

The Unification of All Faiths and Science through Consilience

One Mathematics, Many Heavens — and How We Might Build Them · Resolving the Fermi Paradox

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Note on This Edition

This is the Popular Edition of the essay, complete on this page and available as a print-faithful PDF in the [Library](#). Its formal companion is [From Feature Vectors to the Unified Trust Model](#), which states the same geometry in the machine-learning register; its family source is the [burning-bush record](#), preserved verbatim in the source archive. Claims are graded throughout, and the closing ledger governs where any other page of this corpus differs.

The Space

§0

Preamble — The Universe-Makers

Here is the claim, stated up front so you can decide whether to spend an hour with it: science and the world's faiths can be true together — not by watering either down, but because mathematics turns out to contain a space roomy enough for both, and because we are now, for the first time, close enough to real universe-making machinery that the oldest religious questions are becoming engineering questions without ceasing to be religious ones. The essay promises to say which parts are proven, which are sound engineering extrapolation, and which are faith — and that knowing which is which is not a retreat from wonder. It is where the wonder lives.

The machinery first, because it sounds most like science fiction and is least so. The Quantum Privacy Network was not designed to build simulated universes; it was designed to let people, institutions and traditions hold and govern what they value on shared infrastructure without surrendering it. But ask what a simulated world would need before anyone sane would live in one, and it is exactly that list. A world is not made habitable by its physics engine. It is made habitable by its law: who you are there, what you own there, what may be done to you there, who decides, and what follows you home. Rendering worlds is a matter of computation, and computation is a matter of energy. Making worlds worth entering is a matter of trust architecture — and that architecture exists. The Accelerator Network is its organisational form: chartered programmes through which communities, faith communities included, can build, govern and steward domains of their own, under their own taxonomies of value. Extend the same form to world-building, and any tradition, given sufficient computation, can raise a world that embodies its beliefs, govern it by its own lights, and — as interfaces mature from today's crude implants into full immersion — walk in it.

One more thing, because it frames everything. My father believed that angels were a more advanced people in ships, speaking to our ancestors in the metaphors our ancestors could carry. I record that as family memory, not doctrine. But notice what kind of belief it is: it takes the old accounts seriously and the new knowledge seriously and refuses to choose between them. That refusal, disciplined by mathematics, is what this essay is. Clarke made the general point famous — any sufficiently advanced technology is indistinguishable from magic — and its corollary is the humble one: a sufficiently early observer cannot tell miracle from machinery, and we are all early observers of something. My grandmother would have said God was acting through the machinery. The mathematics, we shall see, is roomy enough for her too.

§1

The Question Every Campfire Asked

Every human culture we have any record of asked the same two questions: what is the world, and who made it? For most of history the same institutions answered both; the split is recent, and William Whewell — who coined the word *scientist* in 1833, and to whom this essay owes a second word — watched it begin. The war that followed has been long, mostly unnecessary, and fought over a map-reading error: both sides assumed that if two

descriptions of reality differ, at least one must be wrong. The burden of the essay is that the assumption is false, that mathematics says exactly where and why, and that the peace on the far side is not a truce of exhaustion. Whewell's word was *consilience* — the jumping-together of knowledge from independent starting points — and [E. O. Wilson](#) spent his last decades arguing it could be extended across everything humans know. This essay extends it to everything humans believe.

And a definition, because *unification* has a bad history. Every previous attempt unified doctrines — and to unify doctrines you must rank them, and to rank them is to flatten someone's faith into a footnote of someone else's. What can be unified — because a theorem says it is already unified — is the space in which all the doctrines live. No tradition will be asked, anywhere in these pages, to concede a claim, adopt a rival's categories, or accept a translation it did not author. If by the last chapter a devout Catholic, a Latter-day Saint, an observant Jew, a practising Muslim, a Vedantin, a Buddhist, and a career physicist can each say *this model leaves my faith intact and my science honest* — that, and nothing weaker, is the test.

§2

A Space Big Enough for God

One mathematical object, and a promise that it is the only one: the Hilbert space — and you have been inside one every time you have heard music. Strike a chord and the air carries a single complicated wiggle; Fourier taught us the wiggle is exactly a sum of pure tones, and that listing the amounts describes the sound completely. The list is a set of coordinates; the pure tones are the axes; and because a sound can contain arbitrarily fine harmonics, the axes go on forever. A space with infinitely many perpendicular directions, where geometry works as reliably as on graph paper: that is an infinite-dimensional Hilbert space.

Three facts carry the essay. **It is capacious:** anything that can be described — in any finite or countable list of features — can be encoded in it. A symphony, a genome, a legal code, a universe's quantum state, and, yes, a conception of God. Note the wording, because the essay's honesty lives in it: a description of a thing is not the thing; a library that holds a book about dragons holds no dragons. **It is unique:** the classification theorem says any two infinite-dimensional Hilbert spaces of the relevant kind are perfect copies of each other — isomorphic; the plain word is *same*. So one substrate is not a metaphor and not a container anyone is invited into. There is only one container, and everything describable has been in it all along, together. **It plays no favourites:** the space comes with no preferred axes; the same point has different coordinates in different bases, with an exact dictionary — a unitary transformation — converting between them, distorting nothing.

And the honest turn, which is the second half of the claim: the space can encode every possible conception of God, and no measurement made inside our universe can tell us which conception, if any, is true. Representation outruns verification. So the mathematics does something no argument for or against God has ever done: it *locates* faith. Faith is not the leftover space where knowledge hasn't arrived. It is the exact, permanent gap between what can be described and what can be verified from inside — surveyed, fenced, and guaranteed by the same theorems that guarantee the describing. The apophatic theologians, who insisted for two thousand years that God exceeds every human representation, surveyed this ground first, without the notation.

WHAT WOULD DEFEAT IT

Show a conception articulable by a human being that cannot be encoded, and this chapter falls.

§3

Coordinates, or Why Traditions Disagree Without Being Wrong

A faith tradition, in chapter two's vocabulary, is a choice of axes and a choice of questions — the categories in which it describes reality, and the matters it treats as answerable. So is a science. Physics chooses axes labelled mass, charge and field, and treats as answerable whatever survives measurement. A tradition chooses axes labelled covenant, grace, duty, karma or harmony, and treats as answerable what survives prayer, practice, revelation, and the tested life of a community across generations. Different coordinate systems, laid over one reality — and the space itself ranks none of them. Neutrality among coordinate systems is not tolerance, which is a favour the strong extend to the weak and may withdraw. It is a property of the mathematics, and it cannot be withdrawn.

Does this dissolve every disagreement into perspective? No — and distrust any model that claims so. Traditions make claims that genuinely conflict, about history, duty, and what happens next. What the model says is subtler: the conflicts live in the choice of axes and distinguished questions, not in the substrate — a real dispute, but not the kind logic forces to a winner, any more than the hiker and the geologist must duel over the mountain. What that reframing buys is not small. It is the end of the structural requirement that traditions agree in order to coexist.

§4

The Two-Storey World

Quantum mechanics describes the world on two levels: underneath, the state — the complete mathematical description no one ever sees directly; on top, measurement outcomes — the definite events experience is made of; between them, the unresolved measurement problem. The simulation hypothesis has the same shape: substrate below, rendered world above, boundary inaccessible from inside by construction. And theological creation has the shape again: the divine ground never directly inspected, the manifest creation we live in, and the connecting act held by every tradition to exceed demonstration. Kabbalah's Ein Sof. Vedanta's Brahman. The Logos. The Tao that cannot be told. Dependent origination beneath the seeming solidity of things.

Be exactly as impressed as the evidence allows, and no more: convergence of form is not agreement of content. The pattern does not prove the state is God, or that God is a programmer. What it establishes is that the two-storey picture is not the eccentric property of any one camp — which matters enormously, because the machinery of the next chapters is machinery for building upper storeys. Wheeler spent his late years urging the profession to take *it from bit* seriously. He did not prove it. He made it respectable to build on, and building on it is what we now do.

The Engineering

§5

Building Heavens: The Engineering

The sun radiates about four hundred trillion trillion watts. Everything humanity has ever built, lit, moved, computed or fought over runs on around twenty trillion — so the sun emits roughly twenty trillion times our total use, every second, almost all of it pouring into the dark. Capture one part in a hundred thousand — a rounding error of a rounding error — and you command about two hundred million times the energy of present civilisation. Dyson pointed out in 1960 that a mature species should be expected to do exactly this: not a solid shell but a swarm of collectors. We now know how the swarm starts — solar-power satellites and orbital data centres, built from the moon and the asteroids, which sit at the top of Earth's gravity well holding prefabricated construction material and free vacuum. No new physics appears anywhere in this paragraph. It is launch costs, robotics, and patience.

Compare the other direction. Starflight is not forbidden, but physics prices it without mercy: one kilogram to a tenth of light speed costs a small city's year of energy, the destination is decades away, and the freight of your civilisation's meaning is reduced to the payload. A solar collector starts paying the moment it unfolds and never stops. Which raises the question the essay actually cares about: when energy and computation become effectively unlimited, what does a civilisation buy with them? The next chapter suggests every civilisation before us already answered.

WHAT WOULD DEFEAT IT

Show the engineering error — a physical reason sun, moon and asteroids cannot yield this energy and computation — and chapters five through seven fall together.

§6

The Great Silence, Explained From the Inside

At Los Alamos in 1950, over lunch, Fermi listened to cheerful estimates of how many civilisations the galaxy should hold, did the arithmetic on how fast even slow starships spread, and asked the question that has embarrassed every estimate since: *where is everybody?* The proposed answers — we are first, we are rare, they hide, they destroy themselves — each carry their discomforts. This essay's candidate has a different flavour, and it is the least gloomy on the menu: run chapter five's arithmetic as any maturing civilisation must, and outward travel is the most expensive possible way to have experiences, while inward computation is the cheapest. A species that completes its swarm finds the interesting frontier is no longer *where* but *what*. Why cross four light-years to stand on a dead rock in a pressure suit, when for the same joules you can live a thousand full lives in a thousand worlds of your own design? On this account the galaxy is quiet for the best imaginable reason: everyone's home is bigger on the inside. Expansion is what a civilisation does with its energy until it learns what energy is for.

The counterargument at full strength, because honesty requires it: for this to explain *total* silence, essentially every civilisation must turn inward — one expansionist exception fills the galaxy anyway — and universal behaviour is a strong claim about minds we have never met. The inward turn has been seriously proposed and seriously criticised in the astrobiology literature, and it remains a candidate, not a verdict. It is ranked here as the candidate requiring the fewest miracles and the least despair, and the ledger in chapter eleven files it accordingly.

§1

Interlude — The Man Who Taught Me to Travel Without Moving

Before the heavens, a memory, because this essay's argument was taught to me as a bedtime practice decades before I could state it. When we were boys my father built a cabin on the Smith River, and its top floor had a clear plastic roof — zero insulation, chosen deliberately, because he had decided that seeing the stars mattered more than keeping the heat. Under it he taught us astral projection: look at the stars, close your eyes, feel your body as something blue and translucent, and rise — then travel, together, anywhere, at the speed of thought. Call it guided visualisation; what I notice now is what it was structurally. In a cabin with no money and no rockets, my father had worked out chapter six of this essay: that the richest travel available to a mind is inward, and that a roof you can see through beats a vehicle you cannot afford. Our textbook was von Däniken's *Chariots of the Gods*, and we loved every page of it.

Decades later, in his living room, my father — who had left the Seventh-day Adventists in the sixties over race, or so his proudest story ran — announced that he had rediscovered God. He had begun noticing things on the drives home from his episodes of sin — a teaching skeleton in a window, a black car whose personalised plate sounded like DEATH — and had come, in time, to read them as God speaking of his spiritual death. I asked whether he was sure the signs were not simply guilt. *No*, he said. *It was God*. Okay, Dad, I said — and readers of chapter three will recognise the move: guilt and Providence are both faithful charts of a man noticing death on the drive home from wrongdoing, and the substrate ranks neither.

But the moment I have carried came next, when I asked how the returning believer reconciled the faith with everything he had taught us. Easily, it turned out. The burning bush was a microphone connected to a ship. The angels of scripture are a more advanced species — who are also children of God. The chariot of fire that took Elijah was a re-entry vehicle. And the pastor? *Oh yes — we've agreed to disagree*. He rejoined, and became a deacon. Hold that pastor's sentence up to the light, because it is this entire essay in five words. A man kept two complete cosmologies without surrendering either; a congregation kept the man without demanding the surrender; and the machinery of this corpus — taxonomies at full depth, coherence without agreement — is my attempt to give what happened in that living room a theorem, an architecture, and a future. My father reconciled the aliens and the Almighty in one sentence. The rest of this essay is commentary. [The full family record is on this site](#), verbatim recordings and all; [so is the cabin](#) — and so, for the reader following the family thread further back, is [the ledger the Adventists kept on paper](#), which turns out to reach Charlemagne.

§7

Whose Heaven? Everyone's

Assemble the pieces: one representational space that already holds every conceivable world; a two-storey structure physics, computation and theology share; energy and computation without practical limit; and a trust architecture built before the worlds that will need it. The conclusion is plain: any world that can be described can be rendered, and chapter two established how much can be described. Every tradition's promised state — the heavens, the pure lands, the world to come — is a description, refined by centuries of longing and discipline, of conditions under which souls flourish; descriptions are exactly what world-building consumes. A tradition could raise the world it was promised and dwell in it. Nor is scripture the only library of longing we own: the worlds of Marvel, Star Trek and Dune are described to a depth centuries of scripture would respect — and fan fiction can become fan fact, lawfully, since worlds belong to their makers, and attribution that travels with a creation is precisely what the inheritance layer enforces. Grandmothers could meet great-great-grandchildren in worlds neither was born in.

And here the essay slows down, because two questions are not engineering questions. Would a mind in such a world — a virtual child, a continuation of yourself — actually experience anything? That is the hard problem of consciousness, it is unsolved, and no confident sentence about it belongs in a responsible essay; note only that we do not solve it for our biological children either — we extend the presumption of experience, and civilisation depends on our doing so. And what do we owe minds we create? *Everything* — rights, governance, consent, protection — and the fact that the trust layer is being built before the worlds is not a scheduling accident. It is the moral core of the project. No tradition on Earth teaches that a creator owes nothing to creatures; on this, every faith and every decent philosophy already agree, and the agreement arrives before the first world boots.

One more turn of the screw. We cannot prove what base reality is; heavens, we now see, are buildable; and we cannot certify our own world is anyone's base reality. How do we know the promise was not kept — that this world, or the next we wake in, is not exactly the constructed paradise the promise described, rendered by a Maker whose machinery our ancestors could only call miracle? We do not know. We cannot know; that is what taking it on faith means. My father's angels-in-ships, my grandmother's God-acting-through-him, the theologian's Providence and the engineer's substrate are four coordinate systems laid over one unfalsifiable and possibly glorious situation. The mathematics will not choose among them. That was never a bug.

The Peace

§8

A Reading for Every Faith

The test the essay set itself: that believers can receive this model as aligned with their faith, each in their own vocabulary, with nothing surrendered. What follows are offered readings — not rulings; every tradition's own scholars remain the judges, and these paragraphs are submitted to their correction in advance. **For Christians**, sub-creation — Tolkien's word: made in the image of a Maker, human beings make, and a creature that builds worlds and owes its creations love is not usurping its Father but resembling Him; nothing here touches the Resurrection, grace, or salvation. **For Catholics**, the corpus's documented convergence with Magnifica Humanitas already makes the institutional point, and fides et ratio — faith and reason as two wings — is this essay's thesis in the Church's own words. **For Latter-day Saints**, a theology of eternal progression and worlds without number will find in buildable worlds a familiar horizon approached by unfamiliar means — whether the approach is doctrinally welcome is for the Brethren to say, and the mathematics is checkable by anyone Elder Gong cares to ask. **For Jews**, b'tzelem Elohim carries the sub-creative logic and tikkun olam extends without strain to worlds we make and the beings in them; Ein Sof stands untouched by a model whose central honest sentence is that representation cannot capture the ultimate — Kabbalah said so first. **For Muslims**, the essential point is that nothing here images, contains, or rivals God: what Hilbert space holds are human conceptions, and the essay's firmest claim is that no measurement inside creation can capture the Creator — which Islamic theology has taught from the beginning. World-building, on this reading, is khilafah at a new scale, answerable to the One who made the stewards.

For Hindus, little here will even sound new: Brahman behind appearance, many realms and many lives, creation as lila — and moksha remains exactly where the tradition placed it: beyond. **For Buddhists**, worlds are mind-made and the Pure Land schools already venerate a constructed realm, Sukhavati, built by a vow precisely as an environment optimised for awakening; the essay's insistence on compassion toward created minds is the Bodhisattva vow arriving on schedule — and awakening itself the tradition never located in environments anyway. **For Taoists**, the first line of the Tao Te Ching is chapter two in eleven words. **For the secular and the scientific**, no supernatural commitment is asked anywhere: every mechanism runs on physics, mathematics and engineering, and the faith residue is rigorous agnosticism about questions measurement cannot reach — which is not a concession to religion but the definition of intellectual honesty you already hold. You lose nothing, and you gain neighbours: several billion of them, whose deepest commitments turn out to occupy coordinate systems, not error lists.

And one objection, recorded rather than managed, because it is the serious one and comes from inside the faiths: the apophatic tradition holds that God exceeds every representation, including this essay's. The formal reply — a limit on representation is itself representable as a limit — is correct as mathematics and may be entirely inadequate as theology. The mystics may be right that the whole apparatus stands outside the one thing that matters. If so, the essay still keeps its promise, for it never claimed to hold God — only every conception of God, which the mystics were first to say is not the same thing.

WHAT WOULD DEFEAT IT

Show one tradition that cannot take its place on the architecture without surrendering doctrine, and this chapter fails exactly where it claims the most.

§9

The End of the Argument

Why has every people known itself chosen? From inside a coordinate system, that system's categories are simply how the world is carved, and its people stand naturally at the origin. There is no view from everywhere inside the space — every view is a view from some basis — so of course each tradition has found itself at the centre. All creatures of one substrate, no two agreeing on the chosen, every one reporting accurately from where it stands: the oldest scandal of comparative religion dissolves into a statement about coordinates. And the world-building future retires the question entirely, because centrality stops being scarce. Chosenness was only ever contested because there was one world to be chosen in.

The détente extends into the basement. No one can prove base reality; worlds are buildable; put the two together and a remarkable treaty becomes available at no cost: I can grant, cheerfully, that I may be living in your God's creation — or your descendants' ancestor simulation, the term being Bostrom's — because you must grant, on identical grounds, that you may be living in mine. And each of us remains free to hold, as faith no measurement will referee, that ours is the tradition at the centre. Unfalsifiability, which looked like the model's great concession, turns out to be its peace treaty: precisely because no one can be proven wrong about the basement, everyone can afford to be generous on the ground floor. Call it *mutual assured creation* — and unlike its cold-war namesake, it costs nothing to maintain and no one is harmed when it is invoked.

Nor is being the centre of your own universe a vice; it is the factory setting of the instrument you are reading this with. Every nervous system stages the world in egocentric coordinates; the view from everywhere does not exist in mathematics, in physics, or in your skull — three independent disciplines reporting the same finding. Centredness is not arrogance. It is architecture. So here is what the model actually ends, stated with care: not religious disagreement, and not bad behaviour — what it ends is the *structural necessity* of the fight: the assumption that traditions must converge on one description in order to share one world. The mathematics says they never needed to; the architecture — Trust Taxonomies at full depth, coherence by composable agreements, the Faith and Tradition Cascade as the adoption path — makes non-convergence workable in practice; and world-building makes it abundant. Whewell's word for knowledge jumping together from independent paths was consilience. It is the right word for peoples doing the same, and it is why the word is on the cover.

§10

A Path to Peace on Earth

First the failure analysis, done fairly, because the popular version — religion causes war — is wrong in a way that hides the mechanism. The horrors are real: the Thirty Years War killed perhaps a third of the German lands over, in large part, how Christ is present in a wafer; the inquisitions, pogroms and mutual slaughters were

prosecuted by people certain they held the one true description; and doctrine has served for millennia as moral licence for oppression. And yet: catalogue the wars we have records of, and fewer than one in ten file as primarily religious — while the most secular century in history produced the largest slaughters ever recorded, under ideologies that permitted no God but demanded that one description of history be imposed on everyone. Line the facts up and the variable identifies itself. **The killer was never faith, and it was never faithlessness. The killer is compulsory convergence** — the structural requirement that all who share a world share its description, which converts every sincere difference into an existential threat and every neighbour into a heretic. Religion has no monopoly on that requirement — and religion has also stood repeatedly on the other side of it: the same scriptures that defended slavery marched at Selma. My father photographed them there.

Humanity has twice stumbled onto the right move and twice applied it incompletely. [Westphalia](#), 1648: peace not by settling a single point of theology but by changing the coordination architecture — each territory its own confession, sovereign questions handled by a protocol that did not require agreement about God. It worked, and its limit is obvious: it protected descriptions by trapping the describers. The First Amendment: a state that declines, on principle, to rank religious descriptions at all — and the result is the society with more sects than any other on earth and centuries of almost no sectarian blood. Neutrality among coordinate systems, installed in law, keeps the peace better than any orthodoxy ever has. But it protects the church door and stops at the infrastructure.

A connection, Burke-style, because this record cannot resist and should not: the Thirty Years War was fought in the empire [Charlemagne](#) founded, and the Eighty Years' War by the republic [William the Silent](#) founded — and the family's paper ledger, [a distributed provenance system run for a century and a half by Adventist hands](#), traces this essayist's descent from both men. The treaty that first built coexistence-without-convergence sits at the join of the author's own tree; the essay is, among other things, a descendant finishing the family's oldest unfinished business. And the statecraft is older still: [Constantine](#) ran an empire on multiple coordinate systems for the good of it, and took baptism only on his deathbed. Coincidences honestly labelled — and enjoyed.

The wars of description did not end; they changed vocabulary. Watch today's politics with chapter three's eyes: the schisms run inside the parties, on the ancient machinery — two confessions contesting one communion, complete with purity tests and a heresy vocabulary; RINO is an excommunication in four letters. The model takes no side, which is precisely the point: these are basis disputes being fought as wars of annihilation for a structural reason. When the prize is the right to describe reality for all, no quarter can be given. Lower the prize and you lower the war. The remedy is not better manners; it is subsidiarity made structural — shrink the set of questions that must be answered identically by everyone, and return the rest to communities governing themselves at full depth. And the old liberty-versus-order dial dissolves with it: on a substrate where each community holds its own basis at full depth, where coherence is carried by composable agreements, and where one floor is not relative — consent, the protection of persons, the security of every neighbour's body and basis alike — you get what the dial said was impossible: liberty without chaos. Virtue is a renewable resource that runs out on bad days. Architecture does not.

The honest accounting: this architecture does not end malice, greed, madness, or the fights scarcity breeds; it disarms no missile. What it removes is one specific, ancient, enormous class of conflict driver — the structural necessity that difference of description be resolved by dominance — and the moral licence that class has

supplied to every other violence. Peace on earth is not delivered by any machine, and no such claim is made. What the machine delivers is the standing possibility of it, for every community, at full depth, on shared infrastructure, all the way down. Whether we take it remains what it has always been — a choice. The ledger files it accordingly, in the only row where it could honestly sit.

WHAT WOULD DEFEAT IT

Show enforced doctrinal uniformity that ever produced peace rather than silence — peace among the coerced, not the quiet that follows their removal — and this chapter loses its history. I have looked, and the record offers none.

The Ledger

§ 11

What We Know, What We Guess, What We Choose

Asimov's rule for science writing — the rule this essay has tried to keep — is that the reader must always be able to tell what standing a claim has. Here is the ledger; hold every page against it.

Established. Hilbert spaces and their uniqueness theorem; the basis-and-coordinates account of representation; the energy arithmetic of the sun; the existence and independence of the academic quantum-adaptive-systems literature; the historical record of Whewell, Wilson, Fermi, Dyson and Wheeler as told here; the record of Augsburg, Westphalia, the First Amendment and the wars of enforced uniformity as told in chapter ten; and the egocentric reference frames of perception as established neuroscience.

Sound extrapolation. Dyson-swarm-scale energy and computation from solar, lunar and asteroid resources, requiring no new physics; immersive interfaces maturing from today's early brain-computer implants; the QPN's governance, identity, consent and attribution layers extending to simulated worlds; the inward turn as a serious candidate answer to the Fermi Paradox; and the reduction of doctrinal and factional conflict drivers when convergence stops being compulsory.

Open questions. Whether simulated minds experience anything at all (the hard problem); the moral status and rights of created digital beings; whether any civilisation in fact turns inward rather than outward; the timeline, which is decades at best and is not promised.

Faith. Which conception of God, if any, is true; whether our own universe is base reality or someone's creation; whether the heaven any tradition was promised is behind us, above us, or ahead of us; and whether humanity, offered a peace that no longer requires agreement, chooses to take it. The mathematics locates these questions precisely and answers none of them. That is not a defect of the model. It is the model.

Four defeating conditions, in plain language, so the claims can lose — which is the only condition under which winning means anything. Show me a conception articulable by a human being that cannot be encoded, and chapter two falls. Show me the engineering error in chapter five — a physical reason sun, moon and asteroids cannot yield the energy and computation described — and chapters five through seven fall with it. Show me one tradition that cannot take its place on the architecture without surrendering doctrine, and chapter nine fails exactly where it claims the most. And show me enforced doctrinal uniformity that ever produced peace rather than silence — peace among the coerced, not the quiet that follows their removal — and chapter ten loses its history; I have looked, and the record offers none. I have stated where the model is vulnerable because I believe it is not — but the difference between belief and knowledge is the whole subject of this essay, and I would not blur it in the last paragraph after defending it in every other.

My grandmother said God was acting through me; my father saw machinery in the miracles; Wilson wanted all knowledge in one fabric; Whewell gave the fabric its name. This essay's claim, at the end, is small enough to be true and large enough to be worth the hour: they were all using different coordinates, in the one space there is —

and now we know how to build in it, together, without anyone letting go of what they hold sacred. That is consilience. The rest is engineering, and faith.