

MARKING THE SEAM

What a Sentence Is Doing

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Abstract. Accounts of consciousness routinely borrow vocabulary from physics — field, phase, coherence, superposition — and the borrowing carries an unpaid debt: a term imported from a discipline arrives with that discipline’s warrant attached. This essay defends a compositional practice I call the seam, the requirement that a work mark, in its sentences, whether a given claim is formal, empirical, or interpretive. Each register has its own condition of failure, and a claim that migrates between them unmarked acquires an immunity that resembles strength and is not. Drawing on Levine’s relocation of the mind–body problem from metaphysics to explanation, and on Atmanspacher’s separation of quantum formalism from quantum metaphysics, I argue that the seam is a disclosure practice rather than a demarcation criterion, and that it therefore survives Laudan’s objection to demarcation: it makes no ruling on what counts as science, but supplies the precondition for assessing the credentials Laudan says we should assess. Because the seam exists only insofar as it is realized in prose, I locate its mechanism in the metadiscourse literature. I close with its cost — the seam renders underdeveloped ideas legible as underdeveloped, which is the practice working rather than failing.

Keywords: philosophical method; metadiscourse; demarcation; explanatory gap; naturalized metaphysics; register; interdisciplinarity; disclosure; consciousness studies

I. The Borrowing

Every account of consciousness borrows. There is no vocabulary native to the problem. When we try to say what it is for experience to hold together — for a life to be one life rather than a scatter of moments — we reach for words that were made for other work. Field. Phase. Coherence. Integral. Resonance. These arrived from physics, and they arrived with their debts unpaid.

I borrow heavily. My own functional takes the shape of a contour integral over a closed manifold, with complex phase and a normalizing constant. That shape is not decorative. I chose it because the thing I am trying to describe — a life whose parts reinforce one another across time — has the structure of interference, and interference is a thing mathematics already knows how to write. To refuse the borrowing would be to refuse the clearest available form.

But a borrowed word carries more than its shape. It carries the warrant of the discipline it came from. When I write *phase*, a reader who knows physics hears a quantity that can be measured, that appears in equations with predictive force, that has been checked. If I use the word for something I have not measured and cannot predict, I am spending credit I did not earn, and the reader is paying for it without being told.

This essay is about the practice I use to keep that from happening. I call it the seam.

II. Three Registers

A sentence in a work like mine is doing one of three things.

It is a **formal** claim: something follows from definitions. The integral is well-defined over the specified domain; given these terms, this consequence holds. Formal claims fail by inconsistency. You check them by working through.

It is an **empirical** claim: something is the case in the world, and could have been otherwise. Measurement bears on it. Empirical claims fail by disconfirmation. You check them by looking.

Or it is an **interpretive** claim: something *means* something. This structure is the right way to read that experience. Interpretive claims do not fail by inconsistency or by measurement. They fail by being unilluminating, or by fitting the phenomenon worse than a rival reading fits it. You check them by living with them.

The three are not ranked. I do not think the empirical is the only serious register, and I do not think the interpretive is where we go when we have run out of rigor. They are different kinds of saying, with different conditions of failure, and a work that mixes them is not thereby confused. Nearly everything worth reading mixes them.

The confusion begins when the mixing is unmarked. A claim that moves between registers without notice acquires a peculiar immunity: challenged as physics, it retreats to metaphor; challenged as metaphor, it points to the equations. It cannot be wrong, because there is no fixed thing it is claiming. This is not strength. A claim that cannot be wrong has stopped saying anything.

The seam is the practice of marking, in the sentence itself, which of the three a sentence is doing.

III. Levine's Precedent

The most durable move in the modern philosophy of mind is a register separation, and it is worth seeing why.

In 1983 Joseph Levine took Kripke's argument against psychophysical identity and changed what kind of argument it was. Kripke had offered a metaphysical claim: that identity statements with rigid designators, if true, are necessarily true, and that the felt contingency of "pain is C-fiber firing"

tells against its truth. Levine granted the metaphysics and relocated the problem. Materialism may be true, he said. The identity may hold. What we still cannot do is *understand how* — we cannot see why this physical fact should constitute that felt one. The gap is explanatory, not necessarily ontological.

That single distinction — between what is settled about the world and what is open in our grasp of it — has outlasted forty years of argument. It survived because it is precisely scoped. Levine does not claim more than he has. He does not say materialism is false; he says it is unexplained. Because the claim is small and exact, it is hard to dislodge. Every attempt to close the gap has had to meet it on its own terms.

This is what marking buys. Not protection from criticism — the explanatory gap has been attacked continuously — but the guarantee that criticism arrives *at the right claim*. Levine has never had to defend a metaphysical thesis he did not advance.

Chalmers does something similar with the meta-problem: he separates the empirical question of why we produce reports of a hard problem from the metaphysical question of whether consciousness is physical, and pursues the first while explicitly bracketing the second. The separation is what makes the project tractable. It also makes it testable in a way the hard problem is not — Rodrigo Díaz has since gone and *checked* whether people actually have the intuitions the meta-problem presupposes, and reports that they are less widespread than assumed. That is what a properly marked empirical claim invites: someone can come and look.

Harald Atmanspacher's survey of quantum approaches to consciousness performs the same discipline as a matter of architecture, sorting the field into work that uses the formalism as mathematics, work that makes claims about neurophysiology, and work that is doing metaphysics. Nothing is dismissed by the sorting. Everything becomes assessable.

IV. Against Closure

There is a stricter position available, and I want to say why I do not take it.

Ladyman and Ross argue that metaphysics unconstrained by science contributes nothing, and propose a principle of naturalistic closure: a metaphysical claim earns serious consideration only if it unifies hypotheses that science already takes seriously. On that view much of what I do is not permitted. My framework makes interpretive claims — about alignment, about what a life leaves behind, about coherence as something more than a mathematical property — that no current science underwrites.

I think the principle is too strong, and I think its strength comes from a real worry that admits a gentler remedy. The worry is that unconstrained metaphysics helps itself to scientific credibility without submitting to scientific discipline. That is a genuine failure and I have no wish to commit it. But the remedy is not prohibition. The remedy is disclosure.

An interpretive claim that announces itself as interpretive is not borrowing anything. It is not competing with physics; it is doing different work in a different register, and the reader knows it. What Ladyman and Ross rightly refuse is the *unmarked* metaphysical claim wearing scientific dress. Mark it, and the objection loses its object.

There is a further reason to prefer marking to prohibition, which comes from the philosophy of science itself. Laudan argued that the search for content criteria separating science from non-science has failed, and the volume Pigliucci and Boudry assembled to answer him largely concedes the point while relocating the question: what distinguishes good inquiry from bad is not the *subject matter* but the *practice* — the epistemic habits, the willingness to be checked, the honesty of the rhetoric.

Laudan would resist being enlisted here, and the resistance is worth stating. On the same page where he asks us to drop *unscientific* and *pseudo-science* as terms that do only emotive work, he denies that he is reviving demarcation

under another name; his positive proposal is that we attend to the empirical and conceptual credentials of a claim and let its scientific status go. I take the point, and I do not think it damages the seam — because the seam is not a demarcation criterion. It does not sort works into science and non-science. It asks only that a claim disclose what kind of claim it is, which is a precondition for assessing exactly the credentials Laudan says we should be assessing. You cannot weigh a claim's empirical credentials until you know whether it was offered as an empirical claim.

V. The Seam Is Textual

Here is the part that is easy to get wrong, and I have gotten it wrong.

The seam is not an attitude. It is not the author's private clarity about what he means. It exists only insofar as it is realized in sentences, and a reader who cannot locate it in the prose is right to say it is not there.

The applied linguists have studied this more carefully than philosophers have. Ken Hyland's work on hedging and metadiscourse describes the machinery by which academic prose signals the status and strength of its claims, and sorts it into five: hedges, which withhold commitment; boosters, which close off dialogue; attitude markers, which convey the writer's stance toward the proposition; self-mentions, which say *this is me, and this is where I am speculating*; and engagement markers, which turn to address the reader directly. These are not stylistic ornaments. They are the load-bearing devices by which a reader learns what kind of assent is being asked for.

Which means the seam, formally, is a metadiscourse practice. It is made of moves like these:

Naming the register before the claim. "Interpretively —". "As a formal consequence —". "This has not been measured."

Refusing the ambiguous verb. “Corresponds to” is the great smuggler. It can mean an identity, a correlation, an analogy, or nothing at all, and it lets a sentence be read four ways. Say which.

Marking the analogy as analogy, and then saying what it does not carry. If I say that a coherent life resembles constructive interference, I owe the reader the disanalogy: that I have no amplitude to measure, no detector, no prediction that could fail.

Keeping the formal apparatus honest about its own emptiness. A well-formed integral is not evidence. It is a shape. If the shape is doing interpretive work, that is legitimate and it should be said.

Stating what would count against the claim — and, where nothing would, saying so plainly rather than leaving the reader to discover it.

There is a model for this last move in physics itself. The literature on decoherence is scrupulous about its own limits: decoherence explains the suppression of interference and the selection of a preferred basis, and it does not yield definite outcomes. Zeh, who founded the program, said flatly that it does not solve the measurement problem. That refusal to overclaim is not modesty. It is what makes the result usable by everyone else.

VI. What It Costs

I should be honest that the seam is expensive, because a practice recommended without its price is being sold rather than argued.

It costs rhetorical force. The most persuasive sentence available is nearly always the unmarked one — the sentence that lets the mathematics lend its authority to the reading. Marking forecloses that sentence permanently. Prose written under the seam sounds more tentative than prose written without it, and readers reward confidence.

It costs momentum. There are passages where the interpretive claim is the whole point and the marking interrupts it. I have not found a way around this that does not amount to cheating.

And it exposes underdeveloped ideas as underdeveloped. This is the real cost and I want to state it without softening. When I mark a claim as interpretive and unmeasured, I am telling the reader exactly where my framework is thin. The seam does not protect a weak idea; it makes the weakness legible. That is not a flaw in the practice. It is the practice working. An idea that needs concealment to survive was not going to survive.

What the seam buys in return is narrow but real: criticism that lands where it belongs. A claim marked as interpretive cannot be refuted by an experiment it never invoked. A formal result cannot be dismissed because the metaphysics around it is speculative. Each part of the work stands or falls on its own terms, and the failure of one part does not take the others down with it.

VII. In My Own Work

Applied to my functional, the seam runs roughly here.

The **formal** layer is what the notation actually establishes: that the object is well-defined over its domain, that the phase term behaves as specified, that certain consequences follow from the definitions. This is checkable by anyone who works through it, and it is worth exactly as much as any other piece of internally consistent mathematics — which is to say, it is not evidence about the world.

The **empirical** layer is, at present, nearly empty. This should be said in those words rather than implied by omission. What I can point to are findings I did not produce and do not own: work on temporal binding, on whether perception is discrete or continuous, on the constructed character of felt

continuity. These constrain what an account of coherence over time can plausibly say. They do not confirm mine.

The **interpretive** layer is where the framework lives. That a life may be read as a structure whose parts reinforce or cancel across time. That alignment is not a metaphor for coherence but a way of seeing it. That what an aligned life leaves behind is not residue but signal. None of this is measured. All of it is arguable in the way interpretations are arguable — by whether it illuminates the phenomenon better than the readings it competes with.

Saying so does not weaken the framework. It tells the reader which objections to bring.

VIII. Legible

The word in my imprint's name turns out to be older than I knew when I chose it, and the older sense is the one I want.

Legible descends through Latin *legere* from a Proto-Indo-European verb meaning to collect, to gather, to pick up.¹ The Latin word did not begin as *read*. Michiel de Vaan sets out the path it travelled: from *gather*, *collect* to *watch out for*, *care for* — which is what survives in *neglegere*, to neglect, literally a failure to gather — and on to *concentrate on*, which is *intellegere*, to understand. Reading arrives last. It is the sense the word acquired at the end of a long journey, not the one it set out with.

Two of the derivatives should stop a philosopher where he stands. *Intellegere*: to understand is to gather between. And *diligere* — to love, to hold dear — comes from *dis-legere*, to pick out. Understanding, love, and reading all descend from the same act, and that act is gathering.

The Greek walked the same road on its own. λέγω carries both *gather* and *say*, and yields λόγος, the gathered thing, the account. De Vaan notes the parallel shift almost in passing, as though it were unremarkable that two

languages should independently travel from picking things up to saying what they mean.

That much is philology, and any reader can check it against the dictionaries. What I make of it is not philology, and I want to mark the transition rather than let the etymology carry weight it cannot bear. An origin is not an argument. That *legible* once meant *gathered* does not establish anything about traces, or lives, or coherence; it only offers a figure, and the figure has to earn its keep on its own.

Interpretively, then. A trace that is merely present is not yet legible. Something must have gathered it, and something in it must tell a reader what kind of thing it is and how to take it up. Legibility is not a property a trace possesses on its own. It is conferred, and it is conferred by marking.

I believe this is true of the traces a life leaves. That belief is the claim my larger framework makes and does not measure, and I have said so. It is also true of the sentences we write about them — and that claim anyone can check, by reading them.

The seam is that marking. It is not a wall between philosophy and science, and it is not a defense. It is the small, continuous labor of telling a reader what a sentence is doing, so that what has been gathered can actually be read.

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1. The two standard etymological dictionaries differ on the reconstruction. De Vaan gives a present *leg-e/o- ‘to collect’. Beekes writes *leg- with a palatal, on the strength of Albanian *mb-ledh* ‘to collect, harvest’, and adds that the relation between this root and the synonymous *les- remains unclear. I follow de Vaan’s notation throughout and record the disagreement rather than adjudicating it, which is beyond my competence. Nothing in the argument turns on the palatal.