and toes to blacken, then drop off, as a prelude to a particularly nasty death. The medical men called it dry gangrene.

Hofmann, who had spent his early years at Sandoz studying the active properties of Mediterranean squill, was in charge of the ergot project. For the past eight years he had methodically synthesized one ergotomine molecule after another, shelving each synthesis as animal tests proved unpropitious and moving on to the next. Ideally he was hoping to discover a new analeptic—something for migraines perhaps—but by April 1943 he had worked his way through dozens of variations, with no sign of success. "A peculiar presentiment,"[1] is the way Hofmann later described the feeling that stole over him that spring. A premonition. Intuition. Whatever it was, Hofmann began to feel that he had missed something back in 1938, when he had synthesized the twenty-fifth compound of the lysergic acid series, the one bearing the lab notation LSD-25.

Acting upon this presentiment, Hofmann synthesized a new batch of LSD-25 on Friday, April 16. By midday he had a crystalline version that was easily soluble in water. But then he started to feel woozy. Thinking it the onset of a cold, Hofmann took the rest of the day off. And he was just climbing into bed when the hallucinations began.

In a report subsequently filed with Arthur Stoll, his immediate superior, Hofmann described these hallucinations as "an uninterrupted stream of fantastic images of extraordinary plasticity and vividness and accompanied by an intense kaleidoscopic play of colors."[2] Suspecting that LSD-25 had caused these fireworks, Hofmann decided to test this hypothesis the following Monday, the nineteenth. At 4:20 in the afternoon, with his assistants gathered around, he dissolved what he thought was a prudently infinitesimal amount of the drug—250 millionths of a gram—in a glass of water and drank it down.

At 4:50 he noted no effect. At 5:00 he recorded a growing dizziness, some visual disturbance, and a marked desire to laugh. Forty-two words later he stopped writing altogether and asked one of his lab assistants to call a doctor before accompanying him home. Then he climbed onto his bicycle—wartime gasoline shortages having made automobiles impractical—and pedaled off into a suddenly anarchic universe.

In Hofmann's mind this wasn't the familiar boulevard that led home, but a street painted by Salvador Dali, a funhouse roller coaster where the buildings yawned and rippled. But what was even stranger was the sense that although his legs were pumping steadily, he wasn't getting anywhere.

Hofmann was about to communicate this predicament to his young assistant (who later reported that they had cycled at a vigorous pace) when he discovered his voice wasn't working either. Whatever mechanism translated thoughts into speech, that too was broken.

When the doctor reached Hofmann's house, he found his patient to be physically sound, but mentally … mentally Hofmann was hovering near the ceiling, gazing down on what he thought was his dead body. Gone were the pleasant fireworks of the previous Friday. He had been invaded by a demon. When his neighbor arrived with milk, a liquid Hofmann hoped would neutralize the poison, she was no longer gentle Mrs. R., but a "malevolent insidious witch" wearing "a lurid mask."[3]

Lying in bed, his thoughts moving at a thunderous clip, Hofmann wondered if he had permanently damaged his mind. Compounding his distress was the fact that his wife and children were visiting in the country. What if they returned and found not Papa, but a lunatic, a cautionary footnote in the history of psychopharmacology?

Although it took as its subject one of mankind's oldest pursuits—the use of drugs for pleasure and healing—as an accepted discipline psychopharmacology was less than a century old. The first scientific treatment of the subject was generally thought to be Von Bibra's Die *Narkotischen Genusmiffeel untie der Mensch*, published in 1855, a work that identified seventeen different mind-altering plants. Von Bibra had urged others to explore this fascinating back alley of the botanical world, and his advice was followed some thirty years later by a Berlin toxicologist and artist named Louis Lewin. In 1886 Lewin had published the first pharmacological study of *kava*, a plant root indigenous to the South Seas, where the natives considered its intoxication to be far superior to that of alcohol.

A year after publishing this monograph, and probably as a result of it, Lewin received some muscale buttons from Parke, Davis, an American apothecary that would one day evolve into the multinational pharmaceutical corporation of the same name. *Muscale* and *mezcal* were the American names for the cactus buttons that the Mexicans called *peyote*. Long popular among the Indians of Mexico, peyote had spread north of the Rio Grande in the aftermath of the Civil War and had quickly achieved ritual status among tribes like the Kiowa and the Comanches. Lewin was sufficiently intrigued by the buttons to finance his own expedition to the American southwest, where he gathered numerous specimens—one of which, the dumpling cactus, was later christened *Anhalonium lewinii*. Back in his Berlin laboratory, Lewin isolated four different peyote alkaloids, but balked at self-experimentation when animal tests failed to reveal which was the psychoactive element. That risky adventure fell to Arthur Heffter, a colleague of Lewin's, who ingested each alkaloid until he isolated the important one, which he christened *mezcal*.

Just as an earlier generation of intellectuals had gathered around Diderot's Encyclopedia, men like Lewin and Heffter were also part of a great collective project, one deriving from Linnaeus, which sought to classify nature in all its variety. It was a project that transcended cultural and class boundaries, and it was carried forward largely by amateurs: the botanizing parson, the baron who financed collecting expeditions, the medical doctor who dabbled in toxicology and pharmacology. A substance like peyote, arriving in the midst of this international quest with its romantic aura of the American frontier, was bound to arouse interest. Buttons were dispatched to every important museum. Lewin himself gave them to Paul Henning at Berlin's Royal Botanical, and another German named Helmholtz mailed a sample to Harvard.

A similar dispatch, originating in Washington, D.C., ended up in the hands of Weir Mitchell, a Philadelphia physician-novelist who specialized in nervous disorders (*Injuries of the Nerves and Their Consequences*, 1872) and historical romances {*Hugh Wynne, Free Quaker*, 1896). Having read of peyote in the *Therapeutic Gazette*, Mitchell obtained a small supply of buttons from the article's author, a Doctor Prentiss. He tried them on May 24, 1896.

At first Mitchell experienced a surge of energy, closely followed by a feeling of intense mental acuity. Selecting a psychology paper that had resisted improvement all week, he sought to test this newfound brilliance. But the paper proved as resistant as ever. Next he tried a quick lyric, then a complicated math problem. Neither validated his feeling of expanded intellect. Fatigued, Mitchell retired to his bedroom for a nap. It was then that the visions came. Writing about his self-experiment in the austere pages of the *British Medical Journal*, Mitchell told how thousands of galactic suns had streamed across his vision, how a gothic tower gleaming with jewels had shot up to an immense height. It was a dreamy landscape, somewhat reminiscent of the American painter Maxfield Parrish, and it was read with interest by men like Havelock Ellis and William James.

Havelock Ellis, in many respects, was the English equivalent of Mitchell, being another medical man who preferred the literary life to the daily practice of medicine. Although he published hundreds of poems, essays, and medical treatises, Ellis is remembered today for the controversy surrounding his massive seven-volume *Psychology of Sex*, which the English courts promptly banned on the grounds of obscenity. On Good Friday, 1897, alone in his London rooms, Ellis swallowed three peyote buttons and sat down to wait. He experienced a rush of imagery similar to Mitchell's, with the distinction that his landscapes tended to be closer to Monet than Parrish.

Intrigued by these visual dramatics, Ellis thought it might be interesting to give peyote to a painter. He persuaded an artist friend to act as guinea pig, and then overdosed the poor man, causing him "hellish attacks of pain at the heart and a sense of imminent death." At one point Ellis offered the tormented fellow a biscuit. But when he touched it, the doughy lump burst into flame, tiny blue flames igniting his trousers and leaping instantly up one side of the body. And when he finally popped the biscuit into his mouth, it cast a light that was bluer than the blue of Capri's Blue Grotto, or so he told the bemused Ellis. Whereas Ellis had been captivated by peyote's transfiguration of the world, "such a silent and sudden illumination of all things around, where a moment before I had seen nothing uncommon," it had seemed a kind of madness to the painter. "Its strangeness affected me more than its beauty."[4]

Undeterred, Ellis gave the buttons to several other artistic friends, among them the poet William Butler Yeats. *Whimsical* is the word for what Yeats experienced in the Other World: "It seems as if a series of dissolving views were carried swiftly before me, all going from right to left, none corresponding with any seen reality. For instance I saw the most delightful dragons, puffing out their breath straight in front of them like rigid lines of steam, and balancing white balls on the end of their breath."[5]

Havelock Ellis summarized his experiments in "Mezcal: A New Artificial Paradise," an essay that appeared in the January 1898 issue of the *Contemporary Review*. Predominantly descriptive, the article did venture several generalizations, the most audacious being Ellis's assertion that an afternoon with peyote was an experience most educated gentlemen should try once or twice.

That was going too far for the editors of the *British Medical Journal*, who had published Weir Mitchell's much more conservative report on peyote. Do not be fooled by Ellis's paradise, warned the editors, it was actually a "New Inferno":

> While admiring the ripe descriptive powers of Mr. Ellis and his friends, we must venture to point out that such eulogy for any drug is a danger to the public … Mr. Ellis, it is true, states that in his opinion habitual consumption of large amounts would no doubt be injurious, but he does go on to claim that "for a healthy person to be once or twice admitted to the rites of mescal is not only an unforgettable delight, but an educational influence of no mean value." Surely this is putting the temptation before the section of , the public which is always in search of new sensation.[6]

And regarding Ellis's claim that intellectuals would find peyote particularly delightful, the editors dryly noted that the Kiowa Indians of the American Plains were not "the most intellectual of the inhabitants of our sister continent."

Reading through this editorial, probably the granddaddy of all antipsychedelic editorials, two styles of argument are apparent, neither of which is particularly scientific, and both of which will reappear as our story runs its course. The first is the standard polemical technique of exchanging an opponent's term (paradise), for one of your own choosing (inferno), thereby redefining the debate to better suit your own prejudices. The second is less a stylistic device than the assumption, predominant in the Protestant West, that sensations, particularly new sensations, are necessarily bad. Drugs like peyote, argued the *BMJ* editors, will appeal to the wrong sort. Yet going by the evidence, they had so far appealed to two respected intellectuals, both of whom deemed the experience a worthy one.

By opting for the moralizing tone, the *BMJ* editors skirted a more interesting area of argument, which was just then becoming a topic of debate: what were legitimate drugs of use and what were dangerous drugs of abuse? There wasn't an issue of the *BMJ* that didn't contain a pitch for some new drug. The difference was that these were proposed cures for specific diseases, whereas peyote had no proven medical use. But did that automatically make it a drug of abuse? Was a substance used to promote nonpathological symptoms such as ecstasy, visions, even terror, a danger to the public if it wasn't a danger, physically or psychologically speaking, to the individual?

There was no simple answer then. There is no simple answer today. The fact is, the mind is constantly dulled by the inflow of everyday information, the same blue sky, the same wife and kids; it uses sensation the way we use grit to sharpen a dull blade. So to legislate against sensation seeking is to legislate against one of our strongest drives … .

But back to our story. Just as the editors of the *BMJ* had feared, peyote use increased, particularly among the bohemian subcultures that were emerging in London, Paris, New York. As the twentieth century moved casually toward the First World War, places like Montmartre and Greenwich Village became centers of intellectual ferment. In Greenwich Village much of this cultural flux revolved around a salon run by Mabel Dodge, a wealthy socialite with designs on becoming America's Madame de Stael. On any given evening one might find Big Bill Haywood, leader of the International Workers of the World, cheek by jowl with the anarchists Emma Goldman and Alexander Berkman, as well as freethinking Harvard boys like Walter Lippmann and John Reed. In the spring of 1914 Dodge conducted a peyote ritual (she called it, significantly, "an experiment in consciousness") that was modeled with quaint fidelity on the actual Kiowa ceremony.

> Raymond went out and found a green branch to make the arrow and he found the eagle feathers. For a fire he laid a lighted electric bulb on the floor with my Chinese Red shawl over it, and for the mountains of the moon—I forgot what he did about that—but the Peyote Path was a white sheet folded into a narrow strip running towards the east along the floor.[7]

Raymond, Dodge wrote, swallowed his first peyote button and proceeded to howl like a dog, while she floated above it all, inviolate, filled with smug laughter for all the "facile enthrallments of humanity … anarchy, poetry, systems, sex, society."

Looking back on that evening from the vantage of seventy years, it is possible to discern a psychedelic epoch in miniature. In less than thirty years peyote had passed from the scientists to the intellectuals to the bohemians. Had the First World War not intervened, there is no telling how far the "dry whiskey" might have spread. After the war interest in these matters was largely confined to Germany, where in 1919 Ernst Spath succeeded in producing a synthetic version of the peyote's psychoactive alkaloid, which he called mescaline. Since it was no longer necessary to wrestle with those evil-tasting buttons—William James had managed to get only a bit of one down before succumbing to nausea; "Henceforth I'll take the visions on trust,"[8] he had written to brother Henry—research thrived. In the early twenties Karl Beringer published a massive study of mescaline, *Der Meslcalinrausch*, literally "the mescaline intoxication." And in 1924 Louis Lewin produced his masterwork, *Phantastica*, in which he kept his pact with Von Bibra and catalogued most of the world's known mind-altering plants. Lewin divided this often contradictory profusion into five classes: euphorica, phantastica, inebrianta, hypnotica, and excitiantia. Seven years after its German publication, an English translation appeared, to scant notice save for an essay by Aldous Huxley that appeared in the Chicago *Herald Examiner*.

But for our purposes the unlikely encounter between Huxley and *Phantastica* is a crucial coincidence. Huxley had chanced upon the book, "dusty and neglected on one of the upper shelves" of his bookshop, in early 1931. It was a serendipitous encounter, for he had just completed a new novel, his fifth, which was a marked departure from the highbrow social satire that was his trademark. In this latest, called *Brave New World*, Huxley had designed an anti-utopia where the social glue wasn't a shared set of ethical assumptions or a national political philosophy or a conception of life's ultimate purpose, but a drug called soma, a name Huxley had cribbed from the mind-altering substance in the Rig Veda. Having designed his own mind drug out of whole cloth, as it were, Huxley was intrigued by Lewin's real-life compendium. And it elicited a prophetic pronouncement from him.

"All existing drugs," he wrote in the *Herald Examiner*, "are treacherous and harmful. The heaven into which they usher their victims soon turns into a hell of sickness and moral degradation. They kill, first the soul, then, in a few years, the body. What is the remedy? 'Prohibition,' answer all contemporary governments in chorus. But the results of prohibition are not encouraging. Men and women feel such an urgent need to take occasional holidays from reality, that they will do almost anything to procure the means of escape … . The way to prevent people from drinking too much alcohol, or becoming addicts to morphine and cocaine, is to give them an efficient but wholesome substitute for these delicious and (in the present imperfect world) necessary poisons. The man who invents such a substance will be counted among the greatest benefactors of suffering humanity."[9]

Albert Hofmann did not go mad. In the morning he felt fine. More than fine, actually. Wandering into the garden after breakfast, he noticed that everything was gleaming with an extraordinary vitality. His senses were vibrating, attuned. It sounded crazy, but he felt reborn.

Equally curious was his almost perfect recall of the previous evening's turmoil. That suggested that his conscious mind had remained, well, conscious throughout the experience. Upon reaching his office, Hofmann composed a report that brought an immediate response from Arthur Stoll. "Are you certain you made no mistake in the weighing?" Stoll wanted to know. "Is the stated dose correct?"[10]

There had been no mistake. Hofmann's incredible experience had been caused by a mere 250 millionths of a gram of LSD-25, little more than a speck, which made the stuff the most potent chemical known to man, some five thousand to ten thousand times more potent than an equivalent dose of mescaline, the substance LSD-25 most closely resembled. On subsequent experiments the dosage was lowered by two-thirds.

From Hofmann, its discoverer, LSD-25 went to Sandoz's pharmacologic department, where Ernst Rothlin tested its toxicity on a variety of animals. Cats, mice, chimpanzees, spiders, all weathered massive amounts of LSD-25 without apparent physical damage, although there was considerable behavioral oddity. Spiders, for instance, created webs of remarkable precision at low dosages, but lost all interest in weaving at higher ones. Cats exhibited a similar variability, ranging from nervous excitability to catatonia. But the most prophetic test, although no one realized this at the time, was the one with the chimps. One day Rothlin injected LSD into a lab chimp and then reintroduced the animal to its colony. Within minutes the place was in an uproar. The chimp hadn't acted crazy or strange, per se; instead it had blithely ignored all the little social niceties and regulations that govern chimp colony life.

At this point Sandoz faced a standard industry dilemma: should they continue research in hopes that a marketable use materialized, or should they go on to something else? Their decision to follow the former course was heavily influenced by the mescaline research of Beringer and others. In *Der Meskalinrausch*, Beringer had commented on the similarity between mescaline intoxication and psychosis, an observation that was echoed by more recent researchers, notably E. Guttmann and G. T. Stockings. "Mescaline intoxication," the latter had written in 1940, "is indeed a true 'schizophrenia' if we use that word in its literal sense of 'split mind,' for the characteristic effect of mescaline is a molecular fragmentation of the entire personality, exactly similar to that found in schizophrenic patients."[11]

Besides giving it to schizophrenics. Stockings had tried mescaline himself, and had discovered that he could reproduce a whole spectrum of abnormal states: catatonia, paranoia, delusions of persecution, delusions of grandeur, hallucinations, religious ecstasy, homicidal impulses, suicidal impulses, apathy, mania. To use Freud's vocabulary, drugs like mescaline seemed to shatter the unity of the ego. It opened the Pandora's box of the unconscious.

The first human experiments, aside from the self-experimentation of the Sandoz staff, were conducted by Arthur Stoll's son Werner, who was a psychiatrist affiliated with the University of Zurich. Besides duplicating some of Stockings's work, Stoll made an additional discovery: in low dosages, LSD seemed to facilitate the psychotherapeutic process by allowing repressed material to pass easily into consciousness. Later there would be rumors that one of Stoll's patients had committed suicide after an LSD trip. In some versions of the story the patient was a female psychotic who killed herself two weeks after taking the drug in a therapeutic session; in others the woman's death occurred after the drug had been administered without her knowledge.

Stoll published his findings in 1947, and shortly thereafter Sandoz offered to supply LSD to select researchers. Trade-named Delysid. the accompanying literature suggested two possible uses:

> **Analytical:** To elicit release of repressed material and provide mental relaxation, particularly in anxiety states and obsessional neuroses.
>
> **Experimental:** By taking Delysid himself, the psychiatrist is able to gain an insight into the world of ideas and sensations of mental patients. Delysid also can be used to induct model psychoses of short duration in more normal subjects, thus facilitating studies on the pathogenesis of mental illness.

It arrived on American shores in 1949, which was a good year for a new mind drug to be making its debut.

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[1] "a peculiar presentiment …" Albert Hofmann, *LSD: My Problem Child,* p. 14.

[2] "an uninterrupted stream of fantastic images …" Albert Hofmann, *Ibid.,* p. 15.

[3] "malevolent insidious witch …" Hofmann, *op. cit.,* p. 17.

[4] "such a silent and sudden illumination … ." Havelock Ellis, *Contemporary Review,* Jan. 1898,

[5] "it seems as if a series… ." Havelock Ellis, *Ibid.,* p. 139.

[6] "while admiring the ripe descriptive powers …" *British Medical Journal,* Feb. 5,1898, p. 390.

[7] "Raymond went out and found a green branch … ." Harvey Wasserman, *Harvey Wasserman's History of the United States,* p. 204.

[8] "henceforth I'll take the visions on trust …"

[9] "all existing drugs …" Aldous Huxley, *Moksha,* p. 4-5.

[10] "are you certain you made no mistake …" Hofmann, *op. at.,* p. 21.

[11] "mescaline intoxication is indeed a true schizophrenia …" Robert S. De Ropp, *Drugs and the Mind,* pp. 177-79. Delysid. Sandoz LTD. Basle, Switzerland.

2. The Cinderella Science

If anything symbolized the public's newfound respect for psychological thinking, it was the pigeon. For two days in the summer of 1947, while America's psychiatrists caucused in the conference room of New York's Pennsylvania Hotel, a pigeon was trapped in the lobby, flitting from chandelier to potted palm, eluding all attempts at capture.

Had such an ornithological visitation occurred even a few years earlier, the papers would have been full of sly plays on birdbrain and the like. Back then the bearded, sex-obsessed psychiatrist had been a stock Hollywood lampoon. Back before the war, the Nazis, the concentration camps, the Bomb, back when the thesis that this was a mad mad world because we were a mad mad species had few adherents. Back, circa 1940, when there were only three thousand psychiatrists in the whole country, and even fewer psychologists.

There was no one explanation for psychology's postwar emergence as a serious discipline. Part of it was just the normal drift of science, the accumulation of theory and experiment, the attraction of capable minds to a new endeavor. But part of it was also the way war and revolution had shattered the serene rationalities of the Victorian and Edwardian eras. The fact that a hundred thousand men had died quibbling over a few yards of mud one day in 1916 had gone a long way toward popularizing the theory that our mental equilibrium was constantly being tested by what the ancients would have called inner demons, but which this new science was calling the unconscious.

A genuine period of the psyche was the way Grace Adams, writing in a 1936 *Atlantic Monthly*, described the years between 1919 and 1929; years when "literate Americans, and much of illiterate America, were more deeply interested in the whats and whys and wherefores of the human mind than they ever were before, and than, it seems likely, they ever will be again."[1]

These were the years when the public acquired a working knowledge of such exotica as libido, IQ, conditioned reflexes, perversions, stimulus and response; when they digested Behaviorism, Freudianism, intelligence testing and gestalt psychology; when they purchased hundreds of books with titles like *The Psychology of Beauty*, *The Psychology of Buying, The Psychology of Bolshevism*, to peruse just the *B*s.

According to Adams, much of this enthusiasm could be traced to a single source: a battery of intelligence tests that had been administered during WWI to the almost two million recruits of the American Expeditionary Force by psychologists attached to the Surgeon General's staff. The results had been discouraging. Besides weeding out 8,646 recruits for mental insufficiency, the tests had also determined that the average mental age of these men—and by extension the nation—was thirteen years and one month. In other words, the average American was about as smart as a young teenager. What followed was an orgy of mental self-improvement, which lasted until the stock market crash, after which few had time for anything but material self-improvement.

By the mid-Thirties psychology had become a confederation of squabbling clans, which was why Grace Adams's article in the *Atlantic* had such a eulogistic tone. Within psychoanalysis there were a half dozen different schools, each headed by a charismatic thinker like Jung or Adler, who accepted the basic Freudian dynamic while differing in their interpretation of its effect on daily life. Behaviorism, which was also known as experimental psychology, was a much more unified body of dogma, and one that stood in opposition to everything psychoanalysis cherished. Through a clever bit of sophistry, the Behaviorists had decided that since many mental acts couldn't be measured they therefore didn't exist. The Freudian unconscious, to a Behaviorist, was about as scientific as a sonnet by Keats. Man was a robot conditioned by his environment, a complex of stimulus-response units! To back up these claims, the Behaviorists assembled a wealth of data derived from experiments with rats and pigeons. As an oft-told joke put it, psychology had first lost its soul, then its mind.

Behaviorism was popular in the corporate boardrooms, where its lessons were diligently applied to the American worker, whereas psychoanalysis found its audience among the wives and bohemian offspring of these same corporate managers.

Squeezed between these two massifs were several smaller duchies, principally medical psychiatry and academic psychology. Closely allied with neurology, medical psychiatry was interested in the organic rather than the psychic cause of mental illness; it favored surgery to talk therapy, and by the mid-Thirties was on the verge of two important breakthroughs. The first involved the severing of fibers in the brain's frontal lobes, a simple operation known technically as a leucotomy or lobotomy, that pacified even the most aggressive psychotics. The second discovery was less a specific surgical operation than a dawning awareness that certain drugs sometimes altered a psychosis's traditional course.

What was left, academic psychology, can best be summarized by quoting James Bruner's description of what it was like to be a psychology graduate student at Harvard in 1938: "We went together to Kurt Goldstein's seminar on brain and behavior, to Bob White's on 'Lives in Progress,' to Gordon Allport's on the life history, to Smitty Stevens on operationism, to Kohler's William James lectures, to Professor Boring's on sensation and perception, to Kurt Lewin's on topological psychology, whether we were intending eventually to be animal psychologists, social psychologists, psychophysicists, whatever."[2] At a place like Harvard, academic psychology grouped itself into two nominal camps: the experimentalists, Bruner among them, who studied perception, memory, learning, and motivation; and the personality psychologists, who were interested in the way habits, traits, and values combined to form the individual ego. Although the experimentalists considered themselves more hard-nosed and scientific, the personality psychologists (appropriately) possessed two dynamic leaders in the patrician Harry Murray and the less flamboyant but brilliant teacher, Gordon Allport. At the Harvard Clinic, Murray was pioneering the use of diagnostic tests that purportedly provided an accurate reading of a patient's personality.

These tests had a curious background. Besides administering intelligence tests to America's doughboys, the Surgeon General's psychologists had also experimented with a questionnaire designed to weed out potential psychoneurotics. This was the Wordsworth Personal Data Sheet, named after its creator, Robert Wordsworth, a Columbia University psychologist. Using Binet's IQ test as a model, Wordsworth had come up with a 125-question inventory that was supposed to detect which personalities would crumble under fire. Unfortunately, as a practical device the Wordsworth had been a failure. Yet an odd thing had happened. Instead of shunning the Wordsworth, psychologists had been "so overjoyed at having a psychoneurotic tool—even one that didn't work—that [they] enthusiastically threw all [their] energies into its use and development."[3]

The Wordsworth implied that human personality was quantifiable, that you could measure degrees of extroversion and neurosis, which was a godsend to psychologists caught between Behaviorism's penchant for rats, and the untestable models of psychoanalysis. By the mid-Thirties there was an abundance of these diagnostics, ranging from Hermann Rorschach's inkblots (1921) to the Minnesota Multiphasic Personality Index and the Thematic Apperception Test, which was co-created by Harry Murray.

These tests came in two styles. The first resembled a standard school quiz, either true/false or fill in the blank, which asked things like: Do you daydream frequently? Do you prefer to associate with people younger than you? Are you troubled with the idea that people on the street are watching you? The second style favored neutral devices like inkblots or pictures. The Thematic Apperception Test, for example, used nineteen black and white illustrations, which you were asked to explain. The assumption was that the resulting fantasies would be loaded with unconscious data.

Although the predictive value of these diagnostics was questionable, their popularity was enormous. When America declared war in 1941, personality tests were an important part of its therapeutic arsenal. Fourteen million inductees were tested, with the disturbing result that 14 percent were declared unfit due to neuropsychiatric disorders. The size of this figure shocked a postwar America that already was tapping its toes to the beat of Henry Luce's American Century. Was it possible to rebuild Europe, bolster the GNP, educate the young, and thwart the communist menace, if 14 percent of our able-bodied young men were judged less than sound? Congress didn't think so, nor did the media, who made mental health, and our lack of it, a staple of postwar reportage.

In many ways it was a replay of the uproar that had greeted the army intelligence scores of the First World War. But what distinguished this second flowering of psychological enthusiasm from the first was the Depression, and in particular the philosophy of government intervention in the form of massive public works programs that had grown out of that decade's economic woes. Confronted by evidence that public sanity was more fragile than heretofore suspected. Congress responded with the National Mental Health Act, signed into law on July 3, 1946. Its first appropriation, a modest $4.2 million, was targeted for research into the cause, diagnosis, and treatment of neuropsychiatric disorders; the education of psychiatrists and psychologists; and the establishment of a nationwide network of clinics.

The numbers tell the rest of the story. In 1940 there were barely three thousand psychiatrists; a decade later, seven thousand five hundred. In 1951 the American Psychological Association counted eight thousand five hundred members, a twelvefold increase since 1940; by 1956 membership would surpass fifteen thousand. And the money curve was even more robust: by 1964 that modest $4.2 million will have jumped fortyfold to $176 million.

It was the arithmetic of twentieth-century progress. Where there had been only a handful of pioneers a decade before, now there were thousands of sophisticated intellects focused on the same problems. The result might be a little chaotic, but it worked. The Manhattan Project had proven that. And if the human mind was capable of penetrating invisible matter and releasing the energy that powered the sun, then wasn't it absurd to think that madness or maladaptation or depression could withstand a similar onslaught?

Inside the Pennsylvania Hotel, while the pigeon cavorted in the lobby, America's psychiatrists were electing the top wartime psychiatrist, Brigadier General William Menninger, as their new standard bearer. Described by the press as "neither a crackpot nor a foreigner," Menninger had occupied, by 1948, most of the top jobs within the psychiatric establishment.[4] From this vantage he urged his colleagues, of which there were still fewer than five thousand, to forgo their traditional clientele of neurotic dowagers and wealthy bohemians, and concentrate on the man in the street, for that was where the real danger lay. The war, Menninger wrote, had taught two great lessons: (1) that there were far more maladjusted people than anyone had previously expected; and (2) that under strain even the sanest individual can break down. "Is there any hope," he asked his audience that day in the Pennsylvania Hotel, "that medicine, through its Cinderella, psychiatry, can step forward and offer its therapeutic effort to a world full of unhappiness and maladjustment?"[5]

As is usual with crises that leap upon us unawares, a certain amount of overstatement occurred. Extrapolating from that questionable figure of 14 percent, it wasn't long before some psychiatrists were maintaining that everyone was crazy, or potentially crazy. *Time*, in the first feverish flush, quoted one psychiatrist to the effect that there were probably only one million normal people in the whole country—normal in this context meaning "no anxieties, no fears, no strong prejudices, no attractive vices."[6]

Particular attention was paid to the children, for they were "fertile soil into which all kinds of mind-twists and deviations strike the root, grow rapidly like weeds, and crush everything that is normal."[7] The Bureau of Census estimated that each year 840,000 kids were lost to neurosis, not to mention the disruption they caused in the smooth childhoods of their peers. According to *Newsweek*, a diligent psychiatrist could detect these weeds in children as young as one and two years old. A Doctor Leo Kanner described these problem kids as "quiet and retiring, anxiously over-conscientious, almost too goody goody. Or they may be highly irritable, sensitive, and disagreeable … preschizophrenic children are overly moody, peevish, humorless, easily angered, taciturn, secretive, suspicious, careless, flighty, and easily fatigued."[8]

At times it seemed no mood or activity was immune from the psychological lexicon. Happiness became euphoria; enthusiasm, mania; creativity was a socially approved outlet for neurosis, while homosexuality and other forms of deviant bedroom behavior were an indication of psychopathology; as were "alcoholism and drug addiction … vagabondage, panhandling, the inability to form stable attachments."[9] Old age became senile psychosis.

What was lost in this surge of prestige and money was the almost religious adherence to grand theories, be they Freudian or Behaviorist. Data poured in from a dozen different directions. When the first issue of the *Archives of General Psychiatry* appeared in 1956, the editor, Roy Grinker, promised to publish "contributions from all disciplines whether morphological, physiological, biochemical, endocrinological, psychosomatic, psychological, psychiatric, child psychiatric, psychoanalytical, sociological and anthropological … eventually a unified science of behavior may emerge," he wrote in the first editorial.[10]

Great things in particular were expected from the marriage of psychology and neuroscience, which was just then emerging from infancy. The late Forties were the period when the various centers of the brain were discovered and mapped. Aldous Huxley paid a memorable visit to a UCLA lab that was filled with cats and monkeys, each with a forest of electrodes sticking out of its skull. The caged animals, by pressing a lever, could massage their brains' pleasure centers with little electrical shocks, an experience so wondrously ecstatic that some pressed the lever eight thousand times an hour, until they collapsed from exhaustion and lack of food. "We are obviously very close to reproducing the Moslem paradise where every orgasm lasts six hundred years," Huxley wrote to a friend.[11]

But even more momentous than the mapping of the pleasure centers was the discovery of the chemical brain. Up until the late Forties the brain had been conceptualized as a complex electrical system, an "enchanted loom … where millions of flashing shuttles weave a dissolving pattern." But then, beginning with nor-adrenaline in 1946, a class of chemical messengers were discovered that served as transmission devices, carrying impulses from cell to cell. The existence of the chemical brain raised some interesting questions. Might not madness, psychosis, etc. be the result of a metabolic malfunction? Wasn't it possible that these pathological states could be caused by an overabundance or a depletion of one of these chemicals? Or did these chemicals, perhaps through some undiscovered mutation, become something else? These were interesting but as yet unanswerable questions, which were the best kind. As one researcher put it, "the man who discovers the chemical basis for madness has a Nobel in his pocket."[12]

The fact of the chemical brain had important ramifications in a corollary and hotly debated area of psychology, namely the use of drugs in therapy. This had become an issue back in the Thirties, when a Viennese psychiatrist named Sakel began treating schizophrenics with insulin. Sakel claimed that between thirty and fifty hypoglycemia comas could arrest schizophrenia in its early stages, but was useless in more advanced cases. The psychological community had barely digested this piece of news than word came that a Hungarian doctor was successfully treating schizophrenia by inducing epileptic fits with another drug, cardiozol, a technique that he later expanded to include depressives.

Classical analysts, with their carefully articulated schemes of repression, neurosis, and abreaction, greeted this work with derision. In 1939 an English psychiatrist named William Sargant attended the American Psychiatric Association's convention in St. Louis. His description of the debates, the rancors, the partisan posturing reads like a cross between a Marxist cell meeting and the Harvard-Yale game. When a paper was read claiming 40 percent of the patients receiving cardiozol treatments had hairline fractures of their vertebrae, "the audience almost jumped on their chairs, cheering the speaker for having given what seemed the death blow to this treatment."[13] Sargant also observed that Dr. Walter Freeman, one of the first Americans to popularize the lobotomy, was treated as a pariah. Not so much because of problems attending his procedure, as for his temerity in suggesting that madness may have a physical cause and therefore a physical treatment. "They felt so insulted by this attempt to treat otherwise incurable mental disorders with the knife that some would almost have used their own on him at the least excuse," Sargant reported.[14]

But by the late Forties cracks were beginning to appear in this blanket refusal to accept the evidence that some drugs did alter the course of some psychopathologies. "One doesn't have to know the cause of a fire to put it out," Menninger said.[15] Sensing a lucrative market, the pharmaceutical companies began an aggressive search for mind drugs. Thorazine, the first major tranquilizer, appeared in 1954, the sedative Miltown a year later, to be followed by Stellazine, Mellaril, Valium, Librium, Elavil, Tofranil—a miscellany that was destined to change the face of psychology by giving it a technology that could control, if not actually cure, most mental illness.

By the mid-Fifties the American Psychological Association divided its membership into eighteen different specialties—the Division of Personality and Social Psychology, the Division of Industrial and Business Psychology, etc.—and published eleven different journals just to keep its members up to date on current research. The largest division, clinical psychology, was also one of the newest. Clinical psych was a sort of psychological Frankenstein, in that it combined the scientific rigor of Behaviorism, the therapeutic insights of psychoanalysis, and the diagnostic techniques of personality psychology. The clinical psychologist was the scientist/healer par excellence.

So it was inevitable that sooner or later one side of this professional persona, the scientist, would focus on just how successful the other side, the healer, really was. In 1955 two clinical psychologists working in the Bay Area published the results of a study in which they measured the progress of a group of patients receiving psychotherapy at Oakland's Kaiser Hospital against a group of prospective patients who had applied for therapy but had been put on a waiting list. Upon testing the two groups after nine months, the psychologists were astonished to discover that both showed similar ratios of improvement: a third had gotten better, a third had gotten worse, and a third had stayed about the same.

The principal author of this study was a young psychologist named Timothy Leary.

Detractors of the Cinderella science interpreted Leary's data as proof that psychotherapy was a hoax. But this wasn't Leary's interpretation. He believed that the Kaiser study confirmed what he had long felt, that what passed for therapy was merely a collection of techniques and tricks that worked sometimes, but failed just as often. In the successful cases something else was happening, a "vitalizing transaction," as his collaborator, Frank Barron, put it: the healing moment was "ephemeral, as frail as love or blessedness … in almost all appearances we remain the same, even though we are different."[16]

And the key to these vitalizing transactions lay somewhere beyond consciousness, in the depths of the unconscious mind.

It is worthwhile asking how much of psychology's outward expansion was a response to its inability to solve its own central mystery. The unconscious was a void at the center of psychology. Studying it was like studying air bubbles in the middle of the ocean and wondering what presence, moving in the depths below, was responsible. It was a walled city, a *terra incognita*, knowable only through the signals that broke against the surface of the personality. In the public mind it was like the proverbial locked room in a Victorian mansion.

Most people credited Sigmund Freud with the discovery of the unconscious, an honor the Freudians worked hard to promote. But formal debate over the mind's internal architecture predated the Viennese doctor by several decades, while informal debate stretched back beyond the Greeks. Modern discussions of the unconscious are generally dated from 1869, when the German philosopher Eduard von Hartmann published *The Philosophy of the Unconscious*. Von Hartmann portrayed the unconscious as a parallel world whose geography, while unknowable by normal methods of introspection, was not immune to study. Echoes of the unconscious were everywhere, in dreams, myths, puns, jokes, fantasies; in abnormal behavior and its opposite, supernormal behavior, which was the realm of genius and mystical experience.

Hartmann's book presaged a formidable assault upon the locked room, which was conceived as both "a rubbish heap as well as a treasure house," containing "degenerations and insanities as well as the beginning of a higher development."[17] By 1900 psychologists had distinguished four different kinds of unconscious: the conservative, or storing mind, which was the repository of memories and perceptions dating back to the first moments of life; the dissolutive, or repressing mind, which was made up of events that over time had been either forgotten or consciously repressed; the creative unconscious, instigator of the poetic muse, the creative trance, the intuitive leap; and the mythopoetic mind, wherein elements of the other three were constantly being combined into romances and fantasies.

Keep this last quality in mind, for its workings are intrinsic to our tale. And don't be fooled by the use of romances and fantasies into believing that the mythopoetic unconscious is some kind of fairytale land. Henri Ellenberger, whose *History of the Unconscious* is probably the best text available on these matters, speaks of its "terrible power—a power that fathered epidemics of demonism, collective psychoses among witches, revelations of spiritualists, the so-called reincarnation of mediums, automatic writing, the mirages that lured generations of hypnotists, and the profuse literature of the subliminal imagination."[18] The great psychologist Jung spent the last years of his life puzzling over the mathematics of the mythopoetic, concluding they were as cockeyed, in their own way, as those of quantum physics. Where did archetypes, those primordial images that we all carry around inside us, come from? Were they simply a byproduct of the brain's structure, were they the reflection of some sort of oversoul, or were they a symbolic residue that encoded our own evolution?

Unfortunately, history conspired to make Jung a rather conspicuous eccentric in these matters. No sooner had this rich model of the unconscious been proposed, than it fell under attack, first from the Freudians, who focused exclusively on the dissolutive unconscious, and second from the Behaviorists, who considered the whole thing unscientific poppycock. The result was a diminution, a simplification of the unconscious, so that by 1948 an anonymous *Times* man could write with an absolutely straight face: "The Id, which makes up most of the Unconscious, contains man's prehistoric, primitive, must-have-it-now, animal drives …

> Dr. Will Menninger has a single illustration of the Conscious v. Unconscious conflict. The mind, he says, is something like a clown act featuring a two-man fake horse. The man up front (the conscious part of the mind) tries to set the direction and make the whole animal behave; but he can never be sure what the man at the rear end of the horse (the unconscious) is going to do next. If both ends of the horse are going in the same direction, your mental health is all right. If they aren't pulling together, there's likely to be trouble.[19]

This, then, was the problem: for the mental health movement to succeed, a way had to be found to make sure that the rear end of the horse had the right marching papers. But this was impossible so long as the unconscious remained a locked room. A way had to be found to get inside, which was why, when Sandoz Pharmaceuticals announced it had discovered a substance capable of producing powerful psychoses, a lot of psychologists assumed that the key to the door had finally been found.

But what would they discover when they used this key? Would it be the Freudian unconscious, buzzing with repressed impulses? Or would it tend more toward the Jungian? Or maybe the Behaviorists were right, and the locked room was nothing more than an accountant's ledger with conditioned reflexes lined up in neat columns? Or maybe the door would open on to something much weirder …

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[1] "literate America and much of illiterate America …" Grace Adams, *Atlantic Monthly,* 1936, p. 82.

[2] "we went together to Kurt Goldstein's seminar …" Jerome Bruner, *In Search of Mind,* p. 33.

[3] "so overjoyed at having a psychoneurotic tool …" Martin Gross, *The Brain Watchers,* p. 22.

[4] "neither a crackpot nor a foreigner …" *Time,* October 25, 1948, p. 69.

[5] "is there any hope …" *Time,* June 2,1947, p. 74.

[6] "no anxieties, no fears …" *Time,* June 9,1947.

[7] "fertile soil into which all kinds of mind-twists … ." *Newsweek,* Jan. 20, 1947.

[8] "quiet and retiring, anxiously over-conscientious …" *Newsweek,* Jan. 20, 1947.

[9] "alcoholism and drug addiction …" Eric Goldman, *The Crucial Decade,* p. 107.

[10] "contributions from all disciplines …" Roy Grinker, *Fifty Years in Psychiatry,* p. 30.

[11] "we are obviously very close to reproducing …" Aldous Huxley, *Moksha,* p. 112.

[12] "the man who discovers …" Oscar Janiger, personal interview,

[13] "the audience almost jumped on their chairs …" William Sargant, *The Unquiet Mind,* p. 70.

[14] "they felt so insulted …" Sargant, *Ibid.,* p. 71.

[15] "one doesn't have to know the cause of a fire … ." *Time,* October 25, 1948.

[16] "a vitalizing transaction …" Frank Barren, *Creativity and Psychological Health,* p. 72.

[17] "a rubbish heap as well as a treasure house …" *White Crows,* p. 150.

[18] "terrible power … a power that fathered …" *Psychology Today.* March 1973, p. 55.

[19] "the Id, which makes up most of the unconscious … . if they aren't pulling together …" *Time,* October 25, 1948, pp. 65-66.