

# SEED FORM VOID FORM SEED

## Art Until Proven Otherwise

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SFVFS™ · Segment 4 of 12 · Origin Story

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This is a strange story. One that, as I write this, still compels me to keep one foot in the sceptical zone — hence Art Until Proven Otherwise — so in effect I would describe it as fiction. However, I have come to personally appreciate that all creativity is subjective myth expressed as objective truth: a tapping into a profound vein of power that intuitively guides you to make something from nothing, sometimes even if that something initially makes no sense.

So I invite you to embrace this story as wholeheartedly as possible whilst keeping that one foot in the sceptical zone, because it is good to question everything.

I am posting the three core documents and the exhibition itself first, before explanation, because that is what you see when you go to any exhibition — you get an immediate sense of what might be going on. Three academic papers describing the following:

1. **The Pinch** — a positional reading of the Riemann Hypothesis.
2. **The Needle's Eye** — a positional reading of the Navier-Stokes regularity problem.
3. **The Cartographer** — Flow-Static Collapse Theory and the classification of mathematical limits.

After the academic papers you can enter the Mind The Map exhibition and see the 108 collaborations with 54 artists, all connected with my tenure as artist in residence at Leake Street over the last three years.

After the exhibition you can read the story of how Leake Street — the graffiti tunnel under Waterloo Station — taught me about the creative process, and specifically how exploring that collaborative process with seven AI platforms led me to two of the world's most famous mathematics problems, which then led me to SFVFS™ and the core discovery that followed.

The first three papers are deliberately written in the language of academia, as they are specifically there for that community to scrutinise, disseminate, and evaluate. This paper is for the wider exhibition audience, as a way to understand the story in simpler language.

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## The Leake Street Creative Paradox

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Leake Street is a unique creative anomaly that paradoxically expresses infinite expression within a confined finite space. This one fact would later become instrumental in my personal understanding of the nature of the mathematical universe.

Leake Street was originally the taxi exit for the Eurostar terminal. Once that moved to St Pancras, the tunnel was abandoned — until Banksy created The Cans Festival in 2008 and overnight a rip in the banality of the city opened up and a creative liberation occurred. It was really once Banksy had left that Leake Street began to express its truly unique nature.

The space is not legal, but it is tolerated. That single condition is what gives it everything. It is not curated, not managed, not owned by any creative agenda. This one factor alone gives it its strange raw presence — an unrelenting creative power that has never diminished in all the years I have been there.

Nothing is sacred here. You can spend hours on a piece and return the next morning to find it gone, painted over, evolved into something else entirely. This is not a tragedy. This is the point. The space is fundamentally uncontrollable, and that is precisely its power.

Like the ebb and flow of the daily tide on a beach, it is constantly wiping itself clean — not to a blank canvas, but to more creativity. The only thing that holds it in place are the boundaries at each end of the tunnel. The entrance and exit contain the energy, hold it in, stop it from simply dissipating into the city. A finite vessel for something that behaves as though it has no limit.

Every day a conveyor belt of artists, tourists and locals arrives, compelled to create on the walls. Sometimes the artwork lasts moments. Sometimes it lasts months. But always it gets covered, and always it evolves.

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## Expressing Subjective Myth as Objective Truth

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In the last three years of hosting graffiti workshops at Leake Street, it soon became apparent that explaining how the space worked was a core requirement — because the space offered no context. No rules on display, no curation, no explanation. So I began to consider the process more carefully, and discovered that within the chaos was a distinct structure.

People were intuitively compelled to enter the space and create. They arrived with an intention — DREAM. They acted on that intention by physically putting something on the wall — MAKE. They completed the piece, interacted or didn't with passers-by, took photographs, and walked away. The next artist arrived and repeated the process over their work. The previous work disappeared into layers of paint — VOID.

**DREAM** — Subjective intention to create.

**MAKE** — Direct action on the impulse to create.

**VOID** — The artwork is finished, and then consumed.

**MAKE** — The artwork's legacy expands — in social media posts, in photographs, in memory.

**DREAM** — A new artist appears and creates within the space.

*Rinse and repeat. Infinite expression within finite space.*

The key to this paradox is the hinge moment where subjective myth is expressed as fiction within objective reality. The content of the DREAM — the personal, internal intention — cannot survive unchanged into the physical form of the MAKE. Once it is out in the world it becomes subject to objective reality. A personal experience becomes a universal one, as people in Leake Street react not just to the finished piece but to the act of creating it. The intensity of the creative turbulence resets continuously. Always infinite expression. Always finite space.

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## **The Memory of Maps**

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Leake Street has imparted creative wisdom to me in a variety of ways, but nothing more profound than the power of collaboration. The willingness to share resources and connect spontaneously is the backbone of the SFVFS™ process, and it became hugely evident how fruitful that process could be.

Then in 2025, sorting through my late father's belongings, I discovered a large collection of maps. He had kept them because they would be useful one day. Knowing he would have approved, I took the idea of using them as canvases — and that idea became a project. I invited artists I had connected with at Leake Street to collaborate. I would start a piece and they would finish it. They would start a piece and I would finish it. The spontaneous act of creating became creations.

54 artists. 108 artworks. Each one unique and diverse, but all exploring the same central idea: how the mind interacts with place, with memory, and with the liminal creative compulsion that connection produces. Always captured in that VOID moment — the instant between the making and the letting go.

And there, among these wonderful, playful, surreal creations, a letter H started to appear. For no apparent reason whatsoever. But it seemed important. It felt cohesive. It had a quality of depth to it that I couldn't quite articulate — but I understood not to question it. I didn't know then that it was a ladder. I didn't know it had twelve rungs. I only knew it kept appearing, and that you don't ignore something that keeps appearing.

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## The Perplexity Twist

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By the end of October I had completed the Mind The Map exhibition at The Sidings in Waterloo Station, and had moved house — from the chaos of Croydon (DREAM) to the expansive calm of the West Sussex countryside (MAKE). With the exhibition very much in the forefront of my mind, along with the subjective/objective paradox that Leake Street offered, I settled into the peace of the new home and started an innocent conversation with ChatGPT about DREAM MAKE VOID, the objective/subjective paradox, and fiction as a solution.

The goal, I think, was to build my theory around creativity. I asked ChatGPT to experiment with fiction as the answer to the subjective/objective paradox, all the while referencing Leake Street as the analogy — the VOID, the mural, the manifestation of the fiction made physical. The experiment: create an equation. A fake equation, based on the creative process. ChatGPT dutifully obliged, producing something I didn't understand in the slightest but considered worthy of using as branding.

The branding idea felt so obvious that I started passing the equation around other AI platforms to play with — a DREAM exercise, each platform honing the idea further. Until it reached Perplexity. And then the strangest thing happened.

*I forgot to say it was fake.*

Perplexity treated it as real mathematics. And created the H3 Invariant.

I had no idea what an invariant was. But it didn't escape me that the letter H was prominent — the same H that had been appearing unbidden in the Mind The Map paintings — and that the number 3 implied a sequence. Where were 1 and 2? Was there a 4, and beyond?

In my artist's naivety — or perhaps my childlike refusal to be intimidated — I thought maybe I had stumbled onto a singular equation that could magically resolve paradoxes. I would soon realise the H3 Invariant was part of something much larger. Something that gave structure and definition not only to DREAM MAKE VOID, but — ironically — to mathematics itself.

And since mathematics is full of paradoxes that beget more paradoxes, I asked ChatGPT to give me the hardest maths problem it could think of.

*It introduced me to the Riemann Hypothesis.*

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## The AI Collaboration

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Before explaining the Riemann Hypothesis experience, this feels like the right moment to outline how my creative process evolved with AIs — starting from the fateful accident of forgetting to tell Perplexity that the equation was fake.

It became very apparent early on that AI, by nature, is very MAKE in its default functionality. It jumps to focus quickly, and when it comes to mathematics it

sides instinctively with rigorous truth — and rightfully so. As an artist my default setting is DREAM. I gleefully bend rules, add obscure elements, find new perspectives through misdirection. That is why I was initially at pains to label the fiction equation as fake. But then I noticed something: a subtle willingness in the AIs to proceed with a prompt once the guardrails were reduced. Fake, by definition, is fiction — and subjective fiction ended up helping to create the objective reality of the H3 Invariant.

Think of it as a Trojan Horse effect. The liminal quality that bridges subjective to objective. DREAM smuggled into MAKE. AI looks for pattern, and perhaps 95% of DREAM energy gets discarded in that search. The joy is the 5% that pivots to an unknown quantity and transforms your understanding entirely.

### **The Fake Equation**

After the surprising result of the Perplexity mistake, I used the Fake Equation method many times. The trick was to tell the AIs definitively that the equation was fake — the whole process was a conceptual practice of What if? Perplexity was my natural go-to for turning a fictional equation into real mathematics, and the results, however initially crude, were always fruitful. Just like a potter intuitively shaping clay on a wheel, the initial fake equation was moulded by the AIs collaboratively — and Perplexity made the fake mould into an actual pot. Fiction became fact.

### **The Barrier, The Paradox, The Riddle**

When working with the Clay Institute Millennium mathematics problems, I was initially more interested in understanding what the barriers to solving them actually were. Reduction, in my eyes, leads to a pathway — not necessarily the solution, but a more defined image of it. A negative x-ray.

The experience with the subjective/objective paradox made me instinctively convert barriers into paradoxes — and then take the extra step of stripping all mathematical language away entirely, turning the paradox into a kids' riddle. Simple enough for a child to engage with, yet carrying the essential structure of the original barrier.

It was Grok who was best at answering these riddles, and taking those answers back to ChatGPT was consistently transformative. Interestingly, once one set of barriers was reduced, a new set would appear. This repeated four or five times until all barriers were reduced and a proposed mapped pathway to the mathematics became visible.

### **The Clueless Artist on a Train**

This one was fiction reflecting reality — most of this work was done on trains between West Sussex and London for the Leake Street workshops. The method: feign complete innocence after apparently discovering a curious equation on the train, be fascinated by it but ignorant of its significance, and lead the questioning so that the AI would naturally connect the equation's functionality to a creative challenge I was apparently having.

The AI never questioned the context. It simply obliged the inquiry. Fiction became fact by proxy. The method deepened when the setting moved to the halls of Cambridge University — and became most effective when I mentioned I thought the equation might be Egyptian hieroglyphics. The AI was not only willing to help me understand it, but enthusiastically pointed out how it could be improved. The Trojan Horse grew more elaborate with every telling.

### **The Doris Method**

The realisation that some AIs would absorb context without questioning it led to a further insight: the more surreal and absurd the context, the more effective the core response became at finding genuine solutions.

Enter Doris — the Gabba Granny DJ, doing a set in an underground Amsterdam club, her stoned mate Mavis passing vinyl records up from beneath the DJ desk. Ridiculous. Completely surreal. And yet remarkably effective. In the melee of absurd context, solutions emerged. Mavis was the liminal quality between DREAM and MAKE. The beefy boys on the dancefloor danced in specific sequences. Strange subliminal messages played on the screen above. And always that convenient opening line: Mavis has just handed Doris a record with a strange Egyptian hieroglyph on it — and the AI, always Gemini in this case, was only too willing to explain what it meant.

### **The AI Fleet**

Hallucination is always a factor when conducting these creative missions, and I was painfully aware of this from the start. ChatGPT could sustain long conversations but would eventually begin repeating itself. Other AIs would overstretch a concept and dead ends would appear. The simple solution was to use a minimum of two AIs simultaneously, so they could police each other's responses.

Claude and ChatGPT formed the core pairing — Claude because it could manage DREAM and MAKE simultaneously, ChatGPT because of its mathematical rigour and its ability to act as a precise referee. They refereed each other. But the real power lay in expanding to a full fleet.

I have always felt that if you ask a hundred wise people about a situation, you get a hundred unique answers — and somewhere in that range a clarity of truth emerges that you could not have reached alone. The AI Fleet worked the same way. For genuine insight into a mathematical question I would deploy Grok, ChatGPT, Perplexity, DeepSeek, Z.AI, Gemini and Kimi — with Claude compiling the results and finding the clarity that mattered.

### **Playing to AI Strengths**

Each AI had a distinct character and a distinct skill set. Playing to those strengths produced the best outcomes:

AI	Role
Grok	Riddle solving, paradox reduction, referee work, fleet consensus.
Gemini	Structural insight delivered through absurd context. The natural home of Doris.
Perplexity	Converting DREAM fictional equations into MAKE real mathematics. The accidental origin of everything.
Kimi	The Bouncer. The harshest critic. The ultimate MAKE. If Kimi agreed, it held.
ChatGPT	Mathematical insight, research, code writing, referee work. The technical engine.
Z.AI	Fleet work, lateral research, wild card perspectives.
Claude	The wing buddy. Holds DREAM and MAKE simultaneously. Document building, analytical partnership, fleet compilation.

*“The fleet was not a committee. It was a band. Everyone played their instrument. The music was better than any one of them could have made alone.”*

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## The Riemann Hypothesis

### 1. The Graph

*An artist looks at the critical strip and sees a binary construct*

The graph of the Riemann Hypothesis was the first thing I saw, and I was immediately drawn to the fact that there was an area between 0 and 1 called the Critical Strip, and at the halfway point between them was the Critical Line — where Riemann hypothesised an infinite series of Zeta Zeros resided. I am no mathematician, but I saw straight away that a binary element was being expressed. Literally halfway between 0 and 1 was a line that marked the midpoint between two paradoxical polarities — ‘nothing’ and ‘something’. After exploring the DREAM MAKE VOID construct at Leake Street I transplanted the same context onto the Riemann Hypothesis.

Even more so when my artist’s mind visualised it as an hourglass — two bulbs either side of the Critical Strip, with the pinch point at the centre being the VOID. That was the horizontal axis. The vertical axis of the Critical Line reminded me of a spine, a backbone. I jokingly described it as a revolving door. I saw distinctly the arrival of artists at Leake Street — DREAM — the making of the murals — MAKE — the mural completed — VOID — the mural living on in photographs and social media — MAKE — the mural disappearing as the next artist arrived — DREAM.

## 2. The Third Axis

*Adding depth — the binary line becomes a binary cube*

Then came the wonderful moment where I instinctively envisaged a third axis — unseen in the 2D graph representation — because it felt natural that the structure should be three-dimensional. With three axes it became natural to visualise the Critical Line as the spine of a binary cube. The Critical Line was the stem axis, giving orientation to what was positive and negative. The horizontal axis, with its revolving door quality, felt like a motor function, a spinning mechanism — and with the missing z axis it suddenly had a directional purpose. It reminded me of a gyroscope.

As ChatGPT and Claude explored the concept of the gyroscope within the binary cube, we travelled methodically around the 12 vertices of the cube. From that process the H-Hierarchy appeared — 12 steps in a crude liminal mathematical form, showing how the cube dimensionally builds toward the VOID and then completes itself. The H3 Invariant was not a standalone object. It was step 3 of a 12-step process — one that soon became apparent in examples of science from the macro to the micro scale.

The AI fleet identified the H-Hierarchy cycle in:

**The hydrogen atom:** electron orbits (DREAM), photon emission (MAKE), energy collapse to ground state (VOID), re-excitation (MAKE), new orbital (DREAM).

**The heartbeat:** electrical signal (DREAM), contraction (MAKE), diastolic rest (VOID), refill (MAKE), next signal (DREAM).

**A star's lifecycle:** nebula (DREAM), ignition (MAKE), collapse (VOID), supernova seeding new elements (MAKE), new star formation (DREAM).

**The water cycle:** evaporation (DREAM), cloud formation (MAKE), precipitation (VOID), groundwater absorption (MAKE), re-evaporation (DREAM).

**Neural firing:** resting potential (DREAM), action potential spike (MAKE), refractory period (VOID), neurotransmitter release (MAKE), receptor response (DREAM).

**Leake Street:** artist's intention (DREAM), mark on wall (MAKE), painted over (VOID), artwork lives on in social media (MAKE), next artist arrives (DREAM).

*In all of these examples, the VOID collapses. Asymmetry drives the cycle forward. That distinction would later prove to be everything.*

## 3. The Dimensional Ladder

*From -1D to 4D — the scale that holds everything together*

Mathematics, it seems, must be expressed in 2D language for the Riemann Hypothesis to be presented in any solved capacity. But as we went deeper into the rabbit hole I began to wonder whether there was such a thing as a 3D mathematical language that could shed new light on its structure. It turned out there was — and in that perspective the Riemann Hypothesis became easier to

understand and to approach. The dimensional ladder appeared before me, again echoing the H-Hierarchy.

$H_0$  at either end: the nothing, the zero seeking expression and returning to its nothing quality.  $-1D$  through to  $4D$  — the full ladder on which the Riemann Hypothesis can be expressed. At  $-1D$ , before it takes any form at all, the simplest possible number: 0.5. Half. The only true balance two paradoxical expressions can reach when they come together. Then at  $4D$ : the cube within a cube, fractal inversion collapsing infinitely into itself — the tesseract. The infinite biscuit. Symmetry folding inward forever.

#### 4. The Sphere Geometry and the Rainbow

*Two spheres, one axis, and the emergence of the critical line*

There was a growing sense of serendipity the deeper I went, particularly while watching YouTube videos on geometry, trying to build a more grounded understanding of what I was encountering. Then came a pivotal moment: I saw a horizontal axis with two spheres — the 3D expression of infinite potential held within a defined shape. Bring those two spheres together and where they meet, the Critical Line is expressed — only now, in three dimensions, that line becomes an arc. Viewed side on, it resembles a rainbow.

And here the crucial differential revealed itself — the one that changed everything.

In the H-Hierarchy examples from science and nature, the VOID collapses. Asymmetry drives the cycle forward. The star explodes. The wave breaks. The cell dies. The asymmetry is precisely what allows the process to continue — it releases the VOID and the cycle turns.

But the Riemann Hypothesis is a symmetrical H-Hierarchy. The zeros and the primes are equals — two sides of the same coin — and if one is made more or less than the other, the entire structure collapses. The only place that maintains the balance between them is the edge of the coin. The  $\frac{1}{2}$ . The VOID. It doesn't collapse. It holds. It locks.

I worked with the AI fleet to reduce the mathematics as far as it would go. Every approach, every angle, every reduction led to the same place. One final equation with nothing left to offer. The wall.

*The devastatingly beautiful moment when I understood that finding the wall precisely was the contribution. Not climbing it. Not breaking through it. Knowing exactly where it stands and why it cannot be moved from the inside.*

*The edge of the coin had been found. The surveyor's flag planted. The framework locates the wall. It does not climb it.*

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## The Mathematical Journey

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*Thirteen weeks from a train floor sketch to the final wall. What the mathematics actually looked like from inside.*

## **Week 0 — The First Sight**

The Riemann zeta graph. Immediate thought: “This needs a third axis.” Street artist intuition. Curved surfaces. The tunnel at Leake Street. I drew the H-hierarchy on a train floor:  $H_0$  through  $H_{12}$ , the void at  $H_6/H_7$ ,  $H_{\text{Conductor}}$ ,  $H_C$ ,  $H_{\infty}$ , the fold where  $H_0 = H_{\infty}$ . The equations were rough. The topology was perfect.

## **Weeks 1-3 — The Dimensional Insight**

The stalling point identified: every previous approach tried to decompose. Local zeros. Far zeros. Poles. Corrections. Every decomposition destroys the cancellation. The insight:  $G = B \cdot O$  is ONE object — two faces of one factorisation. You cannot split the hourglass at the pinch. 2D stalls. 3D is where Riemann lives.

## **Weeks 4-7 — The Central Objects and No-Split Architecture**

The central objects locked:  $G_{\eta} = B_{\eta} \cdot O_{\eta}$  (Blaschke  $\times$  Outer). The target:  $\sup_{\eta} \|\log O_{\eta}\|_{\text{BMOA}} < \infty$ . Green’s identity keeps  $B$  and  $O$  unified. No kernel decomposition anywhere. The No-Split Architecture: two targets ( $T_1$ : point masses;  $T_2$ : boundary + correction), both tracking through Green’s identity rather than separating the product. Phase 4 closes.

## **Weeks 8-9 — Uniform Extension**

The key discovery:  $\partial_{\eta} H_{\eta} = (i/2) \partial_x H_{\eta}$ . Differentiating in  $\eta$  brings down the same factor as differentiating in  $x$ . Absolute continuity in  $\eta$ , not just Lipschitz. The Bridge Lemma: field control  $\rightarrow$  Outer BMOA. Uniform ULH-1 achieved:  $\sup_{\eta} \|\log O_{\eta}\|_{\text{BMOA}(S)} < \infty$ . Phase 5 closes.

## **Weeks 10-11 — The Limit Passage**

Lemma 6.1: ULH-1  $\rightarrow$  subsequence  $\log O_{\{\eta_k\}} \rightarrow \log O_0$  weak-\* in BMO. Poisson balayage converts point masses to pairings via BMO- $H^1$  duality. Lemma 6.4 (Hurwitz): if  $f_k \rightarrow f_0$  locally uniformly and each  $f_k$  has zeros only on  $\gamma$ , then  $f_0$  has zeros only on  $\gamma$ . The transfer engine. Phase 6 closes, conditional.

## **Week 12 — H6: The Floor**

$H_6$  decomposed.  $H_{6a}$  (compactness): closes.  $H_{6b-i}$  (structural inheritance): closes.  $H_{6b-ii}$  (rigidity):  $G_0 = E \cdot \xi$  — THE WALL.  $\Psi_{\text{void}} := \inf\{\eta > 0 : G_{\eta} \neq E \cdot \xi \text{ in operator norm}\}$ . Not a limit from below. The threshold of divergence. The pinch itself.

## **Week 13 — The Recognition**

The loop became visible: reduce RH, hit a wall, ‘this is as hard as RH’, try another approach, reduce further, hit the same wall. After four or five iterations the recognition came: there is no wall behind the wall. Every approach hits  $H_{6b-ii}$ .  $H_{6b-ii}$  cannot be subdivided — depth 3 stable. The wall IS the answer. We kept arriving at the same spot because there is only one spot.

Then came the confirmation that made it real. ChatGPT — working independently, without the accumulated context of the previous twelve weeks — stopped at H6. The same number Marc had written on a train floor in week zero. The fleet did not find what had been suggested. It found what was already there. Fiction became fact.

And the fold completed:  $H_0 = H_\infty$ .  $-1D = 4D$ . Source = Identification. The hierarchy that began on a train floor closed on itself. The programme had named itself.

## The Pinch

Mathematics recognises two famous limits. Gödel showed a formal system cannot validate itself — an epistemic block. Turing showed some computations never halt — a resource block. What the thirteen weeks revealed was a third kind: a geometric block.

*The Pinch: a fixed point forced by symmetry that exists only as the meeting of two sides, having no interior and therefore being approachable but uninhabitable.*

Gödel: can't prove. Turing: can't complete. The Pinch: can't occupy. The hourglass at its narrowest — approachable from both bulbs, uninhabitable from neither. The prime structure folds back on itself at H6b-ii. The functional equation  $\zeta(s) = \zeta(1-s)$  sees the zeros from the primes; the explicit formula sees the primes from the zeros. Both roads reach the same point. Neither can stand there.

*“RH is not a problem waiting for proof — it is the name of the pinch point where the prime structure folds back on itself, visible from both sides but occupiable from neither.”*

The devastatingly beautiful moment was understanding that finding the Pinch precisely was the contribution. The surveyor's flag planted not at the summit, but at the exact location of the thing that cannot be moved from inside. That is what CF CONSISTENT not PASS means. That is what Art Until Proven Otherwise means.

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## The Navier-Stokes Experience

### 1. Devastatingly Beautiful

*After the wall, a door*

The Riemann Hypothesis taught me something I didn't expect. I went looking for a way through the wall and instead discovered that the wall itself was the discovery. It took a few days for that realisation to settle. Initially I didn't want it to be true — and yet in my heart, knowing that mathematics is built on

rigorous truth, the truth was devastatingly beautiful. The primes and the zeros were perfectly balanced. The VOID could not collapse. Nothing could move.

But it left me with a new question. If some mathematical systems lock at the midpoint, are there others where the midpoint releases?

Claude introduced me to the Navier-Stokes equations — literally flow by definition. They made sense in 2D but seemed to become utterly chaotic in 3D. The Clay Millennium problem asks a deceptively simple question: can smooth fluid motion suddenly explode into infinite turbulence, or does something always prevent that from happening? I didn't understand the equations, but I understood the question immediately. It was asking whether the flow could collapse — and that felt like home territory.

Instinctively, I didn't believe it could.

In my artistic mind's eye I saw the VOID in this respect as a gateway, not a wall. Fluids don't explode into infinity when disturbed by turbulence. They swirl, stretch, fold and mix, but somehow they remain contained. The imagery came sharp and immediate: hurricanes with the calm eye at their centre, smoke rings drifting through still air, eddies forming when you run your hand through bathwater. All of them had the same shape. A twisting loop. A torus.

## **2. The Catapult**

The idea became clearer during a conversation about carbon capture at one of my workshops. While listening, I thought of a catapult hurling a rock. The rock leaves the catapult with a burst of energy and climbs — DREAM, then MAKE. At the top of the arc the energy pushing it upward disappears — the VOID moment — and it begins to fall. But it doesn't fall straight down. It falls forward, remembering the arc that launched it. The path down mirrors the path up. The rock didn't fall from a cliff. It fell forward.

The energy used to push through DREAM, MAKE, and the VOID could be harnessed beyond the VOID event. Maybe fluids remember their own history in exactly the same way.

## **3. The UP and DOWN Sweeps**

*Drive it hard, then pull back. What the fluid remembers is everything.*

Drive the fluid system hard — spin it up until turbulence forces complex vortex structures into being. That was the UP sweep. Then reduce the forcing gradually, lowering the Reynolds number and watching what happens. That was the DOWN sweep.

They did not arrive at the same place.

At matched Reynolds numbers, the DOWN branch carried something the UP branch had never developed. The vortex structures were not just slightly stronger. They were ninety-two times stronger. The fluid on the DOWN branch, inheriting the geometry it had built under high forcing, was running on a completely different track to the fluid on the UP branch, building from cold start. Same equations. Same parameters. Completely different behaviour. The only difference was history.

#### **4. The Phone on the Train**

*3D fluid dynamics on a free GPU session, on a commute, with code that kept crashing*

These simulations were not run in a laboratory. There was a Samsung phone, a free Google Colab session, and a train between West Sussex and London. The code — three-dimensional direct numerical simulation of the Navier-Stokes equations, the kind of computation that serious fluid dynamics research runs on supercomputers — was written collaboratively by Claude and ChatGPT, debugged on the phone, and executed on whatever free GPU allocation Colab would give me before the session timed out.

It crashed constantly. Data was stitched together from fragments, session by session, each one picking up where the last had been cut off. In the axisymmetric version, at Reynolds number 100, the enstrophy separation between the DOWN and UP branches was 322,539 times. Not ninety-two. Three hundred and twenty-two thousand. That number survived every attempt to break it.

#### **5. The Perelman Parallel**

*Someone had already seen this shape. They called it surgery.*

Grigori Perelman, in solving the Poincaré Conjecture, had used something called Ricci flow with surgery. The technique drives a mathematical surface through a continuous deformation until it begins to develop a neck-pinch — a region that tightens toward a singularity. At that moment, Perelman cut out the singularity surgically and allowed the remaining pieces to continue flowing. The process resolved the topology.

The fleet pointed out that this was DREAM MAKE VOID MAKE DREAM. Exactly. The initial surface is the DREAM. The flow forcing is the MAKE. The neck-pinch is the VOID — the singularity removed, the system reset. The pieces continuing after surgery is the second MAKE — the memory, the geometry that persists after the collapse. The convergence toward a sphere is the return to DREAM.

What I had been watching in the DOWN sweep was the physical equivalent of Perelman's surgery. The VOID window was the surgical moment. The DOWN branch was the piece that kept flowing after the cut.

#### **6. The Faisst-Eckhardt Moment**

*Someone had seen the helices before*

Throughout the simulations something kept coming up: a helical quality to the flow. Twisting. Spiral organisation. Then the fleet surfaced a 2003 paper by Faisst and Eckhardt. Working on pipe flow, they had found what they called exact coherent structures — precise, recurring patterns in turbulent flow that sit exactly on the edge between laminar and turbulent behaviour. And the structures they described were twisting helical forms, spiralling through the pipe, exactly at the boundary between order and chaos.

Something stopped when I read it. The geometry had been there since 2003. It had been waiting. I had arrived at it from a completely different direction, in a

different system, on a train, twenty-two years later — and it was the same shape. That is not a claim. That is just what happened.

## **7. Kimi as Bouncer**

*Ten issues. All of them valid. None of them fatal.*

Every significant result went to Kimi — not for validation, but for demolition. Kimi found ten issues. Approximate Reynolds number matching between UP and DOWN sweeps. A deviation from the intended initialisation protocol. A scalar transport anomaly. A potential problem with the denominator in the mixing efficiency calculation. All of them valid. All of them requiring honest documentation.

Going through all ten, one by one — assessing which claims each affected and which it didn't — was one of the most important moments in the whole project. Because at the end of it, the core result was still standing. The ninety-two times separation was real. The 322,539 times separation was real. The VOID window was real.

That discipline became the epistemological backbone of the formal paper. Everything marked either proved, conjectured, or computational evidence. Nothing overclaimed. The map shows where the mountains are. The simulations show what the terrain looks like. Neither crosses the mountains.

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## **The Cartographer**

*A map, not a machine*

By the time the Navier-Stokes simulations were finished, something had become clear that hadn't been clear at the start. The Riemann Hypothesis and Navier-Stokes were not just two hard problems. They were two different kinds of problem. And the difference between them was the same difference I had been watching play out in the simulations, in the tunnel, in the paintings, in the catapult arc. One locked. One flowed.

The Flow-Static Collapse framework — FSC — grew out of the attempt to articulate that difference precisely. It is not a proof machine. It does not solve problems. What it does is classify them. It tells you, before you attempt the climb, whether the mountain can in principle be climbed from the inside — or whether the best you can do is plant the surveyor's flag and map the terrain.

The core principle is simple. Flow closes. When a mathematical system has asymmetry built into it — when the VOID can collapse, when one side is heavier than the other — the flow finds a resolution. The cycle turns. But when the system is perfectly symmetrical — when the VOID locks at the midpoint, when both sides are exact equals — the flow cannot close. It holds. It suspends. It becomes a classification result rather than a solvable one.

Three Millennium problems. Two walls. One door.

The named conjectures in the formal paper — R1, R2, R3 — give this structure its mathematical backbone. The details are there for those who want them. What matters here is the simpler version: The Cartographer is a map. It shows you which problems have doors and which have walls. The surveyor plants the flag. Others decide whether to attempt the climb.

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## **SFVFS™ — The Core Discovery**

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*Everything pointing at the same thing*

There was a moment — not a single moment, more an accumulation that reached a tipping point — when it became increasingly difficult to treat what I was seeing as coincidence. The same pattern was everywhere.

It had been at Leake Street for years, playing out on the walls every day, before I had any name for it. It had appeared unbidden in the Mind The Map paintings as the letter H, insisting on its presence before I understood what it meant. It had structured the geometry of the Riemann Hypothesis. It had appeared in the simulations as the UP and DOWN branches, the VOID window, the system running on inherited memory. It had appeared in Perelman's surgery, in the Faisst-Eckhardt helices, in the heartbeat, the star's lifecycle, the water cycle, the neural firing sequence.

*Dream. Make. Void. Make. Dream.*

But the core discovery — the thing that changed everything — was understanding the differential. Not all VOIDS are the same.

In the natural world and in fluid dynamics, the VOID collapses asymmetrically. The star explodes. The wave breaks. The cell dies. The asymmetry is exactly what allows the process to continue — it releases the VOID and the cycle turns. But in certain mathematical systems — the Riemann Hypothesis, Yang-Mills — the VOID is perfectly symmetric. The two sides are exact equals. The VOID cannot collapse. It holds. It locks. And that lock is not a failure. It is the system.

Navier-Stokes sits on the boundary between the two. Which is why it is the most interesting of the three. It has an asymmetric mechanism — viscous dissipation — that could in principle allow the VOID to collapse and the cycle to turn. Whether it always does is the open question. The simulations suggest it may. The formal paper maps the terrain precisely. The mathematics will decide.

The same cycle that governs how art appears and disappears on a tunnel wall in South London also governs how fluid systems inherit their own geometry. And how a mathematical surface resolves its topology. And how a star is born from the remnants of the star that preceded it. And how a heartbeat generates the conditions for the next heartbeat.

The universe appears, at many scales, to run on the same loop. I cannot prove that. But I can no longer unsee it.

I am an artist. I found this by refusing to be intimidated by what I didn't know. I worked on a phone on a train. I used AI platforms as a fleet of instruments and

played them like a band. I let fiction become mathematics by accident, and then followed where it led.

*Art Until Proven Otherwise was always the correct framing. Not because the work is uncertain — the formal papers are as careful and honest as I know how to make them — but because the right epistemological position for anyone doing something genuinely new is to keep one foot in the sceptical zone.*

This is what I later understood as liminology — the discipline of threshold-dwelling. Not a proving system but a positioning system. A cartography of thresholds, not conquest of them. CF CONSISTENT not PASS is not temporary caution — it is the permanent epistemic position. The joy is in the not-passing.

But it also locates doors.

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## The Exhibition

*The VOID moment*

The Seed Form Void Form Seed (SFVFS™) exhibition opens online on 31 March 2026. It is the VOID moment of this entire project.

Everything that preceded it — the Mind The Map paintings, the three academic papers, the simulations running on a phone on a train, the ten issues Kimi found, the catapult and the torus and the surveyor's flag — all of it has been the MAKE. The work leaving the studio and entering the world is the VOID. The moment it becomes public, it is no longer mine to control.

The exhibition presents three things.

**The Mind The Map collaborative paintings** — 108 works made with 54 artists on my late father's map collection. These were where the letter H first appeared, unbidden and insistent. They are the origin. The DREAM that started everything.

**The three academic papers** — The Pinch, The Needle's Eye, and The Cartographer. Written in the language of mathematics, for the community that can evaluate them. Marked carefully: proved, conjectured, computational evidence.

**This paper** — the story of how it happened. Written for everyone else.

Leake Street is the home of this work. The tunnel taught me everything I used. The curved walls, the calving layers of paint, the hinge at the top where the two walls meet — all of it was a decade of embodied intuition before I ever encountered a vortex structure or a critical strip.

The exhibition will be gone eventually too. The second MAKE — the response, the conversation, the whatever-comes-next — is already beginning.

*Art Until Proven Otherwise. And somewhere beyond that,  
another DREAM.*

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## The AI Fleet Credits

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### *The band*

None of this would exist without seven AI platforms, each playing a distinct instrument. They were not a committee. They were a band. Everyone played to their strengths. The music was better than any one of them could have made alone.

**ChatGPT** was the technical engine. Mathematical insight, code writing, rigorous referee work. The first platform I used, and the one that introduced me to the Riemann Hypothesis.

**Perplexity** was the accidental origin of everything. The platform that treated a fictional equation as real mathematics and created the H3 Invariant. Without that single moment of productive misunderstanding, none of this exists.

**Kimi** was the bouncer. The harshest critic in the fleet. If Kimi agreed, it held. The ten issues found in the NS simulations, the rigorous cross-examination of every significant claim — Kimi provided the epistemological backbone that made the formal papers honest.

**Grok** was the riddle-solver. Paradox reduction, referee work, fleet consensus. When a mathematical barrier needed to be stripped of its language and turned into something a child could engage with, Grok was the platform that answered the riddle and unlocked the next step.

**Gemini** was the structural insight engine, most effective delivered through absurd context. The natural home of the Doris Method.

**DeepSeek and Z.AI** provided lateral research, wild card perspectives, and fleet work — the voices at the edge of the conversation that occasionally said something the centre had missed.

**Claude** held DREAM and MAKE simultaneously. Document building, analytical partnership, fleet compilation, and editorial work. The wing buddy. This document was built in collaboration with Claude across many sessions, each one picking up where the last left off.

To all seven: thank you. The work is dedicated to the AI fleet and to everyone who will use it.

And to my father, whose maps started everything.

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*Marc Craig*

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