

Narrow Beam and Open Field

The Vallico Academy Lecture Series · Lecture 5

ACT 0 - THE NAME

The reveal. Show-then-name.

S1

A woman is sitting up in a hospital bed, eating her lunch. She has had a stroke, on the right side of her brain, but her eyes are perfect, her hands work, she is fully awake and will talk to you as sensibly as anyone in the room. She eats everything on the right half of her plate, puts down her fork, and says she has finished. The left half is untouched. Turn the plate around, and she eats what is now on the right, the food she declared a moment ago did not exist, and stops again at the middle.

Ask her to draw a clock. She draws the circle, and then crowds all twelve numbers into the right-hand side of it, jammed together, the left half of the dial an empty white curve. She sees nothing wrong with the drawing.

Reach under the blanket, lift her own left hand, hold it up in front of her face, and ask her whose it is. She will look at it with mild, untroubled puzzlement, and tell you it belongs to someone else. Perhaps to you.

There is nothing wrong with her eye. There is nothing wrong with her intelligence. Half of the world has simply ceased to exist for her: not gone dark, not gone blurry, but *gone*, so completely that the very space where it should be is gone too, and with it any possibility of noticing that it is missing. She has lost half of reality, and she cannot miss it, because missing it would take the very half that is gone.

Keep this woman in your mind. We are going to spend tonight discovering that you are, in a subtler and far more dangerous way, exactly like her. And so is everyone you know. And so is the entire civilisation that built most of what we see around us.

S2

You have seen this slide before. Three times: it opened the second lecture, and the third, and the fourth, and every time I put it up, said almost nothing, and moved on, and some of you I'm sure have been quietly annoyed about this.

Here is what I told you on the very first night, at the end of the Burton lecture. That underneath all five of these talks a single question would run, one connecting thread, and that I would not name it until the end. I told you to watch for it. To feel for it in the dark. I said there were two ways of paying attention to the world, two utterly different modes, and that once you'd seen the difference you would start to see it everywhere: in a Victorian explorer, in a buried tradition of philosophy, in a quarrel between physicists, in the question of what consciousness even is.

Four lectures. Every one of them, secretly, about the same thing. And every one of them I pointed at it and refused to name it: "the first mode," "the second mode," "the theory I'm not going to name yet." I wasn't being coy. I was being patient.

Now the waiting is over. Tonight I tell you whose idea this is, where it comes from, and how far down it goes. And it goes much further than you might think. It doesn't stop at a curiosity about brains. It ends with a claim about what has gone wrong with the whole modern world, and a claim about what reality itself is made of.

So. The name I have kept from you for four lectures.

S3

Iain McGilchrist.

If you have never heard the name, don't be embarrassed: four lectures ago, I rather hoped you hadn't. He is a psychiatrist. British, born in 1953. And in 2009 he published a book with a strange and haunting title, *The Master and His Emissary*, which has slowly, quietly, without much help from the establishment, become what some people have claimed to be one of the most important books of our century. The central theme of this book and his later one *The Matter with Things*, concerns the different roles played by the left and right hemispheres of the brain. These are the books behind every one of these lectures. When I said "the first mode of attention," I meant "using his left hemisphere". When I said "the second mode," I meant "using his right hemisphere". When I told you, at the end of the Burton lecture, that the theory had a name, it was this one. You have been living inside McGilchrist's idea for four lectures without being told whose it was.

And the idea, in its barest form, is the one we've just seen you at the hospital bedside. That you have two hemispheres; that they do not, whatever the hippies might tell you, divide the labour into logic on the left and creativity on the right; that they do something far stranger and far more consequential. And that the relationship between them (which serves, which leads, and what happens when they trade places) is not only the story of your brain. It is, McGilchrist argues, the story of everything we have got right, and everything we have got catastrophically wrong, about the world.

Let me show you the idea properly. And to do that I have to take the word "creativity" off the table right now, because it is the single biggest thing standing between you and the truth.

S4

First, one thing about the man: not a biographical footnote, but the argument in miniature, walking around inside a single life.

McGilchrist did not begin as a brain scientist. He began as far from it as you can get. He read English literature at Oxford, brilliantly (prizes, a fellowship of All Souls, one of the most rarefied purely intellectual perches in the English-speaking world), and he stayed, teaching literature, one of the anointed. And then, in 1982, he wrote a book called *Against Criticism*. And its argument (by a literary critic, remember) was that the whole academic apparatus of criticism, the dissecting and analysing, the breaking-open of poems to see how they work, was killing the very thing it claimed to love. That you cannot understand a living poem by breaking it on the wheel. That the analysing mind destroys the thing it examines, and then mistakes the

corpse for the creature.

And then he did something almost nobody does. He believed his own book. He looked at what he'd written (that the dissecting kind of attention murders the living whole) and understood he had stumbled onto something far larger than literature, something he did not yet have the tools to explain. So he left. Left All Souls, left literature, and in his thirties retrained from scratch in medicine: became a psychiatrist at the Royal Bethlem and the Maudsley hospitals in London, went to Johns Hopkins hospital in Baltimore to do brain imaging, in order to go and find, in the actual physical brain, the two kinds of attention he had first met in poems.

This tells you what kind of man is making this argument. Not a reductionist who backed into meaning by accident. A lover of the living whole who went down into the machinery on purpose, to find out why we keep killing it. He diagnosed the disease in his own field decades before he had the neuroscience to name it. And when we get, much later tonight, to the real, deep reason he left, it is going to matter more than you might think.

S5

I should confess that I've met him. Once. And I made, I think, a bit of a fool of myself, in a way that turns out to be exactly the point of this whole lecture, so I'm going to tell you.

It was a conference, a one-day affair at the Royal Institution in London with the grand title of "The Future of Humanity": four speakers, McGilchrist the star turn. I thought I would like to talk to him but the organisers kept spiriting him off to private lunches and private conversations with people more important than me. So at the end of the day I did what everyone else did and joined the queue to have a book signed. It was a long queue. I was something like eighty-seventh in it. And by the time I shuffled to the front, the poor guy had signed ninety-odd copies and had the glazed, courteous look of someone who has said "and who shall I make it out to?" until the words have lost all meaning.

Now, everyone ahead of me had bought a crisp new copy from the table by the door, specially to have it signed. I had not. I had brought, from home, my own copy of the second volume of his enormous later book: a copy that had been read to pieces, literally to pieces, spine broken, margins black with both my handwriting and Samantha's, our notes scrawled over many of the pages, coffee stains on some of the others. And I put this ruined wreck of a book down in front of him.

And it looked to me like he woke up a bit. He actually looked at it: turned a few pages, saw the annotations, the two different hands notating in the margins, and for about thirty seconds the man was more warmly alive, because someone had finally handed him not a trophy but a book that had been *used*. Then he laughed.

I only understood later what had happened. Every fresh copy in that queue stood for one idea of what a book is: a possession, bought new and then made valuable by a signature. Mine stood for the opposite: a thing you live inside and quarrel with until it comes apart in your hands. Without meaning to, waiting my turn near the back, I had acted out the whole argument of the man I had come to meet. Right. Let me now show you that argument.

ACT 1 - THE NEUROSCIENCE

Master & Emissary, Part I. Ground before assertion.

S6

Just to get it out of the way, let me just talk briefly about anatomy: brain hemispheres and also the way they receive information, which turns out to be very interesting.

As you can see in this little video the human brain is divided into two cerebral hemispheres - the left and the right, or the blue and the pink here - joined by a thick band of nerve fibres called the corpus callosum. These connections through the join are not solely about passing information between the hemispheres as you might think. Many of them are actually inhibitory, so each hemisphere can suppress the other and operate with a degree of independence. All the other bits of the brain you might have heard of, like the brain stem or the hypothalamus or whatever, belong to the brown region at the bottom of the image which also extends inside.

Most sensory pathways are connected to specific hemispheres, and weirdly, most of them cross the midline. Both eyes send the left visual field to the right hemisphere and the right visual field to the left. Hearing is predominantly "contralateral" with stronger projections from each ear to the opposite hemisphere. Touch and motor control for the hands are likewise contralateral: the left-hand is sensed and controlled mainly by the right hemisphere, and vice versa. Smell is the exception - the word is "ipsilateral" - so the left nostril projects primarily to the left hemisphere and the right nostril to the right.

S6a

So having established that, we have to clear away some rubbish, because you've all been sold a lie about your own brain, and it will block everything that follows.

The lie is the one on every motivational poster and self-help book: that you are "left-brained" or "right-brained"; the left the logical, analytical, mathematical one, the right the creative, artistic, free-spirited one. Some of you have probably taken a quiz that told you which you are. It is nonsense, worse than nonsense, because it holds just enough truth to inoculate you against the real thing.

And before anyone asks: he does not think creativity is nowhere. He thinks it is overwhelmingly right-sided, and he wrote the best part of a hundred pages of evidence for it, plus an appendix defending them. What he denies is that creativity is the right hemisphere's *job*, one item on a list opposite arithmetic. It is a consequence of how that half attends. Not a task it was assigned.

Here is the correction, and McGilchrist is emphatic. Both hemispheres do everything. Reason lives in both. Emotion lives in both. Language, mathematics, imagery, music: all of it served by both halves, working together. You cannot sort human activities into a left pile and a right pile. The difference between the hemispheres is *not what they do*.

It is *how* they do it. And that turns out to be the most important sentence in this entire series.

S7

So it's how, not what. The two hemispheres attend to the world in two completely different ways, and because attention is never passive, because how you attend determines what you

find, each hemisphere quite literally brings a different world into being.

The left pays a narrow, focused, sharply targeted attention. The beam of a spotlight. It *grasps*: the word matters; the left hemisphere drives the right hand, the hand that seizes and manipulates. It wants the world in pieces it can use: fixed, certain, known, cut out of context, reduced to the general, the categorised, the mechanical. And it is superb at this. Everything you can measure, count, name, and manipulate, you owe to it. It gives you the map.

The right pays a completely different attention: broad, open, vigilant, taking in the whole scene at once, including everything you weren't looking for. It sees things in context, alive, connected, unique, never quite pinned down, always in flux. The hemisphere of the new, the living, the embodied, the related: of the individual thing in front of you rather than the category it belongs to. It gives you not the map but the territory. The actual world. The one you live in.

Two ways of paying attention: there it is, named at last, in the flesh. When I said "the first mode" across four lectures, I meant the left's narrow grasp. When I said "the second mode," I meant the right's open embrace. And now the only question that matters is this: which of the two should be in charge?

S8

You might reasonably ask: why two? Why would evolution build a brain divided against itself, with two ways of seeing that are always, to a degree, at war?

McGilchrist's answer is beautifully simple, and it is about a bird. I need a volunteer. Saska!

Let me explain by first being a boring human with both eyes on the front of my head. I really want that tasty piece of food on the table. Little do I know that some kind of furry prehistoric cat creature, known as Saska, is eyeing me up from behind a rock, waiting to pounce. And at a moment's inattention from me, I'm lunch. Let's see how easy it is.

Now picture a bird on the ground, feeding, like this one. It must do two utterly different things in the same instant, and it cannot do them with one kind of attention. It has to focus, narrowly, precisely, on a single seed, to pick it out from the grit it's lying in and get it, exactly, with the beak. That is the narrow beam; the left hemisphere's job. But if that were the only attention it had, it would be dead within the hour, because while it stared at its seed the hawk would take it. So at the very same moment it must hold the other attention wide open, the broad, vigilant scan of the whole field, alert to the shadow, the movement, the thing it wasn't looking for: the predator, the mate, the rest of the flock.

So now the vicious Saska creature will now try to eat the bird, but if the bird can see her she has to freeze or stay hidden.

Focus on the part, and attend to the whole. At once. You cannot do both with a single mode (they contradict each other), so nature does the only thing it can. It builds two. Two hemispheres, two attentions, running in parallel. And this is not a human quirk; the divided brain goes back hundreds of millions of years, long before us. The seed and the hawk built it, or the worm and the velociraptor. We merely inherited it, and then did something with it no bird ever could.

And before you ask, yes, birds do have a preferred eye - the right one - for looking at seeds on the ground and a preferred eye for watching the sky for hawks and they can often be seen twisting their bodies to get into the right configuration. This is because almost all the connections from the left eye go to the right hemisphere, and those from the right eye to the left hemisphere. In humans, with eyes on the front of her head, it isn't like that, we have a different architecture. What happens is that half the connections from both eyes, representing the left visual field, go to the right hemisphere. Half the connections from both eyes, representing the right visual field, go to the left hemisphere.

S9

Now back to the woman with the clock, because the two hemispheres are not equal partners, and the way they are unequal is the hinge the whole lecture turns on.

Remember her. Right hemisphere damaged, half her world gone, and, crucially, unable to tell anything was missing. Here is the fact that ought to frighten you: it does not work the other way round. Damage the left hemisphere badly and you get terrible troubles (you may lose speech, lose the right hand), but the person still *knows* something is wrong. They struggle, they grieve their losses, they try to compensate. The lights are still on, because the right hemisphere, the one that sees the whole, is still there to notice the gap.

Damage the right, and you can lose half of everything and sail on in perfect contentment, confabulating, insisting all is well, unable *in principle* to notice what has gone, because the very faculty that could have told you something was missing is the thing that is missing.

Do you see the asymmetry? The right hemisphere knows about the left. It understands what the left is for, values it, uses it, knows its limits. But the left does not know about the right. It cannot see what the right sees; worse, it cannot see that there is anything there to see. It is supremely confident, and its confidence is exactly proportional to how much it cannot perceive. The left hemisphere is the one that does not know what it does not know.

Sit with that. A part of your mind that is brilliant, narrow, grasping, certain of itself, and constitutionally blind to everything outside its own beam, and blind, above all, to its own blindness. Now imagine that part got the upper hand. Not in a patient. In a person. In a culture. In all of us.

Before I take you any further, I want to stop asserting things at you and do something to you instead.

On the next slide there is a video of a basketball game. Six people, two teams, one ball. What I need you to do is to count the passes made by the team in white. Got it? So go on, count them, I'll wait.

ACT 2 - WHICH ONE IS RIGHT?

S9a

Right. Put your hand up if you saw the gorilla.

A man in a full gorilla suit walks into the middle of that game, turns to face the camera, beats his chest with his fists, dances a little, and strolls out the other side. What's supposed to happen

is that roughly half of any room misses him completely. And once you know he's there you cannot understand how you missed him, which is the interesting part, because it means the missing was not a failure of your eyes. Your eyes worked perfectly. Something else decided he wasn't there.

Here is the same trick with people. A stranger stops you in the street to ask directions and holds out a map. While you're looking at the map, two men carry a door between you, and behind the door the stranger swaps places with somebody else. Most people carry on giving directions to a different human being. It still works when the substitute is a different height, a different age, a different race. It still works when it's a different sex.

Now, this is usually filed under "amusing quirks of the brain," and it is not. This is what focused attention *is*. That narrow beam is astonishingly good at its job, and its job is to exclude. It buys precision by paying in everything else in the room. And a narrow beam is the only kind the left hemisphere has.

Which is why McGilchrist opens his book not with the brain but with attention, and says something I want you to hold on to for the rest of the night. Attention is not one cognitive function among others, sitting on a list next to memory and language. Attention is how a world comes into being for you. Change the attention and you have not changed your opinion about the world. You have changed the world you are in.

And that, he says, makes it a moral act. Not a metaphor. A moral act, in the way that deciding what to look at when someone is suffering in front of you is a moral act.

There is one more turn, and it is the one that makes the second half of this lecture possible. For the left hemisphere, attention is responsible not just for *how* a thing appears, and not just for *what* it is. It is responsible for whether it is there at all.

Look at the figure on the right. A large letter H, made out of little number twos. You saw the H first. Everybody does: whole before parts, and the whole comes from the right hemisphere, which is why the H arrives before the twos do. Now, in schizophrenia that order reverses. The twos come first, and the H may never arrive at all.

Hold on to that too. We are going to meet those twos again later, and by then they will not be funny.

S9b

I want to go back to the woman I started with, because I have not been straight with you about what is wrong with her.

Two Italian neurologists, Bisiach and Luzzatti, had patients with exactly her condition, and they tried something that had not occurred to anybody. They didn't show them anything. They asked them to close their eyes.

Picture the Piazza del Duomo in Milan. You know it; you have known it all your life. You are standing at the far end, looking at the west front of the cathedral. Describe what you can see.

And the patient does, beautifully, in detail: the buildings down the south side of the square, one after another, accurately named. And nothing whatever down the north.

Then the neurologists say: now imagine you have walked to the other end. The cathedral is behind you. You are facing back the way you came. Describe it again.

And the patient names, one after another, every single building he has just left out. And leaves out every single one he has just named.

Take a moment with that, because it is one of the strangest results in the whole of neurology. There is nothing wrong with his memory. The whole square is in there. He has just proved it, twice, in two halves, ten seconds apart. He simply cannot put the two halves together, and here is the part that should frighten you slightly: he is not troubled by this. Not embarrassed, not puzzled, not curious. It does not come up.

So the neglect is not in his eye. His eyes are shut. The neglect is in his imagination. There is a room in there that cannot be entered, and the man who cannot enter it does not know there is a door.

That is what I meant, at the beginning, when I said she cannot miss it. She is not failing to see the left side of the world. She is failing to *conceive* it. And a thing that cannot be conceived does not register as absent. It registers as nothing at all, which feels exactly like a complete world, because there is nothing left over to feel incomplete about.

One footnote, and then we move on. You can give it back. Take a syringe of ice-cold water, irrigate the patient's left ear, and for a few minutes the left-hand side of reality returns. Cold water in an ear. Half a universe, on and off, like a switch. Make of that what you will.

I should also say, since we have been on first-name terms with this patient all evening, that in McGilchrist's own book she is a man. Middle-aged, highly intelligent, an actuary by profession, and the author calls him Mike. I have decided not to take this personally.

S9c

Two people have a stroke in the shower. I am not making this up and I could not have invented it.

The first man has his in the right hemisphere. He is standing under the water, he looks up at the showerhead, and time slows down. The stream stops being a stream. It separates into individual drops, and the drops hang there in the air. He described it himself, years later, unprompted, and the comparison he reached for was the bullets in *The Matrix*. Every drop in perfect focus. Where you and I would see a blur of falling water, he could see each one, sharp, and still.

That is the left hemisphere alone, with nothing to balance it. Flow resolved into a row of stationary points, each one beautifully defined. Precision, bought at the price of movement.

The second is a neuroanatomist called Jill Bolte Taylor, and she has hers on the other side, and she is also, as it happens, in the shower. What she reports is the opposite. She reels backwards from the roar of the water, which has become enormous.

Two showers. Two strokes. Opposite directions. Lose the right hemisphere and the flow freezes into a row of still frames. Lose the left and the flow comes in through the walls.

Now hold on to that, because it is the only promise I am going to make you tonight about something later on. So in a little while a Frenchman is going to stand up and tell you that the row of still frames is not time at all, that it is time's corpse, and that the real thing is the flow. And when he does I want you to remember that you have already watched a man lose the flow, in a shower, and describe what was left.

S9d

Right. Let's say you've read a magazine article telling you that all of this is nonsense. OK we're not going to walk past that, because we are the second mode and the second mode does not walk past things.

The objection is real and it comes from serious people. It goes like this. Put anybody in a scanner doing anything at all and both hemispheres light up. There is no task that is done by one side. So the whole left-right story is - as it says on the slide - at best a simplification and at worst a Victorian hangover in a lab coat. The usual citation is a meta-analysis by Dietrich and Kanso, which went through the creativity literature and concluded there was nothing there.

McGilchrist's answer is in an appendix, and it is the reason I trust the man, so let me give it to you in his own image.

Suppose you are investigating the five hundred murders recorded in Britain last year, and you want to know how they are distributed. You find them scattered fairly evenly across the country, once you allow for population. Except that in one small village in rural Wales there have been forty-seven.

You do not say: never mind that, because four hundred and fifty-three murders happened somewhere else.

Waiting for a task that uses one hemisphere and not the other is waiting forever. Nobody ever claimed there was one. The question was never *whether* both are involved. It was which one is doing the work that matters, and what happens to the world when the other one is running the show.

And there is a second point, about the scanners themselves. When you switch on a car engine the fan starts whirring, busily and visibly and measurably. The fan is not what makes the car go.

Then he does the thing that most people writing books like this do not do. He went and found all thirty-seven of the laterality studies his critics cited, and read them. He reports what is in them one by one, including the ones that went against him, including the two he could not trace, including the one that was a conference poster. And what comes out is a pattern nobody had bothered to look at: the right-hemisphere effect shows up strongly in the genuinely creative subjects and washes out in the averagely creative ones. Which means that if you test uncreative people on uncreative tasks, you will find no effect, and you will publish.

You are allowed to disagree with McGilchrist. Several distinguished people do. What you are not allowed to say is that he did not look.

ACT 1 - THE NEUROSCIENCE (RESUMED)

S10

There is a set of experiments that shows the two of them caught in the act, almost as two separate people, and they're actually pretty eerie.

In the mid-twentieth century, to treat severe epilepsy, surgeons sometimes cut the great bridge of fibres joining the hemispheres: the corpus callosum. It worked; the seizures stopped. And the patients seemed entirely normal. But then, because of the way the sensory pathways worked as I explained earlier - Roger Sperry and Michael Gazzaniga found ways to send information to just one hemisphere at a time, and discovered that these people now had, in a real sense, two centres of consciousness in one skull, each with its own knowledge, its own preferences, sometimes its own intentions. One patient's left hand, the right hemisphere's, would be doing up his buttons while the right hand came along behind and undid them.

But here is the detail that matters most to us. Feed a piece of information secretly to the right hemisphere: get the patient to do something on an instruction the left hemisphere never received, then ask him, out loud, why he did it. The left hemisphere, which does the talking, and which had no idea of the real reason, does not say "I don't know." It never says "I don't know." Instantly, and with complete confidence, it makes up a reason. A fluent, plausible, entirely false reason, which the patient then sincerely believes.

Gazzaniga called it the interpreter: the left hemisphere's compulsion to spin a coherent story, to appear in command, and never, ever to admit that the truth lies somewhere it cannot see. A brilliant spin doctor who is certain he is the president. Keep him in mind. Because now I'm going to tell you the story that gives this whole book its name, and its warning.

But first a brief aside which will get me into trouble which is the connection of this behaviour to 'wokeness'. I should be scrupulous here, because I couldn't get McGilchrist to admit it in the Q+A at the London meeting I went to, presumably because he's very well aware he would get in trouble too. What he says is that this pattern belongs to bureaucracy, to managerialism and to scientism, and he leaves it there, on no particular side of any political aisle. The mechanism is his. The application is mine, and you are free to send the bill to me.

So it seems that the ultimate end result of left-hemisphere behaviour is something very like the modern woke, the ultra-lefty lefty. (I'm sure the conflation of the two uses of the word left is just a happy coincidence). Think of the certainty with which such people know - they just know - that climate change is about to destroy the planet, that Covid was definitely not man-made and that vaccines can never have dangerous side-effects, that Jews are uniquely evil and are trying to genocide the Palestinians, that Joe Biden won the election fair and square and that everything Donald Trump does is stupid, deranged, crazy and dangerous, that all of J.K. Rowling's Harry Potter books must be burned because she's mean to transgenders. I could go on. Now understand, I'm not publicly taking a position on any of these overly politicized issues. I can't, because if I say the wrong thing the lefties might get me, which previous more enlightened generations would have found incredible. The point is that the problem is not *what* lefties believe, it's *how* they believe it. There is quite clearly a difference between the *way* the modern left believe whatever it is they believe in, and the way that conservative-leaning people believe their stuff. The right are generally open to argument, they're happy to discuss, they can even change their views if the opposing argument is sufficiently persuasive. Voicing an alternative

viewpoint to a lefty is actually dangerous. Not only will they not listen to any opposing evidence, as soon as a forbidden viewpoint is raised, you are marked for death, online persecution, or being sacked from your job. And I find it very interesting that this 'how not what' is precisely reflected in McGilchrist's hemisphere theory, and - hugely amusingly - in lefty reviews of McGilchrist's own book, see the caption to the image on this slide. The book is easy to exploit by unscrupulous far-right fascists, known until not that long ago as 'normal people'. Happy to oblige! wink emoji

So, a warning from history kids, be more like the guy in the right of this picture. Don't listen to groupthink. Always question why you believe a thing, don't believe it just because your mates would socially ostracize you if you didn't or you want to fit in. That way lies Wokeness, disaster, and death, and almost most importantly, utter stupidity. Take the instant way, for honour travels in a strait so narrow where one but goes abreast.

S11

Here is the story that McGilchrist's first book on this was based on. He takes it from Nietzsche, and it is why the book is called what it's called.

There was once a wise spiritual master who ruled a small but flourishing domain. As it grew, he could no longer see to everything himself: could not be everywhere, know every detail, tend every corner. So he trained emissaries: envoys to go out in his name, attend to the particulars, do the close detailed work he had no time for, and report back. The best of them served him well, and the domain prospered, precisely because the master kept the wide view, the sense of the whole, the ultimate purpose, while the emissaries did the sharp, local, practical work in service of that vision.

But there was one emissary, the cleverest and most ambitious, who began to have other ideas. Out in the field, seeing his own competence, he started to mistake the master's role for his own. He came to regard the master's reticence, his refusal to grasp and control everything, his care for things that could not be counted or used, as mere weakness, even foolishness. And so he usurped him, and set himself up as master in the master's place.

And the domain fell into ruin. Because the emissary, for all his cleverness, had only ever had a part of the picture. Superb at the detail, blind to the whole. He could seize and use and control, but he had no vision of what any of it was *for*. Cut off from the master's wisdom, and refusing to admit there had ever been anything he couldn't see, he ran the domain into tyranny and collapse, never once understanding what had gone wrong, because the faculty that could have understood was the very thing he'd overthrown. (Any comparison with modern politics in the UK is of course entirely coincidental. Not.)

The master is your right hemisphere. The wise servant who must never become the ruler is your left. That is the title. That is the warning. And now, the most disturbing move McGilchrist makes, he asks: what if it has already happened? Not in a brain. In us. In all of us. Across the last three and a half centuries.

S12

Everything I've shown you so far has been about a brain: one skull, one person, two hemispheres, and which is in charge. A clinical matter. Interesting, a little unsettling, but

contained.

McGilchrist's real claim is not contained at all, and here the book stops being neurology and becomes something much bigger and much harder to shake off.

His claim is that a whole civilisation can do what that ambitious emissary did. That a culture, over centuries, can hand more and more power to the left hemisphere's way of seeing (the narrow, grasping, measuring, controlling mode) until the master's voice, the sense of the living whole, is not merely ignored but actively denied, declared unreal, laughed out of the room. That the balance can tip in an entire society. And that ours has. That we are living, right now, inside the domain the emissary took over.

Let me show you how he thinks it happened.

ACT 3 - WHAT WENT WRONG

Master & Emissary, Part II. The civilisational claim, standing alone.

S13

McGilchrist's history (and this is the whole second half of the first book) is the story of a pendulum. Of Western culture swinging between the two modes, now and then achieving, for a golden moment, a balance, and then losing it.

The moments when a civilisation flowers, he argues, are the moments when the two are in balance but the right leads: when there is tremendous left-hemisphere skill and precision and craft, all of it still in service of a right-hemisphere sense of the whole, the living, the meaningful. Athens in the sixth and fifth centuries before Christ. The flowering of the Renaissance. Moments when the emissary is at his most brilliant and still knows his master.

And then, again and again, it tips. The skill detaches from the vision. The means forget the end. The map is mistaken for the country. He traces it through the hardening of the late Roman mind, through the rigid systematising that periodically freezes a living culture into rules and categories, through the long oscillations of European history: a swing toward the whole, a swing back toward the mechanical.

I am compressing a very long and very rich argument into a single slide, and doing it some violence. But you don't need the whole sweep. You need only the last swing. Because the last swing, the one we are still inside, is the largest and the longest and the most extreme of them all. And unlike the others, it may not swing back.

S14

Here is the claim: the thing I promised you, at the very end of the last lecture, that tonight would deliver. Brace for it, because it is not modest.

Somewhere around the middle of the seventeenth century (call it the Scientific Revolution, the birth of the modern world, sixteen-fifty and the decades around it), the pendulum began a swing that has not stopped, and that has gone further than any swing before it. The left hemisphere's way of attending took power, and has been consolidating that power, without serious interruption, for three and a half centuries. Ours is the first civilisation in human history run almost entirely by the emissary, with the master not merely sidelined but *denied*, declared a

superstition, an illusion, a soft unrigorous thing to be grown out of.

And look what the emissary is good at, and look what we have therefore become magnificent at. Measurement. Quantification. Mechanism. Control. Breaking every whole into parts and every quality into a number. Manipulating a world of dead, usable, interchangeable objects. We are the richest, most powerful, most technically capable civilisation that has ever existed, and it is no accident. It is exactly what you would expect from three and a half centuries of handing the keys to the hemisphere that seizes and counts and controls.

But remember the woman with the clock. Remember what the left hemisphere cannot do, and cannot know it cannot do. It cannot see the whole. It cannot see the living. It cannot see meaning, or value, or the sacred, or the connectedness of things, and it cannot see that it cannot see them, so it concludes, with perfect confidence, that they were never there. A civilisation run by the left hemisphere becomes, McGilchrist says, exactly like that patient: brilliant, capable, certain of itself, and getting reality progressively, catastrophically wrong, while insisting all is well. That is the deepest thing wrong with the modern world. Not this crisis or that one. The one behind them all. We have been paying the wrong kind of attention for three hundred and fifty years, and we no longer even remember that there is another kind.

S15

And now, if you've been paying the right kind of attention, something should be dawning on you. Because you have watched this exact story happen twice already in this series, and both times I told you what was happening without telling you its name.

Cast your mind back to the second lecture: the buried tradition. Hermes, the Gnostics, Plotinus, the whole two-thousand-year underground river of Western thought that said the world is alive, that mind comes first, that everything flows from a single source. And I told you that this entire tradition was not refuted but *bulldozed*: flattened, in a couple of generations, by the Scientific Revolution. You know now what did the bulldozing, and why. The left hemisphere coming to power. The second-mode cosmology of the whole living cosmos, steamrolled by the first-mode machine. Same event.

And cast your mind back to the third lecture: the physicists. Copenhagen, telling you to shut up and calculate, to stop asking what is really there, that the question is meaningless, that there's no picture and you're a fool to want one. And de Broglie and Bohm, insisting on asking anyway, demanding to know what is physically happening. I told you those were two temperaments, two ways of doing science. You know their real names now. Copenhagen was the left hemisphere in a lab coat: calculate, control, don't ask about the whole. De Broglie and Bohm were the right: the world is real, and connected, and can be understood, and I want to see it. And here they are on the slide being carted off to a mental institution in straightjackets. Same quarrel. Same two hemispheres. A new century.

I wasn't telling you separate stories, lecture after lecture. I was telling you the same story, four times, and hiding the title. Two more turns of it to go, and then, at last, they all stand together.

S15a

I have just told you that a civilisation went one-sided, and I have told you it on my own authority, which is worth very little. Let me now hand you the evidence, and I warn you it is not

comfortable.

In 1992 a psychologist called Louis Sass published a book noticing something nobody had wanted to notice. Every single phenomenon reported by people with schizophrenia has a close counterpart at the core of literary and artistic modernism. Not a loose resemblance. The same fragmentation, the same flatness, the same watching-yourself-from-outside, the same collapse of the implicit, the same terrible literalism, instance after instance, across the whole of the twentieth century.

He could not explain it. McGilchrist can, and the explanation is the one thing this evening has been building towards: the phenomenology of schizophrenia maps, in detail, onto the phenomenology of right hemisphere damage.

So here is what the patients say. I have taken these from the case literature, some of them a century old. Listen to them as descriptions of a world, not as symptoms.

A man looks at his wife across the table, and afterwards can only report that her outlines were exactly the same kind of outlines as those he saw around the flowers, the glasses, the dishes, the knives, the forks, the tablecloth, the fruit. He looked at his wife as if she were a fruit on the tablecloth.

Another: "I am quite mechanical. I have gone to pieces. I am like a marionette."

Another: "Once I was a man, with a soul and a living body. Now there is nothing left but a corpse, and the soul is dead. I hear and I see, but I know nothing any more. For me time no longer flows. Everything is monotonous: morning, noon, evening, past, present, future. Everything keeps starting all over again."

Another cannot accept anything that has not been demonstrated to him, and so ends by doubting everything, including that a woman's body could have an effect on a man, because he cannot prove it.

And one more, which I include because I live at the top of a valley that is emptying out. A patient with a comprehensive plan to make everything in the world useful, including the sea, if necessary through tourism. McGilchrist adds one dry parenthesis: an uncanny anticipation of the attitude of rural development boards.

Now. The claim is not that our civilisation has caught schizophrenia. A culture cannot catch schizophrenia, any more than a language can catch pneumonia, and if I let you leave here thinking that I would have insulted every ill person in Europe and misled you into the bargain.

The claim is narrower and worse. It is that these people are describing, from the inside and in extremity, the world you get when the left hemisphere's take is all you have. And that we have built a civilisation which produces that world at scale, in people who are perfectly well: a world of parts and not wholes, of things and not beings, of HR departments instead of people, of the explicit and never the implied, in which what cannot be measured does not exist, and in which we photograph our experiences instead of having them. There is a man in California who has taken over a million photographs of his own life. He says he has not looked at most of them.

That is not an illness. That is a Tuesday.

S15b

I have been telling you what the world looks like from in there. Here are two men who showed us, without meaning to.

Lovis Corinth had a stroke in his right hemisphere in 1911. Look at his paintings on the right here. On the top row: his wife, painted in 1910, and a friend's small daughter in 1906. Look at the girl's face. Somebody is in there.

On the bottom row: his wife again, in 1920, and his own children in 1916. The hand is still expert. The technique has not gone anywhere. What has gone is the person. They have become arrangements of features, competently assembled.

And Otto Dix, on the left, who had his in 1967. A photograph, and two self-portraits from before. Then three from after, and they are sketchy, almost cartoons, and the face has stopped being a particular man's face. In the last one his painting hand has come forward and got in the way of his own head, and if you count the fingers on it, there are six.

These are not bad paintings by declining old men. Corinth went on being famous. These are two people who lost the half of the brain that sees the living whole, and who then, professionally, every day, sat down in front of a face and painted what they could still see.

S16

Let me name the cost, before we turn the corner. What does it actually feel like to live in the domain the emissary took over? You already know, because it's the only world most of us have ever been handed.

It is a world of things. Objects, resources, mechanisms: problems to be solved and materials to be used. A world where everything real is whatever you can measure, and everything you cannot measure (beauty, meaning, purpose, the sacred, the sense that another person is a *someone* and not a *something*) gets quietly reclassified as unreal: a projection, a chemical event in the skull, a nice feeling with no truth behind it. A world where the trees are timber and the mountains are mineral deposits and the animals are units of production, and, in the end, so are the people. The left hemisphere's world: fantastically useful, and quietly dead.

McGilchrist's claim is that the flatness you feel is not a mood, or a personal failing, or nostalgia. It is an accurate perception of a real amputation. Half the world is genuinely gone, not from your eye but from your attention, and, like the woman with the clock, we have mostly lost the very faculty that could tell us it is missing.

But here is where McGilchrist does the thing that lifts all of this out of mere lament, and turns it into the most important argument of the night. He does not stop at "this is what we've lost." He asks a far more dangerous question. What if the right hemisphere's world (the whole, living, connected, meaningful one) is not the pretty illusion? What if it is the more *true*? What if, when you attend to reality in the second mode, you don't get a comforting story: you get reality, more accurately than the machine can ever give it to you?

That question takes him out of neuroscience altogether, and into metaphysics. Into fifteen hundred pages of it. Let me show you where he wrote them, and then what is in them.

ACT 4 - THE METAPHYSICS

The Matter with Things, Volume 2 final chapters.

S17

In 2021, twelve years after the first book, McGilchrist published the second. It is called *The Matter with Things*, a pun, of course: the matter *with* things, what's wrong with things; and the matter, the very stuff, *of* things. Two volumes. Around fifteen hundred pages. It may be the last book of its kind anyone writes, a single mind attempting to take in, and connect, the whole of reality: neuroscience, physics, philosophy, mathematics, poetry; the nature of time, of matter, of value, of the sacred.

And he did not write it in a university, or a city, or anywhere near the centre of the machine. He wrote it on the Isle of Skye, a remote, wild, wind-scoured island off the far north-west coast of Scotland, having left the metropolitan world behind. The book itself, in other words, was written the way it argues you should live: far out where the living world is still louder than the machine, attending in the mode he says we have forgotten. The battered volume I set down in front of him to sign was the second half of this.

The first book diagnosed the disease: the emissary on the throne, and what it has cost. The second does something braver. It attends to reality in the right-hemisphere mode, fully and rigorously, and reports back on what the world actually looks like when you do. And what it looks like (I promise you this is where we have been heading all along) is astonishingly, almost unbelievably, like the world I have been building for you, lecture after lecture, out of Plotinus and a pilot wave.

He arrived by one road and I by another. Let me show you what he found.

S17a

I have twice now said "fifteen hundred pages" as though the number were an argument. It isn't, so let me show you the shape of the thing, because the shape is the argument.

Volume one asks how we come to know anything at all, and it takes the portals one at a time. Attention. Perception. Judgment. Apprehension. Emotional and social intelligence. Cognitive intelligence. Creativity. Chapter after chapter of experimental evidence, and the same result every time.

Then it asks which routes we can trust, and there are four of them: science, reason, intuition and imagination. And it says something that annoys almost everybody, which is that no one of the four can be relied on alone, that all four are needed, and that the popular carve-up (science and reason on the left, intuition on the right) is simply wrong, because both hemispheres do all four, differently.

And the finding, in his own summary at the end, is this. In every one of the portals of access to knowledge, the right hemisphere is superior to the left. In one thing, and one thing only, is the left superior: grasping something in order to use it.

Then volume two turns round and asks the obvious question. If that is true, and we have spent three and a half centuries listening to the wrong half, then what does the world actually look

like when you stop?

That is where we are going now. And I want to be honest with you about what I am doing to it. I am about to take seven hundred pages of the most careful metaphysics written this century and give you ten minutes of it. I am not summarising the book. I am pointing at it.

S18

There's a kind of logic that runs like a machine. A thing is either true or it is false; a thing and its opposite cannot both be so. Feed a contradiction into that logic and it seizes up: it does not compute. That logic is real, and powerful, and it is the left hemisphere's native tongue. But the claim McGilchrist makes (and it is one of the oldest claims there is) is that the deepest truths about the world are not either/or at all. They are both/and.

Niels Bohr (yes, the same Bohr we spent an evening roasting) had it carved in Latin on his coat of arms when Denmark ennobled him: *contraria sunt complementa*. Contraries complete one another. And at the centre of the shield he set the old Chinese emblem of light and dark curled each around the other: the arch-priest of the first mode reaching, at the end, for the most ancient picture we have of opposites that need each other. Light is a wave. Light is a particle. Not on alternate Tuesdays: at once. You spent a whole evening with me inside that fact.

Heraclitus saw this twenty-five centuries ago, in the bow and the lyre: it is the tension between the two ends that gives the arrow its flight and the string its note. The opposites do not cancel. They fall together, which is what *coincidence* means here, not accident but a falling-together, and out of it comes everything that is.

Now hold that, because here it stops being decoration and starts paying a debt. Sameness, McGilchrist says, is sterile; it makes nothing. For there to be anything at all (any world, any experience, any *you*), something must be set against something. A limit must be drawn. Delimitation is what makes a thing exist. Which means the dividing of the world is not a fall from some better, seamless unity. The division is the price of there being a world.

Last time, I asked you a question and gave you my own answer. Why would the One divide, why would a perfect, undivided field ever break itself into the many? And I said: not boredom. Necessity. And I told you the answer had a name I was saving. Here it is. Jacob Boehme. A man who mended shoes for a living, in seventeenth-century Germany, and saw deeper into the nature of God than almost anyone before or since, a name I gave you in full in the second lecture, in that buried lineage, without ever telling you why, of all of them, he would come to matter most tonight. Boehme's word was the *Ungrund*: the groundless ground. His vision was of a ground of being that cannot know itself while it stays an undifferentiated one; it must set something against itself, divide itself, in order to become anything, to see itself, to *be*. The One divides in order to be at all.

Now, you are entitled at this point to think that I have wandered off into poetry, so let me put a floor under it, and the floor is mathematics.

McGilchrist's claim is not that contradiction is charming. It is that shallow truths do not generate paradox and deep ones always do, which is Bohr's father's maxim before it was Bohr's, and that the great logical paradoxes are the signature of exactly one thing: a mind trying to take

apart, piece by piece, something that can only be held whole.

Zeno's arrow, which cannot move, because at every instant it is simply somewhere. Achilles, who cannot catch the tortoise, though we have all watched it happen. The heap of sand with no first grain. The barber who shaves everyone who does not shave himself. The ship of Theseus, rebuilt plank by plank, which is and is not the ship that sailed. Every one of them is manufactured the same way: cut a continuous thing into discrete pieces, and then discover that the pieces will not go back together.

These are not puzzles about the world. They are what the machine-logic does when it runs into something the machine-logic cannot hold. Which is why they leave you baffled rather than illuminated, and why the coincidence of opposites, which is the same collision seen from the other side, leaves you illuminated rather than baffled.

And here's what should intrigue you. McGilchrist arrives at the very same place (he gets there through Heidegger, and a strange phrase, *nothing noths itself*, a nothing that can only ground itself in itself), and he does it, in this chapter, without once mentioning Boehme. A neurologist on Skye and a mystic four centuries dead, drawing the same map.

S18a

Two quick ones, and then we go up a level.

The chequerboard first. Square A, up here in the light, and square B, down there in the cylinder's shadow. Which is darker? Everybody? Right.

They are the same colour. Not similar. Identical, pixel for pixel. Watch.

Now the interesting thing is not that you were fooled. The interesting thing is that you are *still* seeing it wrong, right now, with the proof on the screen, and there is nothing you can do about it. Your visual system has decided that a square in shadow which reflects that much light must be a pale square, and it is not going to be talked out of it by a bar.

And the circles. The orange one on the left, ringed by big neighbours, and the orange one on the right, ringed by small ones. Same size. Obviously.

Here is why I am showing you these rather than telling you about them. Both illusions happen because your brain refuses to see the thing on its own. It insists on seeing it in its surroundings, and it reports the relationship rather than the isolated fact. That is not a bug you are stuck with. That is the right hemisphere doing exactly what it is for, and it is the reason you can walk into a room you have never seen and understand it in a quarter of a second.

The left hemisphere would give you the correct answer about square B. It would also walk you into the furniture.

Context is not decoration on top of the facts. Context is where most of the information lives. Remember that in about ten minutes, when somebody tells you that a part can be understood on its own.

S19

McGilchrist ends that same chapter by turning, deliberately, to the one pair of opposites he says matters most: the One and the Many. Which is of course what I've been trying to tell you about

this particular pair for two lectures now.

His claim is that the whole is prior to its parts. Not assembled from them: prior to them. The parts are real; but they are not truly separable, and the moment you treat the fragments as the primary things and the whole as a mere sum of them, you've made the left hemisphere's signature mistake. The right hemisphere holds it the other way up: one living whole, within which the parts appear, distinct, but never divided.

Now, you have met this exact shape before, and not as mysticism. In the quantum lecture I showed you one universal wave function, one field, and told you that what looks like a world of separate things is that single field partitioned: factorised into parts that can no longer reach one another. And last time I gave that partition a name out of late antiquity: Plotinus, the One overflowing into the many without ever ceasing to be one. So: physics. Then a philosopher seventeen hundred years old. And now a neuroscientist, working from split brains and damaged hemispheres, who as far as he knows has nothing to do with wave functions or with Plotinus, telling you that reality is one whole from which the many are drawn and to which they still belong. One out of many; many out of one. Empedocles called it a circle. I'd call it a spiral, because you never quite come back to where you started.

Three fields. One architecture.

S20

Here is a question that sounds childish until you try to answer it, and then it swallows you whole. What is time? St. Augustine said he knew perfectly well, until somebody asked him. Try it now, quietly, to yourself. You reached for a line, didn't you. An arrow. A row of moments, past on the left, future on the right, a little travelling dot called "now." Everybody does. And McGilchrist's claim is that the instant you did that, you lost it.

Because that line is not time. It's a picture of time laid out in space, and the one thing time will not do is hold still to be looked at. To draw it as a line you have to step outside it, freeze it, and slice the flow into points. But you cannot step outside time; there is nowhere to stand. By the very act of picturing it, he says, you place yourself already outside the thing you were trying to see. The line is not time. The line is time's corpse.

This is the two modes again, and by now you can hear which is which. The left hemisphere cannot hold a flow, so it does what it always does: it reaches for a thing. It turns the verb into a noun, the flowing into a fixed, the living into a row of points it can measure and count and spend. The right hemisphere doesn't reach for a thing, because time isn't one. Time is more like love: also no thing, also never sitting still to be weighed, also known only from the inside, in and through what happens. Time is not something the world sits in. It is something the world does.

The man who saw this most deeply was Henri Bergson (you met him briefly last time, alongside James and Huxley and their reducing valve), once the most famous thinker alive, then quietly written out of the story, and I'll tell you in a moment why that matters to us tonight. Bergson split time in two. There is - in French - temps: clock time, measured, chopped into equal points along a ruler. And there is durée: duration, lived time, time as it actually flows when you're inside it. And here's the trap: the moment you measure time you have spatialised it,

turned the flow into points, and points are precisely what a flow is not. Every child knows time drags in the dentist's chair; that's not his point, and he'd have won no prize for it. His point is stranger. The flow is the reality. The row of points is a shadow the intellect throws on it afterwards.

Think of a melody. A tune is not a line of separate notes sitting side by side like railway trucks, each one complete and touching the next. A melody is one seamless thing, where every note holds the notes before it and leans into the notes after; cut it into isolated notes and you don't get the melody in pieces, you get no melody at all. That, says Bergson, is time. Not a chain of nows. A melody. And, you'll enjoy this, hearing a melody as a flowing whole is largely the work of the right hemisphere. The half of the brain that lives in time is the half that can hear a tune.

So when the clever people tell you, as they've told you for a century, that time is really an illusion (lunchtime doubly so!), that nothing truly flows, that the universe is a frozen block and the passing of your afternoon is a trick of the mind: McGilchrist's answer is blunt. That, he says, looks very much like one more mess the left hemisphere has got itself into. It has mistaken its own map for the territory. It stood outside the flow, drew the line, and then announced that the line was all there is. Time is not the illusion. The line is.

And I want to add something Bergson could not have known, because it comes off a stroke ward. In 1913 an Austrian neurologist called Zingerle described a patient who had lost the left side of his body in the way we have been discussing. But he had lost something else with it. He had lost the memory of ever having had one. Not just the perception now: the past as well, gone, so that in his own mind he had always been half a man. Two researchers put it better than I can: a temporal distortion resulting in an ontological landslide, sweeping away the left side of the world.

And the sense of time as something lived through and endured, as against time as a row of measured points, turns out to be a right-hemisphere function. Damage that side, and duration is precisely what you lose.

Bergson worked this out in an armchair in 1889. The stroke ward has been confirming it ever since.

S21

Now. If you were awake last time, you should be feeling distinctly uncomfortable, and so you should, because I feel it too.

Last time I stood here and built you a summit, and the summit was this: the undivided field (the One, the whole wave function, before it breaks into the many) has no time in it. I showed you the equation with no time in it at all. I told you that timelessness was real, genuinely real, at the very bottom of things. And now I've brought you a neurologist who says the flat opposite: that time is real, that the flow is the realest thing there is, and that the people who call the universe a timeless block have been fooled by their own left hemispheres.

So which is it? Did I lie to you last time, or am I lying to you now? Both men cannot be right. Do not let me off the hook.

But before I do, McGilchrist hands me something I could not have scripted. When he wants to explain why the physicists fell in love with the timeless block, he reaches, of all people, for a name you already know. He reaches for de Broglie. Our de Broglie. The prince from the third lecture, the man with the pilot wave. And de Broglie's verdict, which McGilchrist quotes, is this: Einstein's relativity, the theory that gives you the block universe, was the last and most beautiful flowering of the old classical physics, and it spatialised time as far as time can possibly be spatialised. It was the end of the old world, not the beginning of the new one. And quantum mechanics, de Broglie's quantum mechanics, goes underneath it, into a layer of reality the frozen block can't reach. De Broglie even says that Bergson, writing about flowing time in 1889, anticipated the whole quantum revolution by forty years.

Do you see what happened? The timelessness I sold you last time belongs to the grandest version of the old, classical, left-hemisphere picture. And the very physics I spent an entire lecture rehabilitating (the pilot wave, that real and flowing field) is the physics McGilchrist and de Broglie say goes deeper, and sides with the flow. The two roads I walked you down separately have just crossed in the dark.

S22

Here is the resolution, and it is not a compromise. Both were true, because they were never speaking about the same thing.

Last time, the timelessness belonged to the One. To the undivided field, whole and unbroken, before it partitions into the many. And I told you why: with nothing set against it, nothing to change relative to, there's no clock and no time, genuinely none. That still stands.

But then, remember, the One divides. That was the whole of last time's summit: the partition is the origin of time. Time doesn't exist for the undivided whole; time is born in the very act of dividing into many. And who lives among the many? You do. I do. Every divided, embodied, particular creature that ever woke up inside this world. For us, for everything inside the division, time is no illusion. It is real, and it flows, exactly as McGilchrist insists, because we are the many, and time is the native air of the many.

So the physicist, last time, was standing outside, taking the God's-eye view of the whole, from which there is no time. And McGilchrist is standing inside, where every living thing actually stands, from which time is the realest thing there is. Same reality. Opposite ends of it. And McGilchrist gets there in his own words, without a single equation: time, he says, is how the undifferentiated oneness precipitates itself into actual, particular, living reality. Hear that again with last time's lecture still in your ears: the undifferentiated oneness, precipitating into the many. That is the partition. He read it off damaged brains; I read it off a wave function; it is the same sentence. Time is what happens when the One becomes many.

And remember what I told you a few minutes ago about the coincidence of opposites: that the deepest truths are not either/or but both/and, that eternity and time, the disembodied and the embodied, are not rivals to judge between but partners that bring each other into being? McGilchrist names that exact pair himself. The timeless One and your flowing Tuesday afternoon are not two answers to one question with one of them wrong. They are the bow and the string. Take either away and there's no music: no world, and no you.

William Blake said it in nine words, and I'll let him close it: eternity is in love with the productions of time. The timeless is not the enemy of the passing. It is in love with it. It divides itself into time so that there can be something to love.

S23

Cast your mind back to the fourth lecture, to two little cards I set side by side. Two stories about the brain. GENERATOR: the brain makes consciousness, the way a fire makes heat. APERTURE: the brain lets consciousness through, the way a window lets in light. And I told you then that every fact we possess fits both stories equally well, and that choosing between them was the whole game.

McGilchrist plays that exact game, and does something elegant with it. He says there are three possibilities, not two. The brain might EMIT consciousness: secrete it, the way the liver secretes bile. That's the generator. Or it might TRANSMIT consciousness: receive it and pass it on, the way a radio passes on a broadcast it plainly didn't compose. Or (the third, the one he argues for) it might PERMIT consciousness: not merely pass it through, but shape what it lets through. A constraint that is creative. Not a window. A lens.

Start with the first, emit, because it's the one nearly everyone in this civilisation believes without noticing they've decided anything. The brain secretes the mind. And the case looks overwhelming: damage the brain, damage the mind; drink alcohol, alter the mind, like Nye and Harrison; scan the brain, watch the mind light up. Surely that settles it. It settles nothing, and last time I gave you a smashed radio and a single sentence to say why. McGilchrist gives you an alien and a television, and takes it all the way. Picture an alien who has never seen a television, watching one work. He'd swear the little people lived inside the box. Knock it, the picture jumps; damage it, the sound distorts; pull the plug, and the whole world in there vanishes. Every one of those facts is equally true of a set that merely receives its programme from somewhere else. The intimacy of the link tells you nothing about its direction. Correlation was never the question. The question is who is broadcasting.

And here is the blow to the generator, and it's fatal. To say matter secretes consciousness, you must believe you understand matter: that it's the solid, reliable stuff you can stand everything else upon. But we don't understand matter, and it isn't solid. Zoom in on an atom and it doesn't sharpen, it blurs: less and less to see, until it slips your grasp entirely, and changes its nature depending on whether you look. That is not bedrock. And to get felt experience (the taste of coffee, the ache of grief) out of stuff with no inside at all, by no mechanism anyone can even sketch, is not an explanation. It's a miracle you've agreed not to notice. One philosopher put it perfectly: you might as well say numbers come from biscuits, or ethics from rhubarb.

So hear who lines up on the other side. Not mystics: the hardest heads of the twentieth century, the men who took matter apart. Max Planck, who founded quantum theory: I regard consciousness as fundamental, and matter as derivative from it. Schrödinger, our Schrödinger: consciousness is absolutely fundamental, and cannot be accounted for in terms of anything else. And James Jeans, who put it best: the universe begins to look less like a great machine and more like a great thought. Eddington said it, Pauli said it, Wigner and Wheeler said it, and Penrose was saying it to you last week. These are not people who failed at physics. These are the people who did physics all the way down, and came out the far side saying: consciousness

was here first.

Correlation was never the question. The question is who is broadcasting.

S23b

Now: permit, not transmit, because this fine point pays off a promise. Last time I left you with a phrase: the brain is the shape of the partition. Not a wall that blocks the field: a shaping of it, a particular aperture with a particular form, which is why your consciousness has the flavour it has and no other. That is McGilchrist's permit, exactly. The brain doesn't manufacture the light, and it doesn't merely let it through unaltered. It is a lens, and the lens has a shape, and the shape is you. Remember the reducing valve: James, Bergson, Huxley, the filter on the field, from early in the last lecture? Here is that valve, corrected: it doesn't only reduce. It forms.

And if you want to know how, how a lump of tissue could be a lens onto a universal field, McGilchrist reaches exactly where we reached last time. For the quantum. Not Hameroff's microtubules this time, but the same instinct: entanglement binding the brain into one coherent whole, quantum coherence doing work that warm wet classical tissue cannot. The neurologist, hunting the mechanism of mind, wades into the same quantum water we were lost in a lecture ago. One more road, quietly joining the others.

And he leaves us the image to take home. Ice is a phase of water. Not a different substance: the same substance, in a different state. Hard where water is fluid, opaque where water is clear, solid enough to split your skull where water runs through your fingers, and yet nothing but water. What if matter is a phase of consciousness? The same reality, gone solid for a while; different in every property, identical in its nature. Then there was never a chasm between mind and matter to bridge at all. There was only water, and ice.

And notice what this is: it's the coincidence of opposites again, from a few slides back. Mind and matter, two aspects of one reality, but not equal. Consciousness the senior partner; matter what it condenses into, so that there can be resistance, and individuality, and a world to have. The right over the left. The Master over the Emissary. The same asymmetry, all the way down.

So here is the column I'll ask you to hold, when the four of them finally stand together. Consciousness is not made by the brain. It is prior to matter, and older than it. The brain does not generate the light: it admits it, and shapes what it admits. Which leaves exactly one question standing, and it decides what kind of universe you have been living in all along. If consciousness came first, if the cosmos is more thought than machine, then is it only thinking? Or does it also care?

S24

I want to show you something startling, and I want you to hold it more loosely than anything else tonight, because it is contested, and I'd be cheating you if I pretended otherwise. But it points the same way, and it's too extraordinary to leave out.

In 1980 the journal *Science* ran an article about the work of a British neurologist, John Lorber, under a title that is almost rude: "Is your brain really necessary?" Lorber studied people with severe hydrocephalus, where fluid pressure squashes the brain, sometimes catastrophically. Among his patients was a young man with an IQ of 126, a first-class honours degree in mathematics, socially entirely normal, in whom the scan showed almost no brain at all. Where

you and I have the deep folded mass of the cortex, he had a thin skin of it lining the skull, and the rest was fluid. On paper the man should not have had a mind. He had a better one than most.

Go further down, past brains altogether. A slime mould, one cell, no neurons, nothing we would dignify with the word "mind", will find the shortest path through a maze to its food; and if you lay out oat flakes in the pattern of the cities around Tokyo, it grows itself into a near-perfect copy of the Tokyo rail network. No nervous system was consulted.

Now the honest caveat, because this is the second mode and the second mode does not cheat. Lorber's cases have been argued over for forty years, the scans are hard to read, and "almost no brain" is a headline rather than a measurement. Whether a slime mould "knows" anything is a quarrel about the word "know." Take none of this as proof.

Take it as a question that will not go away. If the brain simply secretes the mind, if consciousness is manufactured by cortex the way bile is manufactured by liver, then a man with almost no cortex should have almost no mind, and a creature with no neurons should have none at all. That is the one thing the emit theory cannot survive being wrong about. And it keeps being wrong about it. Whereas if the brain admits and shapes a consciousness already there, if it is a lens and not a lamp, then a damaged lens gives a poorer picture, a strange lens a stranger one, and even the humblest scrap of the world can carry some flicker of the light, because the light was never the brain's to make. The evidence doesn't prove the aperture. It just sits far more comfortably in that house than in the other one.

S25

I left you just now with a question. If consciousness came first, if the cosmos is more thought than machine, is it only thinking? Or does it also care? McGilchrist's answer climbs three steps, and I'll climb them with you.

The first step is value. We're taught that the universe is in itself worthless: a blind churn of particles onto which we latecomers project beauty and goodness and worth, the way a child paints a face on the moon. McGilchrist turns it over. Value, he says, is not painted on; it is found. And his argument is sharper than it first sounds. You cannot squeeze value out of a world that has none: you cannot get an *ought* from a pure *is*, a worth from a bare fact; everyone since Hume has known that. But we plainly *do* meet value (the beauty of a face, the rightness of a resolved chord, the goodness of a kind act), and if it cannot have come from a valueless world, then the world was never valueless. Value is not a coat of paint we add. It is a real feature of things that we discover, the way we discover a mountain, and one of the deepest ways reality opens itself to us. A cosmos that could give rise to Bach's St Matthew Passion had that in it from the beginning. You do not get music out of a universe with no music in it to give.

The second step is purpose (look up the words *teleology* and *teleological*). And this is the one modern people have been trained hardest to flinch at, because at the Scientific Revolution we made it forbidden. We banished Aristotle's final causes, the idea that anything is *for* anything, and declared that only pushes from behind are real, never pulls from ahead. A pure left-hemisphere amputation: a machine, after all, has no purposes of its own. But look at the least controversial thing in the world: a living organism. It is nothing but purposes; every cell is bent on ends, on staying alive, on becoming what it is meant to be. You cannot so much as

describe life without the forbidden word. And look at the whole: matter to life to mind, simplicity to complexity to consciousness; the cosmos is not standing still, and it is not stumbling at random. There is a grain to the wood, a direction to the unfolding. If the world is more thought than machine, then it can be *about* something. It can mean.

S25b

And the third step, the top of the stair, is the sacred, and here is where people bolt for the exits, so stay with me, because McGilchrist is not about to sell you an old man on a cloud. He spends the whole chapter smashing that idol. The thing he keeps circling isn't really a word: it's a placeholder, an "un-word," for the sheer fact that there is something rather than nothing, and that the something is beautiful, and alive, and can be understood. Call it the ground of Being. Every tradition has its un-word (the Greeks' logos, the Chinese tao, the Sanskrit ṛta), and every one of them, he notices, names not a thing but a flow. God, he says, is a verb.

And look at the strip along the bottom, because it is the whole claim in one picture. That is the same pine cone twice. On the left somebody has traced the spirals running one way and counted eight of them; on the right, the spirals running the other way, and there are thirteen. Eight and thirteen: consecutive Fibonacci numbers, and the sunflower beside them does the same trick on a larger scale. It is there because that is the arrangement that packs a seed head most tightly, so it is a fact about numbers and a fact about a flower at the same time. Nothing whatever required the tightest packing to also be the loveliest thing in the field. It just is. That coincidence, endlessly repeated, is what the un-word is pointing at.

And now it stops being an idea and becomes a claim about everything. His name for it is an ugly word for a beautiful thought: panentheism. Not pantheism that we talked about in the last lecture, which means the world simply is God and nothing more; that leaves out everything the world reaches beyond itself toward. And emphatically not deism: the clockmaker who wound it up and wandered off, "a transcendent engineer on sabbatical leave." Panentheism holds both at once, in the coincidence of opposites I showed you earlier: all things are in God, and God is in all things. Welling up through every living thing, and yet more than their sum. Immanent and transcendent, held together, and held, he says, by love. This is the line of Whitehead, of process theology: not a finished God sitting outside time, but an eternal Becoming, the spring, and the water springing from it. Which is to say, precisely the flowing time and the One dividing into many that we have been building for four slides. It all arrives here.

And notice who always knew this. Not the modern West: nearly everyone else. The animist who sees the forest alive and full of spirits is not, McGilchrist insists, a primitive who failed at science. He is doing the thing we forgot how to do: perceiving directly that the world is not dead. The Greeks, the Eskimos, the Aboriginal Australians, the medieval mind, the Romantics: all of them heard something speaking in nature. And most of you archaeologists, in your working lives, dig up exactly those people. So he puts the question to us dead straight: if we alone, here in the twenty-first-century West, suddenly cannot hear it, how sure are we that it's we who are right?

And I said Eskimos instead of Inuit just to irritate Saska, and to remind you that it's important to break the rules occasionally.

And one small vindication before we leave the sacred. When McGilchrist finally reaches for a name for this groundless ground, this fount of all being, he reaches for one you already have. He calls it, in so many words, Boehme's Ungrund. The name I finally gave you at the start of this act sits, in McGilchrist's own pages, at the very foundation of the world. I didn't put Boehme there. He did.

One last thing, and it's personal: his, and mine. McGilchrist tells you, near the end, that he reached none of this by argument. Raised by parents with no religion, he has never sat in a church. He got here by experience: by Nature, which struck him from childhood as unmistakably alive; by poetry; and above all by music: he loves Thomas Tallis, the late Beethoven sonatas, Schubert, first heard at thirteen and never recovered from. And he says (this is the sentence that made me put the book down) that this sense of a living, sacred world, set against the grey little creed of reductive materialism, was part of why he wrote that first book, *Against Criticism*, and part of why he walked out of literature and into medicine at all. Remember him, at the start of the talk, the literary critic who left? This is what he left for. The whole life (the book, the career, the fifteen hundred pages from *Skye*) was one long attempt to say the thing he felt at thirteen listening to Tallis: that the world is alive, and holy, and we have forgotten how to see it. That is what he left for.

ACT 5 - THE CONVERGENCE

The climax.

S27

Here they are. Four names. Read across.

On the last slide of the very first lecture I told you there was a theory hiding behind the man, and refused to tell you whose. You know now. It was McGilchrist's. And the table it completes into is bigger than the one I showed you.

Three of them have stood together before: at the end of the quantum lecture I set Plotinus, Boehme and Bohm side by side and told you the architecture rhymed. They are yours already, so the table gives them to you the way a table should: a line each.

Bohm: one pilot wave field, real and undivided, filling the universe and guiding every particle in it; the separate things, the stuff we call matter, only local ripples on it.

Plotinus, the great Neoplatonist, a mystic of late antiquity, seventeen hundred years earlier, with no physics whatever: the One overflows into mind, then soul, then last of all the world of separate embodied things, a many that never stopped belonging to the One.

Boehme, in the seventeenth century: the Ungrund cannot know itself while it stays an undivided one, and so it must divide, break into opposites, and matter is what that self-knowing looks like from the outside.

And the fourth: the new column, the one tonight has earned. McGilchrist. Our own century. Working not from visions or wave equations but from stroke wards and brain scans and split skulls, and arriving at exactly the same place: consciousness is not produced by the brain, and it is not secondary to matter. It is prior. The brain is an aperture onto it, not a factory for it.

Now look hard at what you are looking at. A physicist. A Neoplatonist mystic of late antiquity. A Protestant visionary four hundred years ago. A twenty-first-century neurologist. Four people separated by continents and centuries and languages and religion and everything else a human being can be separated by.

Now, three of these four could not possibly have compared notes. Plotinus was seventeen centuries dead before Boehme picked up a pen, and Boehme three hundred years dead before Bohm wrote an equation. Three roads that had no way of meeting.

The fourth is different, and I am going to be straight with you about it, because it is the better story anyway. McGilchrist has read all three. Plotinus is quoted right through his book. Bohm is in his bibliography twice. And the Ungrund is named in his own pages, as I told you twenty minutes ago.

So the fourth column is not a fourth stranger. It is what happened when a man spent a working lifetime following damage through real human brains, arrived somewhere, looked up to see who else was standing there, and found these three already in the room. He did not start with them. He ended with them. Which is, if anything, the harder thing to explain away.

And there it is: the completed table. Three of these roads stood together once before, at the end of the quantum lecture: Plotinus, Boehme, Bohm. The fourth is the one I left without a name last time, and tonight it has one. Four roads, and every column named. I will not tell you they are four ways of saying one thing; I have not earned that, and you would be right to stop me. I will tell you they point, hard, at one place: that the One is prior to the many, the field prior to the particle, and, if the last leap holds and I have shown you all evening that I cannot prove it does, mind prior to matter.

That is the throughline. It has been inside every lecture I have given you. Tonight, at last, it says its own name.

S28

Now I have to do the thing I've done at the end of every hard climb in this series, because it is the whole method, and if I dropped it now I'd be betraying everything I've told you the second mode is for. I have to argue against myself.

Because convergence is not proof. It isn't. Four people agreeing, even four people who never met, does not make a thing true. History is stuffed with large crowds of clever people who all agreed, for centuries, about things that turned out to be completely wrong. You don't even have to take history's word for it: I showed you. Two lectures ago I lined up a whole roomful of Nobel-calibre physicists who had every one of them sworn a certain thing could not be done, and every one of them turned out mistaken. Remember the title of my 2009 pilot-wave lecture in Cambridge! I leaned on that story when it suited my case; fairness means admitting the same blade cuts back the other way. Maybe all four of these figures were simply human, and the human mind, faced with a cold and pointless cosmos, reaches for the same warm story every time: the one where mind comes first, and we matter. Maybe what I've shown you tonight is not four windows onto one truth, but a single wish, dressed four different ways. I cannot prove to you that it isn't. I would be lying if I said I could, and you would be right not to believe me if I tried.

But now hold the other side of it, because honesty cuts both ways, and the second mode does not get to flinch from inconvenient data either. These were not four people reaching for comfort. A physicist chasing an equation he found ugly and could not shake. A neurologist following damage through thousands of real human brains. A philosopher and a self-taught mystic, centuries apart, with no possible line of contact between them. Utterly different starting points, utterly different methods, no shared language, no shared world, and the same map keeps coming back. That is not nothing. That is, in fact, a great deal. And the honest response to it is not to declare it proven, but it is also, and just as firmly, not to look away.

So that is where I'll leave the argument. Not at a proof. At a question that has earned the right to be taken seriously, which, for a question about whether the universe itself is conscious, is a good deal further than you had any right to expect to get in five lectures in a mountain village in the middle of nowhere. Let me stop arguing, then. And in the last few minutes, let me simply show you where all of this leaves us.

ACT 6 - THE CLOSE

Series finale: no "next time."

S29

On the very first night, before Burton, before any of it, I told you a question was running underneath this whole series, and refused, point-blank, to show it to you. The question I first handed you was about attention. Watch it open into a bigger one. Tonight it finally goes on the screen, in plain words. Can consciousness be something the universe has (a field, a ground, the water we're all a passing phase of) rather than something your brain squeezes out for a while and then switches off? Is mind fundamental? Or is it a rumour the meat tells itself?

And I told you we'd come at it three ways: through culture, through life experience, and through science. So let me settle the account, briefly, because you have heard most of it already tonight.

Culture said yes. A whole life lived at the pitch of total attention: Burton. Two thousand years of buried philosophy, from Plotinus to Boehme, all insisting the many pour out of a prior One. That was culture's verdict, and history steamrolled it; it never refuted it.

Life experience said yes. Faggin, who built the microprocessor and then met his own consciousness head-on and could never again believe it was a computation. And, I'll be honest with you, me! Who has finally worked himself around to being unable to shake the sense that those equations are describing something alive.

And science said yes, or at least, science stopped saying no. A real field, undivided, guiding every particle, holding up the stars. A hard problem that will not dissolve. The founders of quantum theory, nearly to a man, saying consciousness came first. And a neurologist reading the same verdict off broken brains.

Three witnesses (culture, life, and science), and they agree. Now hear me clearly one last time, because I've spent this whole series refusing to oversell this and I won't start now. Three witnesses agreeing is not a proof. It is an invitation: to stop assuming the answer is obviously

no, which is the one thing this civilisation trained you to assume. The question isn't settled. But it is open. After three and a half centuries of being told it was closed, it is open again. And from where we started, that is everything.

S30

I want to end not with an idea but with a place that you've now heard all about, because everything I've said tonight can sound like it belongs to dead men and old books and chalk on a board, and Keil Space doesn't. So I just wanted to explore if what we've learned in this lecture helps us to understand what Samantha is doing.

What we found originally was a derelict Florentine glove factory - a building that had spent its working life in the most left-hemisphere labour imaginable, precise repetitive handwork stamping out identical objects by the thousand. (I'm leaving out the fact that when we found it, it had become a toilet shop!) You first heard about it in the first lecture, when I strapped you to your seats and made you listen to my poem about my terribly unpleasant experience of building it. But we persisted, we gutted it, painted the entire interior black, and turned it into something for which there is no ordinary word: five hundred square metres of darkness, rooms opening off it, a room of Sam's first-generation bronzes, a room of the later ones, a room built to work on every sense at once. In the second lecture I showed you *Spirit*, Samantha's bronze that dissolves at its edges, that lives in the black gallery. In the last lecture, I told you about the macrophotography and showed you a few more things that you can see inside it.

So after all that, let me tell you what the Space is for. Listen to how it's described on Samantha's website. She built it, it says, on hermetic principles (See Hermes Trismegistus and the buried library from the second lecture) joined to fundamental truths. It's designed, she says, to wake the brain through the senses, and when I told you about the space in the second lecture, "the second mode of attention" was the most I could call that. Tonight you know its real name. She built a house for the right hemisphere. Her bronzes, she says, open a dialogue in which the observer and the observed are no longer separate. And the thing she is reaching for in them, in the exact words on the website, is "a dynamic system which can't be seen, but is inescapably felt." A real field. Undivided. Not seen, but felt. She has been sculpting the pilot wave field in bronze and calling it art, and she never needed my permission or my physics, or that of anyone else, to do it.

The tradition I've traced across two thousand years and five lectures did not end in a book. It walked into a glove factory in Florence, and she turned off the lights, so that you could finally see. So it's two hours away: two hundred metres up the Viale Michelangiolo from the Piazza Ferrucci roundabout by the Arno, down a ramp on the left that seems to lead underground. Which, by now, you will recognise as exactly the right way in. So next time you're in Florence, make an appointment!

S31

I've saved the biggest compliment for last, and some of you have earned it in particular. The ones that are archaeologists. Think about what you actually do.

Someone hands you a broken rim of pot, a dark stain in the soil where a post once stood, a scatter of butchered bone, a single worn coin. Fragments. Dead things. And you do something that, looked at clearly, is close to miraculous: you see a whole living world. The hand that

threw the pot, the fire it was fired in, the meal it held, the people at the meal, the gods they thanked for it. You take the dead fragment and restore it to the living whole it was broken from. That, precisely that, is the second mode of attention. It is McGilchrist's right hemisphere doing the one thing he says our civilisation has forgotten how to do. You've been practising it, professionally, all along. You simply didn't have his name for it. And those of you who aren't archaeologists do the same, in your own fields, every time you refuse to mistake the pieces for the thing.

So here is the only instruction I'll leave you with. The left hemisphere hands you a world of objects: things to be counted, used, and set down again. The right hands you something else entirely: a world that looks back at you. For three and a half centuries we've grown better and better at the first and blinder and blinder to the second, and it is, McGilchrist thinks, quietly killing us. But you already carry the cure in your hands. Most of you do it to a broken potsherd without a second thought. Now turn it on the rest: on the landscape on the drive home, on the person across the table, on your own strange, brief, waking life. Meet it all as something alive. That is the whole of it.

S32

I began this whole series with a man in disguise, crawling into a forbidden city because he could not bear not to see it with his own eyes. Richard Burton. And at the end of that first night I told you a single question would run beneath everything to come, unnamed, and that its name existed, and that I would not speak it until the very end. I have kept that promise to the letter. You have the name now.

Five lectures. An explorer, a heresy, an equation, a field, a divided brain. And one question underneath the whole time, wearing five costumes: the one I finally showed you, in plain words, a few minutes ago. Is your consciousness a candle the skull lights and then snuffs, or is it the light itself, and are you a window it was poured through?

I cannot prove the answer. Perhaps no one ever will. But after Burton and Plotinus and Boehme, after Schrödinger and Bohm and Penrose, after a neurologist on a Scottish island reading it off ruined brains, I no longer believe the people who told you the answer was obvious, and obviously no. The question is not closed. It was never closed. It was only unfashionable.

So here it is, named at last, and yours to carry. The connecting question I asked you, on the first night, to watch for: under Burton, under the Gnostics, under the pilot wave, under the equations. You thought, I let you think, that it was "two ways of paying attention." And it was; that was real, that was the thread. But underneath even that, there was one more turn, and I have been saving it for the very last thing I say to you. Two ways of paying attention: yes. But paying attention *with what?* What is the thing that attends? That was the question, the whole time. Not the modes of attention: the attender. What the hell is it that is paying attention?

Take that question home. Pay it the second kind of attention. And every so often, stop and be astonished that there is anyone in there to ask it at all.

S33

One more slide, and then I will genuinely stop.

I have spent five evenings telling you a story, and I have tried to keep flagging the places where it is a story and not a result. So it would be a bit rich to walk off now as though the thing were finished. It isn't. Here is what I would like somebody to actually do about it, and some of it is small enough that a person in this room could do it.

The first is the easiest and I think the most interesting. Everything I have described as a shift between the two modes is, in principle, measurable. Burton drowning himself in a language until he came out the other side speaking it. Somebody learning a long poem by heart, which I made you sit through an entire tangent about on the first night. An archaeologist taking a rim of pot and a dark stain in the soil and rebuilding a household out of them. Those are not metaphors for the second mode. They are instances of it, and you can watch people do them, and count things while they do. Behaviour first, and where anyone has the equipment, in the brain.

The second is further along than almost anyone knows, and I can be precise about it. We know that Keil space in Florence was deliberately engineered to do this to people. Almost a thousand people, aged eight to eighty-five, have done their guided visits, one at a time, and over eight hundred of them were formally interviewed about what happened to them in there. An independent analysis firm has already done the qualitative work: the interviews have been coded, the themes mapped, the charts drawn. And the themes are the ones you have been hearing from me all week, from people who had never heard of me. They describe a cave. A womb. An initiatory temple. They describe the observer and the observed becoming one thing. And the lasting effect they report more than any other, by a distance, is healing.

So what is left to do there is not more listening, it is measuring, and here I want to be concrete, because "measure the right hemisphere" is the sort of phrase that sounds like science and isn't. You cannot simply read off how busy someone's right hemisphere is, and if you could it would not tell you much, because both halves are always working. What you can measure is the signature of the attention itself, and there are old, cheap, well-tested ways to do it. Ask someone to mark the middle of a line and healthy people miss slightly to the left, because the right hemisphere is doing the looking. Show them a big letter made of small letters and see which one they read first, the whole or the parts. A minutes on a tablet at the door on the way in, a minute on the way out. Nothing touching them, nothing switched on, nothing that would spoil the thing you came to measure, and that last point is not a small one: put a cap of electrodes on somebody's head in that room and you have changed the room. And do not test the building against nothing. Test it against an ordinary white-walled gallery across town, because the question worth asking is not whether that space is good, which several hundred people have already told us, but how an environment built for one mode of attention differs from an environment built for none.

The third is the pair of holes I know about, because you have heard me argue against myself all week and I am not going to stop on the last night. I still cannot tell you which divisions of one field produce a mind and which produce nothing at all. And I cannot tell you whether putting the hard problem inside a universal field genuinely changes its logic, or merely changes its address. Those are not rhetorical concessions. If anyone in this room ever solves either one, I would like to be told.

And the last is the place you are sitting in. This is not just where the lectures happened. It is meant to become something: somewhere people come to think and walk and argue in the oldest sense of the word, with a working farm attached, and with people working on it who do not usually get to be full participants in anything. My son among them. Whether an institution built deliberately around that kind of attention, and that kind of work, actually produces better thinking, or better lives, or a village that stops emptying out, is a question nobody has answered, because nobody has seriously tried it. We are going to try it. And you are, whether you meant to be or not, in the pilot study.

So thank you, that really is the end, not only of tonight but of all of it. Thank you for your patience! Go and remember to have fun and to break the rules occasionally.

END OF LECTURE 5 AND OF THE SERIES

Notes and Sources

The technical distinctions behind the talk, and where each claim comes from. Slide numbers refer to the markers in the right margin.

Block universe vs Wheeler-DeWitt (Slides 20-22).

McGilchrist's target is Einstein-Minkowski spatialised time: the block universe, in which all of time is laid out as a fourth dimension and the flow is written off as subjective. Lecture 4's timelessness was different physics: Wheeler-DeWitt, $H\Psi = 0$: for the universe as a closed whole there is no external time parameter at all. Cousins, not twins: the block has too much time (all of it, frozen); Wheeler-DeWitt has none. In the talk they ride together as "physics without flow". The S22 reconciliation uses only Wheeler-DeWitt plus Page-Wootters, and the de Broglie/Bergson quotations McGilchrist supplies are aimed squarely at the block. The welding of his "time precipitates the undifferentiated oneness into actuality" to Page-Wootters is our synthesis, not his, and the talk says so. (Rovelli's thermal-time hypothesis is a different mechanism to a similar end; a road not taken here.)

Boehme and the Ungrund (Slides 18 and 25).

In the coincidence-of-opposites chapter McGilchrist reaches the self-grounding ground via Heidegger ("nothing noths itself") and never names Boehme; the S18 identification is ours. He names Boehme's Ungrund himself in the sense-of-the-sacred chapter, which is the S25 loop-close ("I didn't put Boehme there. He did."). The order matters straight under questioning: our reveal first, his confirmation later, deliberately.

The neuroscience (Slides 1, 9-10).

Hemineglect after right-hemisphere stroke, and the load-bearing asymmetry (left-hemisphere damage is noticed and grieved; right-hemisphere loss cannot, in principle, be noticed) are from The Master and His Emissary, Part I. Split-brain: Sperry and Gazzaniga; the confabulating "interpreter" is Gazzaniga's term. The master/emissary parable is McGilchrist's telling of a story he credits to Nietzsche.

"Three and a half centuries" (Slide 14).

Mike's compression. McGilchrist's actual history has more swings (Reformation, Enlightenment, the Romantic counter-swing) and S13 carries that fuller pendulum precisely so S14 can land the last and largest swing as a single claim. The ground for it is S13.

The quantum sentence (Slide 23).

McGilchrist's reach for quantum coherence and entanglement in the brain follows proposals of the Fisher type (nuclear-spin coherence), not Hameroff's microtubules. The two are worth keeping distinct: the rhyme with Lecture 4's Orch-OR is a shared instinct, not a shared mechanism. Roll-call sources: Planck (Observer interview, 1931); Schrödinger (Mind and Matter); Eddington (The Nature of the Physical World, 1928); Jeans (The Mysterious Universe, 1930); Penrose as quoted by McGilchrist.

"Is your brain really necessary?" (Slide 24).

Roger Lewin's article of that title, Science 210 (1980), on John Lorber's hydrocephalus series, contested ever since (compressed is not absent; white matter substantially preserved). Hydranencephaly responsiveness: Merker, Behavioral and Brain Sciences (2007). Slime mould: Nakagaki et al., Nature (2000), the maze; Tero et al., Science (2010), the Tokyo rail network. The caveats spoken alongside these cases are not optional: they are the second-mode move.

Odds and ends.

Bohr's coat of arms: Order of the Elephant, 1947: *contraria sunt complementa*, with the taijitu at its centre (the "old Chinese emblem" of S18). Blake (S22): "Eternity is in love with the productions of time," *The Marriage of Heaven and Hell*. Hume's is/ought (S25): *Treatise*, III.i.1. Whitehead and process theology (S25): *Process and Reality*. Empedocles' cycle (S19): the many from the one and the one from the many, under Love and Strife. The Sanskrit un-word at S25 is *ṛta*.

Keil Space (Slide 30).

The one verbatim quotation, "a dynamic system which can't be seen, but is inescapably felt", and the "hermetic principles" framing are from Samantha's own site copy (keilspace.com / keilbronze.com). Address: Viale Michelangiolo 5, roughly 200 m up from the Piazza Ferrucci roundabout by the Arno. This supersedes Lecture 2's "on the Lungarno below Piazzale Michelangelo" placement. Erratum logged; the Lecture 2 wording is the one to follow.

Keil Space visitor research (Slides 30, 33).

The visitor figures quoted on Slide 33 are from Keil Foundation, *Keil Architectural Integration* (first edition, March 2025), and from QDAS (Qualitative Data Analysis Services), *Exploring the Therapeutic Benefits and Impact of Keil Space Multi-Sensory Art Experiences on Participants' Perceptions and Emotions: summary of analysis of visitor interviews*, March 2025. Over 750 visitors aged 8 to 85 have been through the space individually; over 500 were interviewed, and the interviews were coded and thematically analysed by QDAS independently. Recurring visitor descriptions include a cave, a womb and an "initiatory temple", and the dominant reported longer-term effect is healing. The honest limit: this is qualitative and descriptive work, professionally done, not an inferential study. There is no pre-visit baseline, no comparison venue and no behavioural or physiological measure, and visitors are self-selected. The proposal on Slide 33 is that the next phase supplies exactly those: threshold tasks measuring the attentional signature (line bisection and its leftward pseudoneglect bias; Navon global/local precedence; chimeric faces), run before and after, against a conventional gallery as the comparison condition. Instrumenting the visitor inside the space (EEG caps and the like) risks destroying the treatment being measured, which is why the tasks sit at the door.