

STAGGED

Till Wittwer

SETUPS

A Prolog



You may not be aware of it, and that's okay. It's okay because you cannot know. You cannot know because you most likely only live on one timeline and have probably never questioned that. But here's the truth: There is more than one timeline. In fact, there are potentially infinite timelines out there, and they all run in meandering strings, sometimes disorderly like a hopelessly entangled roll of yarn, sometimes in neat parallel lanes, sometimes venturing quite far from each other, frequently colliding, and occasionally re-fusing after one of those collisions.

Remember: YOUR timeline is only one of number n timelines. Scientists suspect that we are all descendants of an ur-timeline, but that in the course of history there have been a number of events provoking time to fork and take diverging paths.¹ It is difficult to say how many events of this sort have taken place throughout humankind's history and thus to be clear about how many forked timelines there are, precisely. Recent trends in academia, reacting to debates around the post-colonial and a heightened interest in identity politics, tend to lean towards the hypothesis that the number of timelines, as well as the actual forking events themselves, cannot be objectively measured as they vary for each individual depending on cultural, socio-economical, political, gender, quantum, and other factors.²

Be that as it may, the scientific community widely agrees on the occurrence of specific global events that have caused timeline splits that have affected the paths of all humanity. These events, which are seen as being true across all timelines, are called Major Forks.³ This is the story about one of those forks, occurring on December 2nd, 1942, at 3:25pm.

¹ See e.g. Heidelberger, Martina, *Being in Times*, Niemeyer, 1927, reprint Y2K.

² For example, a timeline-split may have occurred after the capitulation of the Imperial Japanese army in WWII which for most of us who find ourselves on one timeline, marked the end of WWII in the South Pacific. However, for a number of Japanese soldiers this wasn't the case and only a few were found years later dispersed on Pacific Islands still fighting the (from our timelines' viewpoint imaginary) enemy. Similarly, the recent appearance of fortified partisanship under the neologism "alternative facts" points to nothing else than the exposure of people living on incompatible timelines whilst sharing continuous space.

For a broader overview, see Haroun, Monique, *Your Way Ain't My Way. Why Personal and Collective Histories Matter in Fork Theory*, Verso, 2016, and Wigner, E. P., "Remarks on the Mind-Body Question," in: Good, I. J. (Ed.), *The Scientist Speculates*, pp. 284-302, Heinemann, 1961. Experiments as recent as August, 2020 at the Centre for Quantum Dynamics at Griffith University in Brisbane, Australia, seem to underscore the complementary nature of perception and reality (see Bong, KW.; Utreras-Alarcón, A.; Ghafari, F. et al., "A strong no-go theorem on the Wigner's friend paradox," in: *Nat. Phys.* 16, pp. 1199-1205, 2020).

³ See Zucchetti, A.; Avondale, Z., "The Major Fork and Its Unitarian Potentials," in: Yo, Dal (Ed.), *Splitting the Difference—Quant, Quaint, Quasi. States of Difference*, MIT Press, 2012.

SIDES

December 2nd, 1942
3:20 pm



*Themistocles, Thucydides,
The Peloponnesian War,
X squared, Y squared,
H₂SO₄.
Who for? What for?
Who we gonna yell for?
GO, MAROONS!*

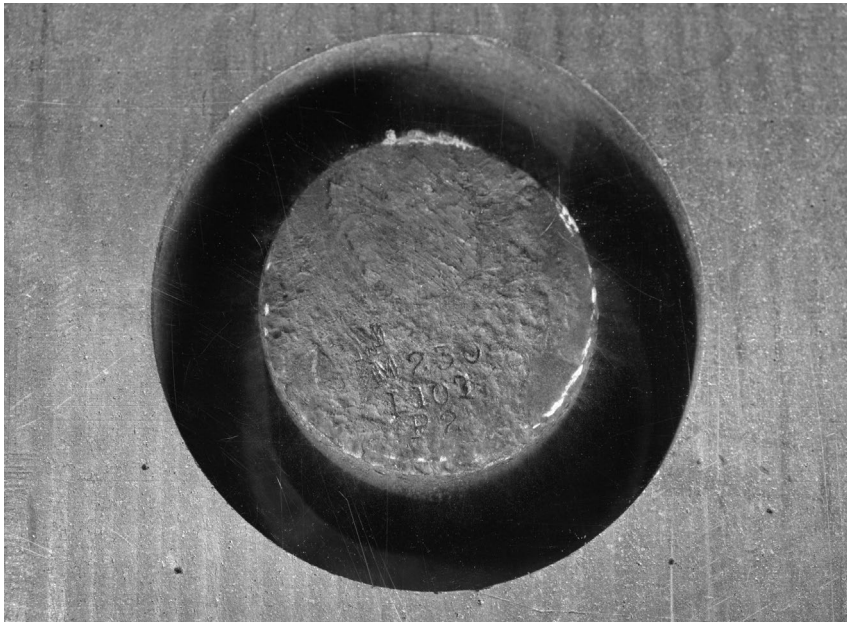
The players kneel down on this frigid early December afternoon in 1942. Two rows of padded giants, two sides facing each other, divided by a white line of chalk drawn on a turf that once must have been succulent grass but now looks more like an overplowed crop field. Leather caps, tightly hugging the colossus' skulls to prevent concussions, fractions and other minor blemishes, squeak in nervous anticipation as the players dig their toes into the half-frozen ground. A stiff wind has picked up over Lake Michigan and now blows its icy breath across the taut faces squatting around the forty yard line. Suddenly, a yelled command breaks the silence: "GEIGER, GEIGER, COUNT IT—HOT!" With surprising agility, considering their size, the players dash forward, stampeding toward each other; no regrets, no concern, no fear.⁴ First contact is full contact. Those capped heads are butted, those padded shoulders wedged, legs and arms interlocked in painful-looking contortions. On the field: Gurgled "oohs!" and growled "aahs!" and an occasional suffocated "ugh!" from a player that just got punched in the solar plexus. In the stands: The crowd's tension is released in a bulging roar. The marching band blares out the home team's anthem, small triangle-shaped flags are waved frantically, banners sporting disparaging slogans directed towards the opposing team are rolled out, straw hats fly through the air signaling excitement. It is one of those moments one wishes could last forever.

Well, here goes:

4 And no future, one is inclined to add.

PROTAGONISTS

December 1st, 1942
10:52 pm



As this year's holiday season draws closer, the eponymous spirit and cheer remains somewhat hushed. One can sense the growing concern regarding the fascist war machine's momentum weighing heavily on the upstart American soul. Hitler's advances in Europe loom over a country that has been engaged in armed conflict overseas for almost exactly one year now, and as of yet there is no end in sight. In short, people have a great desire for distraction to escape wartime austerity and general woes—and football is certainly a welcome one.

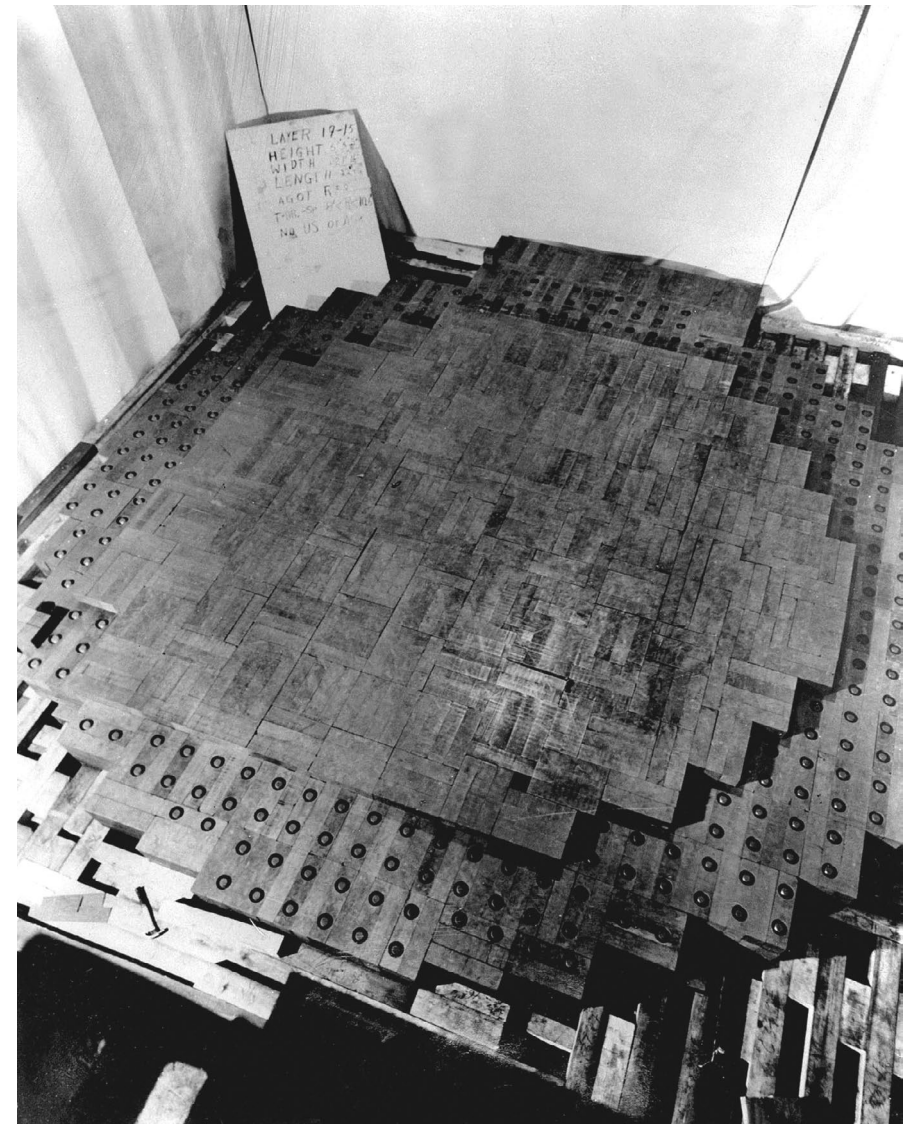
Eugene Wigner is not interested. On this first day of December, the physicist walks into a Chicago liquor store on South Halsted Street to purchase a bottle of Bertolli-brand chianti, imported from Italy, and some paper cups. The next day, in all likelihood, there will be something to celebrate, and Wigner wants to come prepared. He is not sure, however, if it will even occur to any of his colleagues at the University of Chicago—jokingly, they call themselves “The Nuclear Family”—to honor this special occasion with a treat. He has an inkling that it won't. Surely Fermi, who heads the “family,” will appreciate the little surprise, and perhaps even become a bit nostalgic for his native Italy when sipping the palatable wine once their task is completed. After years of preparing for tomorrow's experiment, Wigner is genuinely excited for the “Metallurgical Laboratory Project” to finally come to fruition. The “Metallurgical Laboratory Project”—that's how they are supposed to refer to their top-secret endeavor in public. But he is also strategic about it. If he can make Fermi shed a tear in this undoubtedly emotional moment, then he will surely gain entry to the inner circle. Catching this whiff of future glory, Wigner feels a bit light-headed. He notices the slight tremble of his fingers as he pushes some coins over the counter to pay for the flask and the cups, and begins to whistle as he exits the store to brush off the tinge of megalomania. The doorbell's cheerful jingle starts him off: “x squared, y squared, h2s04...”

Baszd meg!

He never understood why this stupid chant doesn't resolve the x squared, y squared formula it opens up. Where's the “r”? How can you lay out a formula without demanding the soothing resolve of the equation?! Pretentious college kids... Secretly, Wigner despises them and their lackluster lifestyle. They literally have no idea what's coming. Wigner himself is a man who likes resolve. That's why he became a physicist and that's why he became

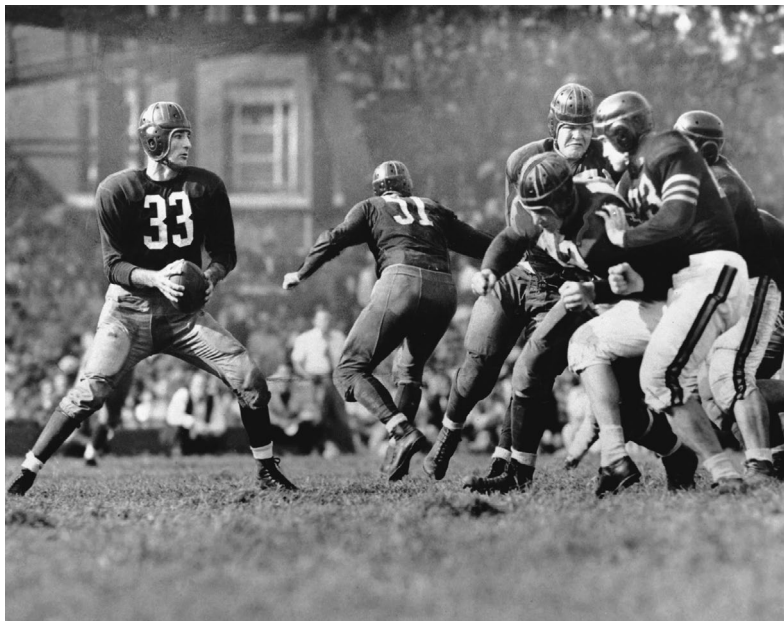
a good one. He hates not having clear answers. He hates ambiguity. He also hates the secrecy, the codes. “The Metallurgical Laboratory,” “Chicago Pile-1,” the “Manhattan Project.” Oh, please! Can’t they just name it all for what it is, everything that they are doing, at the university and all over the country? First and foremost, it’s research, he growls as he eases himself onto the soft cushion of his night-black Dodge Custom Town, carefully placing the bottle next to him on the passenger seat. It’s science, goddammit! Clean, groundbreaking, epoch-making science. His cheery mood is gone.

Thank you very much, you darned U of C pep chant!



LAYERS

December 2nd, 1942
3:20 pm



Stagg Field, home stadium of the Maroons, the University of Chicago's football team, and site of the leather-capped face-off previously described, will go down in the history books. A literal game changer will take place there today, an event that will alter the world permanently. However, this act of world-modification has nothing to do with the achievements of said football team. In fact, the Maroons will end the 1942–43 campaign with an abysmal record of 0 wins and 21 losses and they will subsequently drop out of their league, the Big Ten Conference, forever. This team is not worth a further mention. In fact, sports has nothing whatsoever to do with it. What matters, here, is not happening on the field where the home team is getting clobbered once more, but beneath the stands in the stadium's catacombs, sequestered and out of sight. Unbeknownst to the spectators in the stands, two timelines have begun twisting around each other in a fickle dance on this bleak day, leading towards an event that once more causes ideas of coherence and stability to disintegrate and invites in the profound discomfiture of quantum physics, demanding the decidedly un-modernist embrace of reality's relational nature. If the fans of the University of Chicago's football squad only knew, they'd be reconciled with their embarrassing team, as they could then accept the suckers on the field for what they are: Just one of an infinite and equally likely amount of constellations of possible teams, with the little caveat that this particular group of players getting humiliated in front of their very eyes is probably the worst possible of all these constellations. But they don't know. "Maximize our GNP, Titrate their solution; Calculate their MPC, Crush their revolution! GO, MAROONS!"

Just as the game heads towards the final minutes of its last quarter and the crowd in the bleachers has abandoned all hope of witnessing the Maroons' first win of the season⁵, a group of forty-eight scientists and workers, all sporting pristine white lab coats, is assembled around what appears to be a giant cube placed in the middle of an abandoned squash court right underneath the stadium's West stand. The alien object is made up of a stack of fifty-seven layers of cuboid graphite bricks (each measuring 4.25 by 4.25 by 16.5 inches) with medallion-shaped bores 3.25 inches in diameter, each inlaid with circular medallions of uranium oxide and uranium metal. The giant stacked cube itself measures 24 feet deep, wide and high. An eerie and solemn silence suspends time in this unlikely place. The muzzled cheers

⁵ As they are used to seeing their team lose, it fires them up just a little bit more, prompting them to tout not only the opponent, but also their own team's players—"GO, GET LOST, MAROONS!"

and jeers erupting from the crowd assembled for quite a different ritual several storeys above hardly reach the gathering down here, as their ears are ringing with tension and excitement. The moment Wigner and his “Nuclear Family” have been working towards for so long has finally arrived. It’s their own rather peculiar crunch time.

They are all watching a man—the forty-ninth member of this curious congregation—who is standing on a ladder that allows him to comfortably reach about halfway up the outer wall of the graphite pile. Very slowly and with due sobriety he pulls a thin metal rod out of the stack. His hands are jittery and he is clenching the rod so tightly that his knuckles have turned a sickly white. A single bead of sweat has formed on his forehead. The forty-eight onlookers can actually see his knees shaking on the jerky ladder. Quite evidently he is struggling to keep his balance up there. His eyebrows twitch in brief spurts of doubt and fear. However, it is too late to turn back now. The strange ritual, whose main performer the fate of pulling the shortest straw has turned him into, must be completed. It’s all a blur now: Is this inception? Is it consummation? Focus. Pull out the rod. Gently, ever so gently. The group is holding its collective breath, everyone utterly alone together, here in the stadium’s bowels.

A sharp crackle shoots across the solemn scene and makes the lab coats flinch. It’s a Geiger counter rupturing the hypnosis, lifting the spell that had kept them petrified. The lab coats and their wearers now begin to move. Rustling fabric, a clearing of the throat. Some quiver slightly, some move their lips, sending silent prayers to whomever wants to listen; some grip their notepads even tighter than before. As the loneliest of all lonely souls in the space pulls out the rod inch by inch, the crackle intensifies. Slouchy physiques straighten and necks elongate as if magnetically drawn to the mysterious structure. Eyes, miniaturized by refracting prescription lenses, goggle; the smack of dried-up mouths mixes with the Geiger counter’s now continuously surging crackle. “A drink,” Eugene Wigner thinks to himself. “Let’s have a drink, already!”

Wigner forms the words in his mouth, preparing to address his fellow witnesses. And just as he opens it to let out the sound that would end a complex chain of neurological and physiological impulses and reactions, all sparked by an electrical signal in his brain commanding his lungs and diaphragm to compress and force a stream of air up his windpipe, which would then be modulated by his vocal chords to ultimately form the first of a series of utterances prompting his colleagues to celebrate this unbelievable act of subduing nature to man’s will,

everything grows silent.



n¹

December 2nd, 1942
3:25 pm

The flash comes unannounced and it is brighter than anything any living being's retina has ever been exposed to. Wigner's proposal to celebrate, already at the cusp of leaving his throat, a sharp vacuum-like drop in air pressure, that fraction of a second before the first sound leaves the mouth to speak, the anticipation that comes with it, the bridging of distance, the connection established with fellow humans, are all violently shoved back into his body in reverse order and in unascertainable speed: past his vocal chords, down his windpipe, depressurizing his lungs and diaphragm and ultimately reaching his brain, shoving the electrical spark, the initial impulse of communication, back through his auditory dorsal stream, cramming it in there real good, so hard and so deep and so thoroughly that everything becomes an instant lightning storm, that every act of communication he has ever engaged in during his thirty-nine years on the planet gets hidden in there too, forgotten in an instant, an embryonic state, an intuition of pain before it can manifest as a sensation, a chain of acids and proteins and fibers and electrical carrier sparks all instantly vibrating so fiercely that you could fry all the eggs that any hen has ever laid on them—that is, if there were any hens or eggs left in time and space, which bends, bends, bends so far and so fast that an attempt of grasping this circumstance alone would bust anyone's fuses in no time.

Támasz, Támasz!

But there are no words left and much less someone to hear them, let alone act on the plea. A glow, so bright, where there once was a giant stack of graphite blocks, a thin, rod-like glow that's even brighter, God's piercing dagger, with a grotesquely levitating man attached to it, a man that has already become a shadow, a man that cannot be commemorated as all memory is being

n²

December 2nd, 1942
3:25 pm

Upon Fermi's command—a simple hand gesture, no more is needed—the poor worker desperately trying to keep his balance up there on the ladder pushes the protruding metal rod back into the stack of graphite blocks with a sigh of relief. Instantly, the Geiger counter stops its portentous crackle and leaves the crew alone with the tangible tension that has built in the space. It lingers for a second or two, before dropped shoulders and alleviating exhalations expel it from the room with an almost audible whiff.

Poof, gone. Release.

The smell of cold sweat and coffee breath remains as Eugene Wigner notices that his tongue is still pressed against the roof of his mouth and he is standing there with half-parted lips like a dunce, ready to speak. He feels the cascade of words he now is glad to have held back until Fermi's wave of the hand had ended the experiment, these words that are still stuck in his clenched throat and demand to escape his muggy pharynx. Quickly, he seizes the moment, grabs his bottle, and with way too much pressure from his lungs resulting in uncomfortably high volume cuts through the festive silence: "Let's have a drink, already!"

Jolts, a second collective sigh of relief, the creaking of the ladder's joints as the chosen one up there shifts his weight to begin the happiest descent of his life, humble cheers, devout congratulations, the tap of hands on shoulders. someone is sobbing quietly. Secretly eyeing Fermi, Wigner is pleased to see his excitement. Is it because of the bottle or because of the experiment's success?! Either way, they did it, they really did it! They just conducted the world's first controlled nuclear reaction. This will change the course of everything. They just made history. They. Just. Made. History.

effectively erased right this instant, a man whose flesh is plucked from his bones in one swift yank, an afterimage more than reality, a shining—yes, a shining of all things that were and all things that are never to come.

Life is inverted upon itself, the vacuum is consuming Wigner's body, he is literally turned inside-out. He isn't sure if what is happening emanates from his utterance but there is no time now to think it through, nor will there ever be. He doesn't get this final chance to express himself, as expression befalls him and he is quite violently *ex-pressed* by that marvelous, transcendent blow. In fact, this blow is so marvelous and transcendent that it questions all basic human assumptions garnered over thousands of years of empiricism. It separates time from space and a body from its shadow as only divine intervention can. Yet, it's all man-made. With the bodies gone, the shadow will be the event's lone vestige, a shadow without anyone or anything left to cast it: One wouldn't ever have thought this to be possible, but once it's all said and done, that's what it is, indeed. It's all hot, it's all white, it's all gone.

Moments before the blast erases past and present and future, its foreshadowings are beginning to bend time already, and a faint and woeful echo is heard by the congregation down here, or rather, premonished. A whisper in the bushes that line Stagg Field. It's a whisper exhaled by ghostly bodies from another world. Bodies whose eyes have seen decades of humiliating defeats and whose lungs now need to resolve that burden before all memories are pulverized: "Logarithm, biorhythm; Entropy, kinetics; MPC, GNP, bioenergetics! Maximize and integrate; Titrate and Equilibrate—GO, MAROONSSSSSSSS!"

As the luscious red liquid splashes along the walls of the paper cups—they're a bit crumpled up and mildly damp with perspiration from Wigner's palms, but that doesn't seem to bother anyone—as the toasts have been spoken and the chianti has sufficiently soothed anxiety-parched gullets (the wine is a good deal more acidic and stinging than Wigner would have liked it to be), once more, silence befalls the group, but this time it is a pensive one. The giant pile of graphite blocks towers over the group, the precarious wooden ladder leaning against it just underneath the rod that now doesn't poke out more than a few inches. It's a tacit instruction. The group is turned towards the structure like an agnostic congregation worshipping a mysterious tabernacle, while the Italian-imported eucharist is working its intoxicating way into these zealots' heads. Everyone is dwelling on their own thoughts and enjoying the gentle lull of inebriation's soft embrace; what more is there to say, anyway? Wigner closes his eyes and feels the warm waves of toxins pulsing through his veins.

Elegantly tip-toeing through the contemplative silence, careful to not more than graze any single one's ears, a faint whisper, inaudible almost, begins to traverse the space. An etheric multitude of sources, breath more than voice. The members of the congregation look at each other in mild bewilderment: Can the others, too, hear that faint and woeful echo? Is it the football game's crowd chanting in the stands way above their heads? It can't be, the game must long be over by now, the fans heading towards the exits, bystanders of yet another humiliating defeat. It must be happening in their minds, then. Is it an intuition? A premonition? Nobody down here would ever admit to that, of course. Nevertheless, they all can make it out, their mildly woozy senses can't deny it: There is a whisper in the bushes that line Stagg Field. There is a wind exhaled by ghostly bodies from

The lone remaining witness to the occurrences of December 2nd, 1942, the literal shadow without body, is that of the bottle of Bertolli-brand chianti. While the blast has obliterated the bottle itself, its silhouette has been permanently burned into the South-facing wall of the squash court beneath the West stand of what once was Stagg Field, this wall being the only structure still standing after the formidable blast has not only razed the stadium and its surroundings, but the greater part of the city of Chicago, too. Protruding out of the vast, barren fields like a strange monolith, it has become a memorial for the horrors of the nuclear age, a memorial that nobody can visit. A cleanup crew in hazmat suits, sent to assess the situation a few weeks after the tragedy had taken place (“All clear,” was their verdict, and not in a good way), found the bottle’s shadow etched into the wall and reported the sight of this impossible image to the mourning public.⁶

“Now I am become death, the destroyer of worlds.” J. Robert Oppenheimer’s words still echo over the steaming fields; but there is no one to hear them. Every single one of us survivors has radioactive matter deposited in his or her teeth as a little token of Mister Atom’s awesome powers, and in the darkest hours of the night, when we’re lying in our bunk beds deep down in the doomsday bunkers, fabulating about what could have been and what never was and whether it can ever be again, we watch each other’s glowing teeth clatter like tap-dancing pebbles. The ones who anticipated the things to come and moved underground ahead of time, awaiting better days among canned goods and their favorite dog and barrels of gasoline, the ones who crawled into the

6 Needless to say, the photographs they had taken on site to document their findings were rendered indecipherable as radiation—the material witness—had inscribed itself onto the photographic paper in overexposed blots and spatters. They themselves all died from cancer within weeks of their mission.

other worlds. Bodies whose eyes have seen scores of clumsy football matches and butchered set plays and whose lungs now need to resolve that burden before all memories of the spectral realm are pulverized in that grand victory of reason over the metaphysical. The whisper goes: “Logarithm, biorhythm, Entropy, kinetics, MPC, GNP, bioenergetics! Maximize and integrate, Titrate and Equilibrate—GO, MAROONSSSSSSSS!”

In later writings and interviews, not a single one of the group down here will ever make mention of the spectral breath that passed through the catacombs that day.

The emptied bottle of imported Bertolli-brand chianti, having crossed the ocean to become silent witness to the world’s first controlled nuclear reaction and the haunting thereafter, today finds itself in the collection of the Atomic Energy Commission’s archives on Chicago’s South Side.⁶

Right after the last sips of wine had dribbled down thirsty throats, Wigner’s friend F. picked up the phone to inform president Franklin D. Roosevelt about the success of the „Little Metallurgical Experiment.“ The message for the president, supposedly delivered in code, may have been more straightforward than everyone thought, after all. It went:

- The Italian navigator has landed in the New World.
- How were the natives?
- Very...

6 If you ever want to see it for yourself, here’s the full citation for the object: Chianti Bottle; 12/2/1942; Program Correspondence Files, 1942–1988; Records of the Atomic Energy Commission, Record Group 326; National Archives at Chicago, 7358 S. Pulaski Rd., Chicago, IL., 60629.

earth because they feared that what has just happened in Chicago may be about to happen, don't know that it has, indeed, just happened. They said goodbye to sunlight and fresh air and the news before sunlight and fresh air and the news were no more, and now they don't know. Their teeth don't glow in the dark.

For them, the superposition stands.

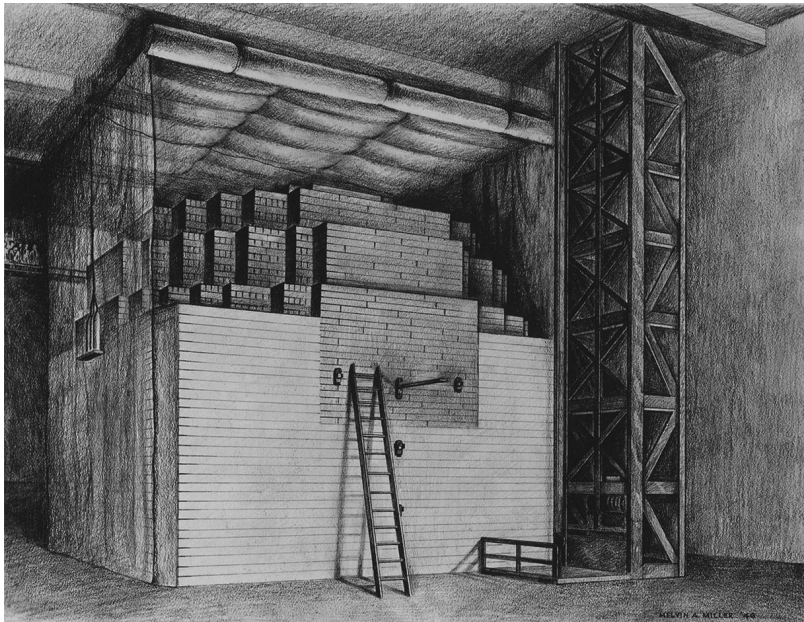
A foreboding, Geiger counter-like crackle in the telephone line can be heard right before the call drops, the comforting resolve of an answer pending. F's message is trapped in a copper wire somewhere between Chicago and Washington, D.C. The president is currently not in the know concerning the experiment's outcome.

For him, the superposition stands.

THE FALLOUT

An Epilog

20



The dust has settled, the radiation lingers. Staging the experiment amidst a densely populated area in the heart of the—at the time—second largest city of the United States was an admittedly audacious act. Researchers on either timeline unanimously agree with that. And whether our axis is the ultimate redemption of modernism’s promise to overcome nature, commemorated by a vaguely figurative Henry Moore sculpture now placed at the sight of Chicago Pile-1 on the University of Chicago’s campus, or whether it is the ultimate failure of man’s hubris, memorialized by the vast contaminated field from which the monolith of the squash court’s South-facing wall, where the shadow of that bottle of chianti eternally burned into the brick structure arises like a vengefully pointing finger, most researchers equally agree with Leo Szilard, another scientist present in the catacombs of Stagg Field on that fateful day of December 2nd, 1942, who turned towards Enrico Fermi to whisper a bleak prophecy, just before the Geiger counter’s crackles rose to deafening levels:

“This is a black day for the history of mankind.”

2021