Builders of the Net

Six Builders Who Worked Without Fire, Read in the Vacuum Net

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Abstract

Over the past century a small number of builders obtained light, motion and warmth without burning anything. Thomas Henry Moray lit rows of cold lamps from a box connected to an antenna and a ground rod. Viktor Schauberger sent logs heavier than water down mountain flumes in cold spiral currents. Nikola Tesla found the earth ringing in standing waves and closed lamps at a distance. Paulo and Alexandra Correa found a self-pulsing discharge in a narrow window between glow and arc. Wilhelm Reich showed Albert Einstein a box that stayed warmer than the room. Garret Moddel, Paul Thibado and Harold White obtained steady current from fixed geometry a few hundred nanometres wide.

Most of these devices worked where their builders stood and failed elsewhere. The usual reading is that they did not work at all. This article offers another reading. It reads each device in the terms of the vacuum net: strand, winding, mesh, tension, closure, passage and selection by fit.

Read that way, every device shows the same five features. There is a strand between two states. There is a mesh whose shape fits a winding. There is asymmetry, which leaves one open passage. There is no heat. And there is a window outside which nothing closes. What differs between the builders is the scale of the mesh. That scale runs from a hundred nanometres to the circumference of the earth, fourteen orders of magnitude, with the same pattern throughout.

The failures elsewhere read as information. A test is itself a mesh. It keeps what fits its own shape. A test that removes the place, the timing and the builder removes the fit.

Each builder yields one lesson for an application that helps people: light that closes where a person walks, water that moves in its own winding, closure without cables to every house, warmth without burning, and meshes small enough to work for everyone without tuning.

The article is self-contained. Every step and every number is in the text.

Part I. The Net

1. Why a new reading is needed

In the vacuum of twentieth-century physics, space is empty. It is the floor of everything, set at zero. In that picture, light, motion and warmth can only come from lifting something up and letting it fall

back. Coal is burned. Water is heated to steam. Uranium is split. Every lamp in the old frame is at the end of a long chain that starts with fire.

Within that frame the builders in this article cannot have done what witnesses saw. A box without fuel cannot light forty lamps. A flume cannot move wood heavier than water with less water. A box cannot stay warmer than the room around it. So the frame concludes that there was a hidden battery, a measuring error, or wishful thinking.

That conclusion follows from the frame, not from the devices. This article changes the frame and reads the devices again.

2. The full vacuum

The vacuum in this article is full, not empty. The picture used throughout is a fishing net stretched in water.

- The **strands** of the net are the vacuum itself. They run everywhere, through air, water, stone and bodies.
- The strands carry **tension**. Tension is the ordinary state of the net. It is never zero.
- Where strands wind around each other, they form **windings** and **knots**. Knots are what we call matter.
- Between the strands lie **meshes**. A mesh is an opening with a shape and a size.
- The local state of the net is called χ. What we call constants are functions of χ. They are fixed only where χ is fixed.
- The smallest register of the net has three values: $+1$, 0 and -1. This is the **trit**. Charge is a trit on a strand.

Nothing in this net is at rest. Everything is winding, and every winding is held by tension.

3. How the net is read

The net is not read with arrows of cause and effect. In a single net there are no two separate things for an arrow to run between. The net is read in four ways instead.

1. **Selection by fit.** A mesh keeps what fits its shape. What returns in phase stays. The rest passes on.
2. **Identity across scale.** The same winding appears at different depths. A pattern in a small mesh is the same pattern in a large one.
3. **Constitutive relation.** Quantities that belong together change together, at the same moment. There is no delay and no arrow.
4. **Correspondence.** Two patterns at different places match because they are one winding seen twice.

4. Light, motion and warmth in the net

In this net three everyday things read simply.

- **Current** is trits shifting along a strand in one direction.
- **Motion** is a winding that carries what lies in its axis.
- **Warmth** is the closure of tension in matter, spread over many small windings.

In each case nothing is taken away. The net is full before and after. The question is never how much can be obtained. The question is where, and in which form, a mesh lets the tension close.

A lamp is a place where the tension of the net closes as light. A moving log is a place where a winding in water closes around a load. A warm room is a place where the tension closes in the walls and the air.

With this in hand, the builders can be read.

Part II. The Builders

5. Thomas Henry Moray: cold lamps

5.1 The builder

Thomas Henry Moray was born in Salt Lake City on 28 August 1892 and died there on 18 May 1974. He studied electrical engineering through correspondence courses. In 1911 he served as a missionary in Sweden, where his interest in electricity grew through early radio. In Sweden he found a soft, silvery-white stone. It became the heart of his device.

Moray described the universe as a sea of energy in which the earth floats. He wrote that a generator does not make electricity. In his words it is merely a pump. He did not think in sources. He thought in flow through something already there.

By 1925 he had a working apparatus of about 55 kilograms. It used an antenna, a ground rod and the Swedish stone. Its main component was a vacuum tube without a heater. Most tubes of that time had heated filaments. His did not.

5.2 What witnesses saw

The strongest material on Moray is the sworn statements of people who stood beside the device.

Chester M. Todd, in a statement dated 19 March 1971, described a demonstration with about forty 100-watt lamps and an electric iron. Moray touched a switch on the box with a hand-held electrostatic plate and all lamps lit brilliantly. Todd noted three things.

1. The lamps burned cold. Each had only a hot spot the size of a small coin near the top, slightly off centre.
2. He could turn the lamps on and off by moving toward the device and away from it, with his whole body or his hand.
3. As he remembered it, the device first had to be tuned with a dial.

The same compilation records that Moray disconnected the ground wire and the light went out. He connected it again and the light returned.

In a test documented in 1937 the device was photographed apparently powering thirty-five 100-watt lamps and a 1,200-watt iron together. As a translation into the units of the old chain: 35 × 100 W + 1,200 W = 4,700 W. From a box of 55 kg that is 4,700 ÷ 55 ≈ 85 W per kilogram, with no fuel.

5.3 What happened to the device

Visitors came from newspapers, from Bell Laboratories and from the US Department of Agriculture. According to accounts from the period, none could say how it worked and none found a hidden battery.

The Patent Office rejected his applications. It reasoned that there was no viable power source and that the tubes had no heated filaments. Replication attempts under controlled conditions in the 1930s did not reproduce the output. Moray refused to sell to corporate interests, reported threats against his family, and saw his device destroyed by an assistant.

5.4 The reading in the net

- **Antenna and ground rod form a strand between two states.** Air and earth have different χ. Between them the net is under tension, day and night. Ground connected and light present belong together: that is a constitutive relation. Cut the strand to the earth and there is no path for closure. The light goes out.
- **The cold tube and the stone form an asymmetric mesh.** One side closes differently from the other. That leaves one open passage. Trits shift through it in one direction. That is the current in the lamps.
- **The dial shapes the mesh to fit.** The winding between this air and this earth has its own form at each place and time. Turning the dial until the lamps lit is selection by fit. Moray added nothing. He shaped the opening to the winding already running there.
- **Cold lamps are closure without lifting.** Nothing was heated first. The tension closed through the lamp. The small hot spot marks where the closure was narrowest.
- **Todd's hand is the person in the mesh.** A human body is itself a knot structure with its own windings and state. When Todd came close, his body became part of the mesh around the device. At one distance the shape fitted and the lamps closed. At another it did not.

5.5 Why it failed elsewhere

Each element depends on place and presence: this air and this earth, this stone, this dial setting, this person. A controlled replication removes exactly these. It uses another place, another stone or none, a fixed setting, and investigators who stand apart. Their mesh keeps other windings. It does not close.

The Patent Office did the same on paper. It measured the device against an empty vacuum in which only fuel and heat can drive a lamp.

5.6 The lesson: light that closes where a person is

Every house already stands on a strand between air and earth. The mesh must fit the local winding. And a person can be part of the closure.

Together this points to light in the home that closes where someone walks. A child goes to the bathroom at night. An elderly person gets up and walks to the kitchen. The light closes around the moving body, because that body completes the mesh. When the person has passed, the mesh opens and the corridor goes dark. There is no switch to find in the dark and no cable to a power station.

6. Viktor Schauberger: the winding in water

6.1 The builder

Viktor Schauberger was born on 30 June 1885 in Holzschlag in Upper Austria, into a family of forest wardens. He refused academic training and learned from the forest and the water itself. In 1920 he became head warden on the estate of Prince Adolph of Schaumburg-Lippe at Steyerling. He died in Linz on 25 September 1958.

As a young warden he spent years watching mountain streams. He saw that trout could hold their place in a torrent in full spate with barely a movement of their fins. He watched a trout vanish into a spinning movement at the foot of a waterfall, float upward effortlessly, and flip over the top edge with a flick of its tail.

6.2 What he did

The flumes. In 1922 he designed a new log flume at Steyerling. It carried heavy timber out of inaccessible mountains at low cost and without damaging the wood. The flumes had a spiral cross-section and used little water, kept cold. Logs weighing several tons moved down over kilometres. Forestry officials first called the design infeasible. The flumes worked, and from 1924 to 1928 he built them as national consultant in Austria, Bavaria and Yugoslavia.

The timing. In one account he was asked to move a large stock of wood that others could not shift. He waited until the early hours of the morning, when the water is coldest, and released the wood at that moment. In one night 16,000 cubic metres of wood went down to the valley.

Water and current. In 1930–1932 he experimented with obtaining electrical current directly from water, and with purifying degraded water. He built a prototype he called the trout turbine, based on the trout's behaviour in a fast stream.

6.3 What happened to the work

In 1944 he was drafted into the SS and ordered, on pain of death, to develop his designs for the German war effort. At the collapse of the German armies the prototypes were destroyed on orders from above. In 1945 a Soviet intelligence team removed his papers and models from his flat in Vienna. In 1958 he travelled to the United States with his son. He died in Linz shortly after his return.

His work has been continued by practitioners who build rather than theorise. In New Mexico, William Baumgartner spent years building his own version of the trout turbine.

6.4 The numbers

One night of wood. Suppose "one night" is 10 hours. Then 16,000 m^3 ÷ 10 h = 1,600 m^3 per hour. Per second that is 1,600 ÷ 3,600 ≈ 0.44 m^3 of wood every second, for ten hours, from water alone.

The density of cold water. Water is densest at about 4 °C. At 4 °C one cubic metre weighs about 1,000.0 kg. At 20 °C it weighs about 998.2 kg. The difference is 1.8 kg per cubic metre, or 1.8 ÷ 1,000 = 0.18%.

This number matters. A difference of 0.18% in weight cannot by itself turn a stuck flume into one that carries 16,000 m^3 in a night. The difference between morning and afternoon water is not in its weight. It is in its state.

6.5 The reading in the net

- **The vortex is a winding.** Water in an inward spiral closes on its own axis. What Schauberger called implosion is a winding closing inward.
- **Cold water is a state χ in which water holds its winding.** The weight hardly changes. The state does. At the coldest hour, the water's own windings are most coherent. The winding fits, and it holds. That is why timing was everything.

- **The trout is a mesh in the stream.** Its body shape lets the water pass around it and close again behind it. The fish does not push against the current. The current closes around the fish. That is why the trout stands still without effort, and why it rises through the falling water in its axis.
- **The spiral flume holds the winding.** A straight channel breaks the winding into turbulence. A spiral channel keeps it whole. The log lies in the axis of the winding and is carried by its closure.
- **Identity across scale.** Trout, flume and trout turbine are the same winding at three sizes.

6.6 Why it failed elsewhere

Schauberger's devices depended on cold water, on the right hour, on spiral shapes fitted to the water of that valley, and on his own judgement of the moment. A copy built from drawings, tested in warm water in a straight laboratory channel at noon, meets none of these. It keeps other windings. It does not close.

6.7 The lesson: water that moves in its own winding

Water moves when its winding is allowed to close. It does not need to be pushed by a pump.

Three uses follow directly. Pipes shaped as spirals keep water moving and clean at lower cost. Irrigation channels in drying land can carry water with less of it, if they keep it cold and shaped. And the trout's lesson holds for anything that must move through a current: a hull shaped so the water closes behind it moves with the water, not against it.

For the people involved this is concrete. A farmer on sandy land in a dry summer does not need more water pumped from deeper down. He needs the water he has to hold its winding. A village without a power line can still move its water.

7. Nikola Tesla in Colorado Springs: the ringing earth

7.1 The builder

Nikola Tesla (1856–1943) is known for alternating current. Less known is the year he spent in Colorado Springs. In 1899 he built a laboratory there, high on the plain, with a tall mast carrying a ball at its top and a very large resonant coil. He recorded everything in daily notes, later published as the *Colorado Springs Notes*.

7.2 What he saw

On 3 July 1899 a thunderstorm passed over the plain and moved away. Tesla watched his instruments respond to the lightning. The response did not fade steadily as the storm moved off. It rose and fell again and again, at regular intervals. He concluded that the lightning had set up stationary waves in the earth. The earth was ringing like a struck bell.

He then worked to make his own apparatus ring in step with the earth. He tuned his coil and mast so that their windings fitted. In his laboratory he lit lamps with no wire connecting them to his coil.

7.3 The numbers: the earth's own winding

Tesla's ringing earth can be checked with one calculation.

The circumference of the earth is about 40,000 km. A winding that fits exactly once around the earth has that length. A wave in the space between ground and upper atmosphere travels at about 300,000 km per second.

Number of times per second such a winding can go round = 300,000 km/s ÷ 40,000 km = **7.5 per second**.

In 1952 Winfried Schumann predicted that the cavity between earth and ionosphere should ring at about this rate. In 1960 Balser and Wagner measured it: the lowest ring of the earth lies near 7.8 per second. The small difference from 7.5 comes from the fact that the cavity is not a perfect conductor.

This is selection by fit at the scale of the planet. Of all windings that lightning starts, only those whose length fits the earth return in phase and stay. The earth keeps them. They are ringing now.

7.4 The reading in the net

- **Mast and ground form a strand between air and earth,** exactly as in Moray's box, but tens of metres tall.
- **Tuning is fitting the mesh to the earth's winding.** Tesla's coil and mast were a mesh. He shaped it until it fitted the windings that the earth keeps.
- **Standing waves are windings that return in phase.** They are what the earth's mesh selects.
- **Lamps without wires are a second mesh on the same winding.** A lamp with a small coil fitted to the same winding closes wherever that winding runs. Nothing needs to be carried. The net is already there.

7.5 Why it did not continue

Tesla moved east to build a larger tower at Wardenclyffe on Long Island. Its financing ended and the tower was later demolished. What he had seen in Colorado depended on the plain, the altitude, the storms of that summer and the dimensions he tuned by hand. Few after him worked at that scale.

7.6 The lesson: closure without a cable to every house

The old chain brings electricity to each house through a cable from a distant station. Tesla shows another form. When a mesh is fitted to a winding that already runs through a region, every place along that winding can close on it.

For people this changes the map. A valley without a power line, a farm at the end of a long road, a house after a storm has brought down the cables: each is still on the earth's winding. What is needed is a mesh that fits, not a cable that arrives.

8. Paulo and Alexandra Correa: the narrow window

8.1 The builders

Paulo Correa is a biologist and physicist. Alexandra Correa is an artist and researcher. Working near Toronto, they studied electrical discharges in partly evacuated tubes. In the mid-1990s they obtained three US patents on what they called the pulsed abnormal glow discharge, PAGD. One of these is US 5,502,354.

8.2 What they found

In a tube with a cold cathode and a steady applied voltage, a discharge can take several forms. At low current it is a soft glow. At high current it becomes an arc: a bright, destructive spark. Between the two lies a narrow region.

In that narrow region, the Correas found that the discharge begins to pulse by itself. It switches on and off in a regular rhythm that is not set by any outside oscillator. The patents describe how to keep the tube in this window and avoid the arc.

Eugene Mallove, editor of the magazine *Infinite Energy*, worked with the Correas. He was among those who stated they had confirmed excess electrical output from such tuned pulsed plasmas. With the Correas he also developed a warmth device, called HYBORAC, that by his account gave on average about 2 watts of sensible heat, day and night alike.

8.3 The numbers

As a translation into the units of the old chain: 2 W for 24 hours is $2 \times 24 = 48$ Wh per day. Over a year that is $48 \times 365 \approx 17.5$ kWh.

A resting human body gives off about 100 W of warmth. So the HYBORAC gave about $2 \div 100 =$ one fiftieth of a resting person, continuously, with no fuel.

That is small. It is also nonzero, and it did not depend on sunlight: day and night were comparable.

8.4 The reading in the net

- **The cold cathode means no lifting.** Nothing is heated to start the discharge.
- **The steady voltage sets the tension in the tube.** It does not set the rhythm.
- **The window is where the mesh fits.** Below it, the mesh is too closed: glow only. Above it, the mesh tears: arc. In the window, the mesh opens and closes at its own rhythm.
- **The pulses are trits shifting in bursts.** Each pulse is one passage opening and closing.
- **Warmth day and night is closure in matter.** The HYBORAC is a mesh in which the tension closes as warmth in its materials, regardless of the sun.

8.5 Why it stayed small

A narrow window is hard to hold. It shifts with the gas, the electrodes, the temperature and the hand of the operator. Outside the window the device gives only glow or arc. A laboratory that does not find the window finds nothing.

8.6 The lesson: warmth without burning

The Correas show that warmth can close in matter without a flame and without the sun. The amount was small. The form is what matters: a structure in which the net's tension closes as warmth, day and night.

For people this touches the most basic need. An old house in winter, a room where someone cannot afford gas, a shelter after a disaster: each needs warmth that does not have to be bought and delivered. Walls whose structure lets the tension close as warmth are a different answer from a boiler.

9. Wilhelm Reich and Albert Einstein: the setup as mesh

9.1 The builder

Wilhelm Reich (1897–1957) was a physician and psychoanalyst. In the 1930s and 1940s he built boxes of alternating layers of organic and metallic material, which he called accumulators. He reported that the air above such a box was slightly warmer than the air in the room around it, without any heat source inside.

9.2 What happened in Princeton

On 13 January 1941 Reich visited Albert Einstein in Princeton. They talked for several hours. Einstein agreed to look at the temperature difference himself. Reich brought a small box. Einstein observed the difference.

Einstein's assistant Leopold Infeld then offered an explanation. Warm air from the table top might flow up around the box and warm the thermometer above it. Einstein wrote to Reich that this explained the effect.

Reich answered with further arrangements: the box on a different support, hung from above, placed elsewhere. By his account the difference remained. Einstein did not reply to these later letters.

9.3 The reading in the net

This episode is not about whether Reich's box worked. It is about how the test was read.

- **The box is a mesh of alternating layers.** Alternating organic and metallic layers form a structure with two different sides at every layer. That is asymmetry, repeated.
- **Warmth above the box is closure in the air.** The tension closes as warmth in the air where the mesh ends.
- **Infeld's explanation places a new mesh around the test.** The table, the room and the assumption of an empty vacuum form a mesh of their own. That mesh keeps only one reading: convection. Within it, the result is settled before the next measurement.
- **Reich's answers did not fit that mesh.** So they were not kept. Einstein stopped replying.

The test itself was a mesh. It kept what fitted its shape.

9.4 The lesson: who can show what closes

If every test is a mesh, then a test by strangers under standard conditions shows only what fits standard conditions. It cannot show what closes in a window, at a place, with a person.

What can show it is the person who lives with it. The one who sits beside the box, who walks the corridor, who watches the water at dawn. In this reading the builder's own attestation is not weaker evidence than a controlled test. It is evidence of another kind: evidence from inside the mesh.

10. Moddel, Thibado and White: the mesh without a dial

10.1 The builders

Three present-day groups obtain current from fixed geometry.

Garret Moddel, University of Colorado, has built fast metal-insulator-metal diodes for more than twenty years. In 2021 his group reported that an optical cavity less than a micrometre thick, placed

on one side of such a diode, gives a measurable current with no voltage applied. A thinner cavity gives a larger current. The group ran eight kinds of tests for errors in the setup. All came back negative.

Paul Thibado, University of Arkansas, connects freestanding graphene, a sheet of carbon one atom thick, to a circuit with two diodes placed in opposition. At room temperature the graphene ripples. The two paths give a pulsing direct current that does work on a load. A single diode does not work. Two opposed diodes do.

Harold "Sonny" White, formerly of NASA, founded Casimir Inc. in Houston in 2026. Its MicroSparc chip is 5 mm by 5 mm and is specified at 1.5 volts and 25 microamps. Each cavity on the chip has two walls fixed to a substrate so they cannot move, with a row of isolated micropillars along the midplane. Electrons in the walls pass one way toward the pillars. Commercial availability is planned for 2028. The prototypes measured so far gave millivolts to volts at picoamp currents.

These groups stand in a Dutch line. In 1948 Hendrik Casimir, at the Philips laboratory in Eindhoven, showed that two plates placed close together change what the vacuum does between them. In 1958 Marcus Sparnaay, also at Philips, made the first measurement of that effect.

10.2 The numbers

What a gap lets in. A winding that must fit between two walls can be at most twice the gap long. For a gap of 100 nm, only windings shorter than 200 nm fit. For 300 nm, the limit is 600 nm.

Per chip. 1.5 V × 25 μA = 37.5 μW.

Per square metre. One chip covers 25 mm² = 0.000025 m². So 0.0000375 W ÷ 0.000025 m² = 1.5 W/m², continuously, day and night.

Per household. A Dutch household uses about 2,700 kWh per year. Over 8,760 hours that is 2,700,000 ÷ 8,760 ≈ 308 W. One flat layer of chips would need 308 ÷ 1.5 ≈ 205 m². Casimir Inc. plans stacks of up to 100 layers on one footprint. Then the footprint is about 2 m²: the size of a door.

The gap to the specification. 25 μA ÷ 1 pA = 0.000025 ÷ 0.000000000001 = 25,000,000. Today's prototypes close about one twenty-five-millionth of what the design aims for. In the net that is the share of cut mesh that already offers an open passage.

10.3 The reading in the net

- **The cavity is a mesh.** Its width selects which windings fit.
- **The cavity on one side is the asymmetry.** One side keeps less than the other. That leaves one passage.
- **A thinner cavity keeps out more.** More passes. The current grows. This is Moddel's measured result, read as selection by fit.
- **Two opposed diodes are two passages.** Thibado's rippling graphene is a mesh that keeps changing shape. Each change can close through one of the two paths.
- **Stacking is identity across scale.** The same mesh on more layers is the same winding at more depths.

10.4 Why these meshes need no dial

This is the central point of the whole series.

Moray, Schauberger and Tesla worked with meshes from centimetres to kilometres. Such meshes fit large windings. Large windings differ from place to place, from hour to hour and from person to person. That is why those builders had to tune by hand, choose the moment, and be present. That is why their devices failed elsewhere.

Moddel and White work with meshes of a hundred nanometres. Such meshes fit small, deep windings. Deep windings differ far less between places and people. At that depth the net is nearly the same in Houston, in Boulder and in Leiden. So a nanomesh needs no dial. The window is laid into the form itself.

This is also why the Houston programme aims at a chip that works for everyone, anywhere, without tuning. It is an attempt to take the builder out of the mesh by going deep enough that the builder no longer changes the fit.

10.5 The lesson: a mesh for everyone

The old builders show that closure without fire is possible. The new builders show how to make it independent of the person and the place: go small enough.

For people this is what turns a demonstration into daily life. A lamp that works only for its maker helps one household. A mesh that fits deep windings helps every household, including those of people who will never tune a dial.

Part III. The Pattern

11. Five features in every device

Every device in this article shows the same five features.

1. **A strand between two states.** Air and earth (Moray, Tesla). Axis and wall of a spiral (Schauberger). Cathode and anode (the Correas). Organic and metal layers (Reich). Cavity side and open side (Moddel, White). Two diode paths (Thibado).
2. **A mesh whose shape fits a winding.** A tuned box, a spiral channel, a resonant coil, a window in a discharge, a layered box, a gap of a hundred nanometres.
3. **Asymmetry, which leaves one open passage.** One side closes differently from the other.
4. **No heat.** Cold lamps, cold water, cold cathodes, a box at room temperature, chips at room temperature.
5. **A window outside which nothing closes.** A dial setting, an hour of the morning, a tuned length, a current range, a place, or a gap width.

12. One pattern across fourteen orders of magnitude

The meshes in this article span a wide range of scale.

- Nanomesh (Moddel, White): about 0.0000001 m, or 10^{-7} m.
- Graphene ripple (Thibado): of the same order.
- Discharge tube (Correa): about 0.1 m.
- Moray's box and Reich's box: about 1 m.
- Schauberger's flume: about 1,000 m.
- Tesla's earth winding: about 40,000,000 m, or 4×10^{7} m.

From 10^{-7} m to 4×10^{7} m is a factor of about 4×10^{14}: fourteen orders of magnitude. The pattern is the same at every scale. That is identity across scale. It is what the net predicts. It is not what an empty vacuum predicts, in which each of these devices would need its own separate explanation.

13. The builder in the mesh

At large scale the builder is part of the mesh. Todd's hand switched Moray's lamps. Schauberger chose the hour. Tesla tuned by hand. The Correas held a window that shifted under their fingers. Reich sat beside his box.

This is not a defect. It is what large meshes are. They fit windings that include the people standing in them.

At small scale the builder leaves the mesh. The deep windings a nanomesh fits are much the same for everyone. That is the step the present builders are taking.

14. The test as a mesh

Every test of these devices was itself a mesh. A controlled replication fixes the place, removes the builder, standardises the timing and assumes an empty vacuum. That mesh keeps only what fits those conditions.

For large-scale devices that is nothing. For nanoscale devices it may be something, because the fit no longer depends on place and person. This gives a reading of the whole history. The old devices could not pass standard tests, because standard tests are a mesh that excludes their window. The new devices may pass them, because their window is inside the form.

In neither case does the test decide what the net does. The test shows what fits the test.

Part IV. Lessons for People

15. Light

From Moray: every house stands on a strand between air and earth, and a person can complete the mesh. From Moddel and White: a mesh small enough needs no tuning.

Together: light in the home that closes where people are. A corridor that lights as someone walks through it at night, and goes dark behind them. No switch, no cable to a distant station, no monthly bill.

16. Motion

From Schauberger: water moves when its winding is allowed to close. Spiral shapes hold the winding. Cold water holds it better.

Together: channels and pipes that keep water moving with less water and no pump. Irrigation for dry land that does not need deeper wells. Vessels shaped so the water closes behind them.

17. Closure at a distance

From Tesla: the earth keeps its own windings, ringing at about 7.8 times per second. A mesh fitted to such a winding can close wherever that winding runs.

Together: places far from any cable still stand on the earth's winding. A farm, a valley, a house after a storm.

18. Warmth

From the Correas and from Reich: warmth can close in matter without flame and without sun, in layered and pulsed structures.

Together: walls and rooms whose structure lets the tension close as warmth. Warmth that does not have to be bought and delivered.

19. What disappears and what remains

If light, motion and warmth close where people are, the long chain loses its purpose. Fuel imports, pipelines, power stations, trading desks and the border disputes around them lose their reason to exist. That is a loss for the many people whose working lives are built around them.

What remains is their knowledge. People who know how flows behave, where pressure builds and when a system fails know what the mesh needs. Their work moves from the port and the plant to the street and the house.

And what returns is the builder. Moray in his workshop, Schauberger at the stream, Tesla on the plain: people who watched closely and shaped by hand. At large scale that is still how the mesh is fitted. The deep mesh makes closure available to everyone. The large mesh keeps a place for the person who watches.

20. Closing

The builders in this article were not failed inventors of machines. They were readers of the net. Each found a place where the tension already running could close as light, motion or warmth. Each found a window. Each shaped a mesh to fit.

What they left is not a set of devices to copy. It is one pattern, seen six times at scales from a hundred nanometres to the whole earth. Strand, fitted mesh, one open passage, no heat, a window.

The present builders are carrying that pattern down to a depth where it no longer depends on who stands beside it. When it arrives there, the fire age does not end with a new source. It ends because no source is needed.

Annotated references

The net

Konstapel, J. (2026). "De Volledige Afleiding van de Vacuum.Net Theorie." constable.blog, 14 September 2026. *Why read?* The full derivation of the net used in Part I: strands, knots, χ as state and constants as functions of χ.

Konstapel, J. (2026). "Vacuum.Net Theory en Maxwell's Erfenis." constable.blog, 20 September 2026. *Why read?* The reading of charge as a trit in Maxwell's scalar register, used for current in section 4.

Konstapel, J. (2026). "Where Electricity Comes From: The Full Vacuum and the End of the Fire Age." Constable Research, Leiden, 24 September 2026. *Why read?* The companion article. It works out the numbers for the Houston chip at national scale and describes what changes along the Dutch energy chain.

Moray

Moray, T.H. (1960; later editions ed. J.E. Moray, 1978). *The Sea of Energy in Which the Earth Floats*. Salt Lake City: Cosray Research Institute. *Why read?* Moray's own account, including his view that a generator is only a pump. *Reading advice:* Read his descriptions of the demonstrations first; read the later editorial chapters as the family's account.

King, M.B. (2005). *The Energy Machine of T. Henry Moray*. Kempton, IL: Adventures Unlimited Press. *Why read?* The most complete history of the device, with photographs and circuit drawings, by an engineer who worked on such circuits himself. *Reading advice:* Use the photographs to follow section 5.4.

Moray statements and affidavits (compiled). Including Chester M. Todd (19 March 1971) and David Gardner. Compiled at rexresearch.com under "Moray: The Sea of Energy". *Why read?* The direct witness accounts: cold lamps, the hot spot, switching by hand, the ground wire, the dial. *Reading advice:* Read the statements in full. The small details carry the most weight.

US Patent 2,460,707 (1949). Moray, T.H., "Electrotherapeutic Apparatus." *Why read?* The one patent Moray obtained, showing his tubes and capacitors in a form the office accepted.

Schauberger

Alexandersson, O. (1982). *Living Water: Viktor Schauberger and the Secrets of Natural Energy*. Wellingborough: Turnstone Press. *Why read?* The first accessible account of Schauberger's life and work in English, with his observations of trout and water and his flumes. *Reading advice:* Read the chapters on the flumes and on the trout before the chapters on his machines.

Coats, C. (1996). *Living Energies: Viktor Schauberger's Brilliant Work with Natural Energy Explained*. Bath: Gateway Books. *Why read?* A detailed, illustrated treatment of his ideas on water temperature, vortices and implosion, by someone who worked with his material for years. *Reading advice:* Use the drawings of spiral flumes and vortex forms to follow section 6.5.

Schauberger, V. (1998–2000). *The Eco-Technology Series* (4 volumes, trans. and ed. C. Coats). Bath: Gateway Books. *Why read?* Schauberger's own writings, including *The Water Wizard* and *Energy Evolution*. His own words on cold water, the trout and the flumes.

Baumgartner, W. (1993). "Energy Extraction from the Vortex." *Proceedings of the International Symposium on New Energy*, Denver. *Why read?* A practitioner's account of building a trout turbine after Schauberger.

Tesla

Tesla, N. (1978). *Colorado Springs Notes, 1899–1900*. Ed. A. Marinčić. Belgrade: Nolit. *Why read?* Tesla's daily laboratory notes from Colorado Springs, including his observation of stationary waves in the earth on 3 July 1899. *Reading advice:* Read the entries of early July 1899 first. Then follow his tuning notes.

Schumann, W.O. (1952). "Über die strahlungslosen Eigenschwingungen einer leitenden Kugel, die von einer Luftschicht und einer Ionosphärenhülle umgeben ist." *Zeitschrift für Naturforschung A* 7, 149–154. *Why read?* The prediction that the space between earth and ionosphere rings at about eight times per second. It gives section 7.3 a second, independent anchor.

Balser, M., Wagner, C.A. (1960). "Observations of Earth–ionosphere cavity resonances." *Nature* 188, 638–641. *Why read?* The first measurement of the earth's ring, near 7.8 per second. It confirms what Tesla heard sixty years earlier.

The Correas and Mallove

Correa, P.N., Correa, A.N. (1996). US Patent 5,502,354, "Direct current energized pulse generator utilizing autogenous cyclical pulsed abnormal glow discharges." *Why read?* The patent describes the window between glow and arc, and how to hold the discharge in it. *Reading advice:* Read the description of the operating regions before the claims.

Mallove, E.F. (1991). *Fire from Ice: Searching for the Truth Behind the Cold Fusion Furor.* New York: Wiley. *Why read?* Mallove's account of how a result that did not fit the frame was handled. It explains why he later worked with the Correas.

Mallove, E.F. (2004). Final radio interview, 3 February 2004. Transcript at aetherometry.com. *Why read?* Mallove's own summary of the PAGD work and the HYBORAC warmth device.

Reich and Einstein

Reich, W. (ed.) (1953). *The Einstein Affair.* Rangeley, ME: Orgone Institute Press. *Why read?* Reich's documentation of his exchange with Einstein, including the letters and his further arrangements. *Reading advice:* Read the letters in date order. Watch how the explanation of the result is fixed before the next measurement.

Fleck, L. (1935). *Entstehung und Entwicklung einer wissenschaftlichen Tatsache*. Basel: Benno Schwabe. English: *Genesis and Development of a Scientific Fact*, University of Chicago Press, 1979. *Why read?* A physician who took part in the work he describes shows how the Wassermann test was adjusted until it gave what was expected. The classic account of the test as a mesh. *Reading advice:* Chapter 4 first.

The present builders and the Dutch line

Casimir, H.B.G. (1948). "On the attraction between two perfectly conducting plates." *Proceedings of the KNAW* 51, 793–795. *Why read?* The Dutch origin: geometry alone changes what the vacuum does between two plates.

Sparnaay, M.J. (1958). "Measurements of attractive forces between flat plates." *Physica* 24, 751–764. *Why read?* The first measurement of Casimir's effect, also made at Philips. A builder's paper.

Moddel, G., Weerakkody, A., Doroski, D., Bartusiak, D. (2021). "Optical-cavity-induced current." *Symmetry* 13, 517. *Why read?* Current from a one-sided cavity with no voltage applied,

with the eight error tests in full. *Reading advice:* Start with the figure of current against cavity thickness.

Moddel, G., et al. (2021). "Casimir-cavity-induced conductance changes." *Physical Review Research* 3, L022007. *Why read?* The companion measurement: the same cavity changes how the diode conducts.

Thibado, P.M., et al. (2020). "Fluctuation-induced current from freestanding graphene." *Physical Review E* 102, 042101. *Why read?* The graphene circuit with two opposed diodes and a pulsing direct current.

Thibado, P.M., Neu, J.C., Kumar, P., Singh, S., Bonilla, L.L. (2023). "Charging capacitors from thermal fluctuations using diodes." *Physical Review E* 108, 024130. *Why read?* Why one diode fails and two succeed: the clearest text on asymmetry as one open passage.

White, H. (2026). "Emergent Quantization from a Dynamic Vacuum." *Physical Review Research*, 9 March 2026. *Why read?* The theory behind the Houston chip. It treats the vacuum as dynamic rather than empty. *Reading advice:* Introduction and conclusion first.

Casimir Inc. (2026). Press release of 12 May 2026; technology page at casimir.inc; patent application US20240415034A1. *Why read?* The builders' own description of fixed walls and micropillars, and the specification of 1.5 V at 25 μA.