

Why Must Something Be Stored Somewhere?

The Hard Problem as a Symptom of Spatialized Intelligence

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Abstract

The hard problem of consciousness asks why physical processing is accompanied by subjective experience — why there is something it is like to undergo it. This essay does not attempt to answer that question. It attempts to diagnose it: to show why the question is one we cannot help asking, and what happens to it once its motivating assumption is made explicit. The assumption is that experience is a content that must be located — produced at some site, carried by some substrate, superadded to a physical process already complete without it. I argue that this demand for a place is a particular instance of a more general disposition of the intellect, which Bergson called the spatialization of duration: the rendering of a continuous, temporal, mutually interpenetrating reality into discrete items occupying determinate positions. The hard problem is the form this disposition takes when it is applied to experience. Once experience is reconceived, after Bergson, not as a content produced by a process but as the temporal thickness — the memory — of a process that endures, the two terms whose relation the hard problem interrogates (the physical process and the experience supposedly accompanying it) are seen to be two abstractions cut from a single durational event, and the question of why one accompanies the other loses the traction it appeared to have. The essay is diagnostic rather than solutionist: its claim is not that the hard problem is solved but that we can say why it arises, and why a durational ontology dissolves rather than answers it.

Keywords: *hard problem of consciousness, qualia, Bergson, duration, spatialization, postdiction, free energy principle, memory*

1. Introduction: A Question We Cannot Help Asking

The hard problem of consciousness, as David Chalmers formulated it, is the question of why physical processing in the brain is accompanied by subjective experience at all.[1] The easy problems — how the brain integrates information, discriminates stimuli, controls behaviour, reports its own states — are hard in the ordinary sense that they are unsolved or partly solved, but they are the kind of thing a mechanistic account is fitted to address. The hard problem is different in kind. However complete the functional account, a question seems to remain: why is any of this functioning accompanied by a felt quality — why is there something it is like to see red, to taste coffee, to be in pain — rather than nothing at all?

This essay does not try to answer that question. I think the question, as posed, cannot be answered, and that the more illuminating task is to diagnose it — to ask why it is a question we find ourselves unable not to ask, and what becomes of it once the assumption that generates it is brought into the open. My claim is that the hard problem is not a discovery about consciousness but a symptom: the form taken, when applied to experience, by a general disposition of the intellect to demand that everything real be located somewhere.

Consider the shape of the question. “Why is physical processing accompanied by experience?” presupposes two things standing in a relation whose obtaining is puzzling: on one side a physical process, complete in itself; on the other an experience, which the process somehow produces, or carries, or has

superadded to it. The puzzle is that nothing about the first term seems to require or explain the second. But notice what the framing has already done. It has treated experience as a content — a further item, a product, something that must be somewhere: emitted by the process, realized in the substrate, present as an extra ingredient over and above the functioning. The hard problem is the demand to say where this extra ingredient comes from and why it is there. It is, at bottom, a demand for the location and provenance of experience.

This demand is not peculiar to the philosophy of mind. It is the same demand that, in a companion essay, I have argued disfigures the science of memory: the insistence that a memory must be stored somewhere, that recollection must retrieve a content from a place, that the past must be kept in a location if it is to be available at all.[2] There, too, the demand generates an intractable question — where is the memory? — that dissolves once one sees that it inherits its sense from a picture that does not survive scrutiny. The hard problem and the storage problem are, I will argue, two applications of a single underlying disposition. The present essay treats the second application; it is intended as the sister of the first. What binds them is the diagnosis they share: that the intellect cannot rest until it has assigned a place, and that some of its most stubborn problems are artefacts of this restlessness rather than features of the world.

The order of argument is as follows. Section 2 identifies the naive-realist picture that underwrites the hard problem and shows that the leading contemporary theories of consciousness, however anti-reductionist they take themselves to be, remain within it. Section 3 introduces Bergson's diagnosis of spatialization and applies it to the hard problem specifically. Section 4 develops the positive counter-picture — experience as the temporal thickness of an enduring process, with postdiction as its empirical signature — and shows how, on this picture, the question of accompaniment loses its grip. Section 5 draws the diagnosis together and states precisely what has, and has not, been accomplished.

2. The Picture That Generates the Problem

The hard problem does not float free of assumptions; it rests on a picture so familiar that it is rarely stated. The picture is that the world consists of objects existing independently of any observer, and that perception is the more or less faithful reception of those objects: input arrives at the senses, is processed within the brain, and issues in experience as output. Call this, following the standard usage, naive realism — not as a term of abuse but as the name of a definite position: physical objects are there anyway, and perceiving is a one-way, roughly linear transaction that copies them inward.

Within this picture the hard problem is not merely possible but inevitable. If perception is the inward transmission of an independently constituted world, then experience is the terminus of the transmission — the last stage, the output. And an output is a product: something the process yields, something that must be accounted for as its effect. The question “why does the processing produce experience?” is then forced, because experience has been positioned from the start as a produced content standing at the end of a causal line. The felt quality becomes a thing whose production must be explained, and whose failure to follow from the physics becomes the explanatory gap.

It is worth seeing that the major theories of consciousness, including those that present themselves as radical departures, inherit this picture rather than escaping it. Integrated Information Theory proposes to measure consciousness by the degree to which a system integrates information, a quantity it calls Φ . [3] Whatever the merits of Φ as an index, the theory leaves the hard problem exactly where it found it: even granting that a system's Φ is high, one may still ask why a high value of an integration measure should be,

or be accompanied by, the redness of a sunset. Φ is a ruler for the presence or quantity of consciousness; it is not an account of why structure of any degree should be attended by felt quality. The question of accompaniment survives intact.

Higher-order theories fare no better against the same test. On such views a mental state becomes conscious when it is the object of a higher-order representation — roughly, a thought to the effect that one is in that state.[4] But this relocates the difficulty rather than removing it. If the lower-order state is rendered conscious by a higher-order thought, we may ask whether that higher-order thought is itself experienced. If it is not — if it is an unconscious monitoring — then it is obscure how an unconscious process confers felt quality on what it monitors; and if it is, then it in turn requires a further monitor, and the account regresses. Either way, the felt quality is treated as an effect to be produced by a functional arrangement, and the question of why the arrangement produces it is not answered but deferred.

The pattern is general. Each theory, however sophisticated, ends by treating experience as a result — an output of integration, a product of higher-order representation, an epiphenomenal accompaniment of processing — and each therefore reinstates the very question it hoped to dissolve. This is not, I suggest, a failure of ingenuity on the part of their authors. It is a consequence of the shared picture: so long as experience is positioned as a content that processing yields, the demand to explain the yielding is inescapable. The theories differ in what they take the processing to be; they agree, tacitly, that experience is its product. The agreement is the problem.

3. Spatialization and the Demand for a Place

Why is the picture so hard to shake? Because it is not really a theory of perception at all but a manifestation of something more basic, which Bergson identified and named. The intellect, he argued, is a practical instrument, evolved and refined for action upon a world of manipulable things; and its characteristic operation is to take the continuous, flowing, mutually interpenetrating reality given in immediate experience and to render it into discrete, stable, externally related units — into things occupying positions in a homogeneous space.[5] This operation is what makes measurement, comparison, prediction, and shared reference possible; it is the source of the intellect's immense practical power. But it exacts a price. It substitutes for the temporal a spatial surrogate: it represents change as a series of states, movement as a succession of positions, duration as a line. Bergson called this the spatialization of duration, and held that a great many philosophical impasses are traceable to the unnoticed substitution of the spatial surrogate for the temporal reality it displaces.

The demand for a place, which I have argued underlies both the storage problem and the hard problem, is precisely this disposition at work. To ask where a memory is kept is to have already spatialized the past — to have treated it as a set of items requiring locations. To ask where experience comes from, and why the physical process is accompanied by it, is to have spatialized experience — to have treated it as a content requiring a source and a site, an extra thing needing a place in the causal order. In both cases the intellect, faced with something that is not a thing in a place but a phase of a duration, cannot rest until it has found the thing and assigned the place; and when it cannot, it registers the failure as a deep problem about the world rather than as a limit of its own habitual operation.

This is the sense in which the hard problem is a symptom. It is what the spatializing intellect produces when it is turned upon experience. The “gap” between physical process and felt quality is not a gap in nature waiting to be bridged; it is the shadow cast by an act of division — the division of a single durational event into a “physical process” on one side and an “accompanying experience” on the other.

Having made the cut, the intellect is baffled that it cannot reunite the pieces. But the pieces were never apart except in the representation that severed them. The bafflement is real; its object is not.

It must be stressed that this diagnosis is not a dismissal. The spatializing intellect is not making a mistake it could simply cease to make; its operation is the condition of ordinary cognition and of science itself. The point is not that we should stop spatializing but that we should recognize when a problem is an artefact of spatialization rather than a feature of what is spatialized. The claim about the hard problem is specific: that it belongs to this class. It is not that consciousness is easy, or illusory, or that the felt quality of experience is denied — on the contrary, the felt quality is exactly what the positive account in the next section is about. It is that the particular question “why does physical process produce it?” is ill-formed, because it presupposes a division that the phenomenon does not contain.

4. Experience as the Thickness of a Duration

Diagnosis without a positive counter-picture is empty; it merely tells us to stop asking a question without giving us anything to think instead. The counter-picture is Bergson's, and it locates the felt quality of experience not at the end of a causal line but in the temporal structure of a process that endures.

Begin with perception, which Bergson denies is the passive reception of a ready-made world. To perceive, on his account, is to select — from the continuous field of what might be responded to, the intellect and the body carve out what is relevant to possible action, and they carve it out by means of memory. What I perceive as “this red apple” is not a datum delivered inward but a construction: the present sensory occasion is invested with the whole sedimented past that bears on it — previous apples, their taste, their associations, the cultural and personal freight the object carries — and this investiture is not added after perceiving but is constitutive of it. Perception is already memory at work; there is no bare sensory given to which memory is subsequently attached. This convergence of Bergson's active, memory-laden perception with the predictive account of the brain — in which perception is the meeting of a prediction generated from the past with present sensory signal — I have developed elsewhere and do not repeat here.[6]

The temporal reach of this construction is made vivid by a class of phenomena in which experience is demonstrably assembled after the fact. The cutaneous rabbit illusion is the clearest case.[7] Tap a point near the wrist several times in quick succession, then a point near the elbow; the subject feels not two clusters of taps at two sites but a series of touches hopping up the arm, at intermediate points where nothing touched the skin. The illusory intervening touches are felt at locations that only become determinable after the later taps at the elbow have occurred. The experience of the earlier, intervening region is therefore constructed retroactively, in the light of information that arrived later — the phenomenon of postdiction. What one experiences at a moment is not fixed by the information available at that moment; it is settled by a slightly later context that reaches back and constitutes it. Experience has temporal thickness: it is not a knife-edge present receiving inputs but an interval within which the past and the just-arrived are integrated into a determinate felt content.

This thickness is the key term, and it is where Bergson's ontology becomes decisive. For Bergson, to exist is to endure, and to endure is to carry one's past — not as a stored inventory but as the very form of one's persistence, the interpenetration of what has been with what is arriving. This carrying is what memory most fundamentally is: not the retention of items but the temporal thickness of a being that lasts. A conscious being is one in which this thickness is drawn to a high tension — in which the whole of a relevant past is brought to bear, for the sake of present action, on the arriving moment. And qualia, on this

account, are not contents produced by such a process; they are the thickness itself, made determinate at the point where the enduring past meets present action. The redness of the apple is not an output the visual system emits; it is the felt shape of a duration — this sensory occasion invested with just this sedimented past and just this anticipatory reach — crystallized as the quality it is. What it is like to see the red is what it is like for this duration, at this tension, to actualize this past upon this occasion.

Once experience is understood this way, the hard problem's question can no longer find its footing. The question required two terms: a physical process, and an experience accompanying it. But on the durational account these are not two things, one of which produces or accompanies the other. They are two abstractions cut, in retrospect, from a single event. "The physical process" is what we get when we describe the enduring event in the spatialized vocabulary of states and mechanisms; "the accompanying experience" is what we get when we notice that the vocabulary has left something out and posit a further item to carry it. But the enduring event was never the physical-process-abstraction plus an extra ingredient. It was a duration with a felt thickness, of which the "physical process" is the spatialized shadow. To ask why the process is accompanied by the experience is to ask why the shadow is accompanied by the thing that casts it — a question that dissolves as soon as one sees which is prior. The felt quality is not superadded to the process; the process-description is what remains of the felt duration after spatialization has drained the time out of it.

It follows, though I press the point only lightly, that a being physically identical to a conscious one but wholly lacking experience — the philosophical zombie — is not, on this account, a coherent supposition; for the "physical identity" it posits is identity in the spatialized description, and the felt thickness is not a further fact added to that description but the durational reality of which the description is the residue. There is no room for the thickness to be subtracted while everything else remains, because everything else is what you get by subtracting the thickness. But I do not rest the argument on the zombie case, which too easily becomes a contest of stipulated intuitions. The substantive claim is the diagnostic one: the accompaniment the hard problem asks about is an artefact of a division the phenomenon does not contain.

5. What Has Been Done, and What Has Not

I want to be exact about the character of this result, because it is easy to overstate and easy to dismiss. I have not solved the hard problem. I have not given a mechanism by which physical processes generate qualia, nor an argument that qualia are identical to some functional or physical property. Anyone seeking such a thing will find the essay a failure on its own terms — but it is a failure only relative to a demand the essay contends is itself the error.

What I have tried to do is prior to solution and, I think, more secure. I have tried to show why the hard problem is a question we cannot help posing — because the intellect is disposed to demand a place and a provenance for everything it takes to be real, and experience, spatialized, presents itself as a content demanding both — and to show that when the disposition is made explicit and the durational alternative is put in its place, the question loses the traction that made it seem to point at a deep feature of the world. The hard problem is dissolved in the specific sense that its motivating division is exhibited as an artefact: there are not two terms, process and accompanying experience, but one durational event described in two vocabularies, one of which has had its temporality removed.

This is the same movement made, in the companion essay, against the storage model of memory, and the parallel is not decorative. In both cases a stubborn problem — where is the memory? why is the

process accompanied by experience? — is shown to arise from the intellect’s demand that what is really a phase of an enduring process be treated instead as a content requiring a location. In both cases the dissolution is achieved not by answering the question but by displacing the picture that lends it sense. And in both cases what remains, once the spatialized question is set aside, is a positive ontology: memory as the thickness of a duration, experience as that same thickness felt from within. The deeper question underlying both — why the intellect cannot rest until it has stored something somewhere — is itself a proper object of inquiry, and belongs to the larger project of which these two essays treat adjacent corners. [8]

Whether the durational ontology can be developed into something more than a diagnostic instrument — whether it can be made to do positive explanatory work of the kind the sciences of mind require — is a further question this essay does not settle. What it claims is narrower and, for that reason, more defensible: that the hard problem, taken as it is usually taken, is not the bedrock difficulty it appears to be, but the reflection, in the mirror of consciousness, of a habit of intelligence that a temporal ontology allows us at last to see as a habit rather than as the shape of the world.

Notes

[1] Chalmers, D. J. (1995). Facing up to the problem of consciousness. *Journal of Consciousness Studies*, 2(3), 200–219; and Chalmers, D. J. (1996), *The Conscious Mind* (Oxford University Press).

[2] See the companion essay, “Memory Is Not in the Brain: Reductionism’s Self-Dissolution and the Return to Bergson,” available at <https://infophilosophy.com/research/>, which treats the demand for a storage location as the same disposition analysed here under the heading of the demand for a place.

[3] Tononi, G. (2004). An information integration theory of consciousness. *BMC Neuroscience*, 5, 42; Oizumi, M., Albantakis, L., & Tononi, G. (2014). From the phenomenology to the mechanisms of consciousness: Integrated Information Theory 3.0. *PLoS Computational Biology*, 10(5), e1003588.

[4] Rosenthal, D. M. (2005). *Consciousness and Mind*. Oxford: Clarendon Press.

[5] Bergson, H. (1889), *Essai sur les données immédiates de la conscience*, and Bergson, H. (1896), *Matière et mémoire*. The account of spatialization runs through both and is extended in Bergson, H. (1907), *L’évolution créatrice*.

[6] “Generative Logic: An Essay on Bergson, Active Inference, and the Quantum-AI Frontier,” available at <https://infophilosophy.com/research/>. The structural convergence of Bergson’s perception thesis with Friston’s free-energy and active-inference framework is developed there and presupposed here.

[7] Geldard, F. A., & Sherrick, C. E. (1972). The cutaneous “rabbit”: A perceptual illusion. *Science*, 178(4057), 178–179. For a Bayesian model reproducing the effect as retroactive spatiotemporal inference, see Goldreich, D. (2007), A Bayesian perceptual model replicates the cutaneous rabbit and other tactile spatiotemporal illusions, *PLoS ONE*, 2(3), e333.

[8] The larger project is set out in the author’s *Jōhō Jitsuzairon Josetsu* [An Introduction to Information Realism] (Tokyo: Information Philosophy Press, 2026; ISBN 978-4-9914937-0-6), where perception, memory, and the hard problem are treated as facets of a single account of information as coarse-graining within duration.

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Related work by the author

This essay is one of a pair. Its companion, “Memory Is Not in the Brain,” applies the same diagnosis to the storage model of memory; the two are intended to be read together as applications, to the questions of place and of accompaniment respectively, of a single account of the spatializing intellect. Both develop, for an English-language readership, arguments first presented in the author’s *Jōhō Jitsuzairon Josetsu* [An Introduction to Information Realism] (Tokyo: Information Philosophy Press, 2026; ISBN 978-4-9914937-0-6), available at <https://www.amazon.co.jp/dp/4991493706>. The companion essay and further material are available at <https://infophilosophy.com/research/>.