A READING MAP

Bergson on Stating Problems

— and what it means for building software

> *"It is a question of finding the problem and consequently of stating it, even more than of solving it. For a speculative problem is solved as soon as it is well stated."*
>
> *« un problème spéculatif est résolu dès qu'il est bien posé »*
>
> HENRI BERGSON · "DE LA POSITION DES PROBLÈMES," LA PENSÉE ET LE MOUVANT

How a problem is stated already decides the solution that can come of it. The original handout built this arc from Deleuze; here every move is rebuilt in Bergson's own words — and in the earlier thinkers he drew on.

I · DE LA POSITION DES PROBLÈMES — STATING THE PROBLEM

A problem is solved once it is well stated

Truth and falsity belong first to the way a problem is *stated*, not to the answer; most error is a competent answer to a question wrongly put. To state a problem, Bergson insists, is not to uncover something already lying there — *"it is to invent."* Discovery bears on what already exists; invention "gives being to what was not," and might never have come. So the truly great problems *« ne sont posés que lorsqu'ils sont résolus »* — are stated only when they are solved: to pose well is already half to create the answer.

> THE ENGINEERING TRANSLATION
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> **A problem well stated is half-built.** The architecture of the problem fixes the solution space; most bad code is a clean answer to a badly-stated requirement. Leverage is in the *statement*, not the cleverness — the bug that evaporates once you state the requirement right is a false problem dissolving, the way "why something rather than nothing" dissolves once you see the question bore on *what is not*.

II · L'IDÉE DE NÉANT — HOW PROBLEMS GO FALSE

Two ways a problem goes false

(*i*) *It bears on what is not.* "Why is there something rather than nothing?", "why order rather than disorder?" Bergson shows that *le néant* ("nothing") and *absolute disorder* are pseudo-ideas that hold *more* than what they deny, not less: to think "nothing" you first picture a thing and then add the image of its abolition. There is no more in the half-emptied bottle — wine *and* void — than in the full one that holds only wine.

(*ii*) *It confuses a difference in* kind *with a difference in* degree — a composite (duration and space, quality and quantity) taken as one thing graded more-or-less. To dissolve such a problem is to find where thought flattened a difference of *nature* into a mere more-and-less, and to restore it.

> THE ENGINEERING TRANSLATION
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> **Find differences in kind, not degree.** Most muddled designs flatten a difference of nature into a slider. Before optimizing, ask whether two cases differ in *kind* — and so deserve separate paths — or only in *degree*, and should share one. It is the single discriminating gesture, applied to design.

III · INTRODUCTION À LA MÉTAPHYSIQUE — INTUITION AS METHOD

Cut at the real's own joints

The concepts language hands us "cut up the real according to [society's] needs," along divisions that may not *« correspond[re] aux articulations du réel »*; philosophy must carve at the joints, not at the words — the old demand of Plato. Intuition reverses the intellect's outward, spatializing habit: its way of recomposing movement out of immobilities, the error Bergson lays at Zeno's door — the Eleatics, he writes, "really put two tortoises" in place of Achilles and the tortoise. Reflection on duration, he says, "led us to *erect intuition into a philosophical method*." And a philosopher "worthy of the name has never said more than a single thing… he has known but a single point" — the simple generating intuition the method exists to recover.

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Cut at the natural joints, not the vocabulary's. Module boundaries inherited from words rarely fall on the system's real articulations. Good factoring is the search for the joints — where the domain differs in *kind* (read vs write, latency- vs throughput-bound), not merely in degree.

THE ENGINEERING TRANSLATION

Build by intuition; let the symbols serve it. The spec is the outward, analytic view — needed for action, but it recomposes the system from static snapshots (the intellect's "cinematographic" habit). Keep returning to the one intuition of what the system is *for*, and let specs, types, and diagrams serve it. Two faithful architectures for one need can look nothing alike, because each *re-creates* that intuition rather than copying a finished form.

IV · LE POSSIBLE ET LE RÉEL — THE VIRTUAL & BECOMING

The possible, the virtual, and why becoming

The badly-stated problem treats the real as a *possible* made real — as if the answer pre-existed and only awaited selection. Bergson refuses it. Before it is composed, the symphony was not waiting, possible, in some mind; "possibility" is only *« le mirage, dans le passé indéfini, de la réalité une fois apparue »*. The possible is thus not less but *more* than the real — the real plus a backward projection of its own image, the "retrograde movement of the true." The genuinely new is *created*, not selected: "life… is invention, is unceasing creation." So a problem stays a verb — an ongoing effort of statement and re-statement — never a finished noun.

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The possible vs. the virtual (Claude / Codex / Copilot). Tempting to say a model *creates* a solution that did not pre-exist. Keep it an analogy. A model's weights are a vast compressed store of patterns, and sampling by fit to the prompt resembles Bergson's *possible* "realized" by resemblance — the combinatorial pre-given — more than a creation that yields what does not resemble its conditions. Whether the output is invention or sophisticated interpolation is exactly the open question; in Bergson's terms, ask whether it *makes duration* or only *re-selects the possible*.

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The problem endures in the solution. It does not vanish at ship. The codebase keeps the shape of the problem it answered, and that problem re-actualizes through versions and refactors — the past surviving integrally and pressing into each present. Software is becoming, not being; "done" is always provisional.

FIVE ONE-LINERS FOR THE CONVERSATION

— Spend yourself on stating the problem, not the answer — it is solved once well stated.

— Find the difference in kind, not the difference in degree.

— Carve at the real's joints, not at language's.

— Beware problems that bear on *what is not* — they dissolve, they aren't solved.

— A model re-selects the possible; ask whether it creates the new.

SOURCES & PRE-BERGSON LINEAGE

Every move above resolves to Bergson's own words. Citations are to the standardized *bergson/* corpus — `source-key · [[ CH NNN ]] · line` — so each can be opened and checked.

Bergson — "De la position des problèmes," ***La Pensée et le mouvant***: stating outruns solving, to state is to invent, carving at the articulations of the real. `intuition-philosophique-fr · [[ CH 012 ]] · L287` The pseudo-ideas of nothing and disorder; the half-emptied bottle; Kant credited with giving "a natural illusion" its most systematic form — "*but he preserved it*"; the antinomies "stated backwards… of human manufacture." `[[ CH 015–016 ]] · L311, L315, L325` A philosopher "has never said more than a single thing." `[[ CH 004 ]] · L189` Intuition "erected into a philosophical method." `pensee-et-le-mouvant-fr · [[ CH 005 ]] · L129`

Le possible et le réel: the possible as "the mirage, in the indefinite past, of the reality once it has appeared"; the retrograde movement of the true; the symphony that was not possible before it was real. `pensee-et-le-mouvant-fr · [[ CH 003–04 ]] · L105, L115`

L'Évolution créatrice: life as "invention… unceasing creation" `[[ CH 005 ]] · L1538`; existence as a "conquest over nought" `[[ CH 046 ]] · L12735`; the false problem of disorder `[[ CH 037 ]] · L10216`.

Time and Free Will: Zeno and the Eleatics reconstructing movement from immobilities — "in place of Achilles pursuing the tortoise they really put two tortoises." `time-and-free-will · [[ CH 017 ]] · L2652`

Pre-Bergson — the lineage he draws on. Plato — carve reality "at the joints" (*Phaedrus*), the demand behind Bergson's *articulations du réel*. **Berkeley** — Bergson salutes "the great progress made in philosophy the day Berkeley established" the case against the mechanical philosophers `(matiere-et-memoire-fr · [[ CH 001 ]] · L76)`, and reads him, with **Spinoza**, as the unfolding of one simple intuition. **Plotinus** and **Ravaisson** — the inward, generative reading of nature. **Maine de Biran** — the inner sense of effort. *Counter-cases he diagnoses rather than endorses:* Zeno's paradoxes and Kant's antinomies — problems "stated backwards."

ON LAYERS — THE PROJECT'S DISCIPLINE

The original handout's scaffolding — "false / badly-posed problems," "the virtual," "differential Ideas," "singularities," "differentiation / differenciation" — is largely **Deleuze's** systematization of Bergson (*Bergsonism*, 1966). It is faithful and illuminating, but it is a reader's crystallization. Above, each is returned to a Bergson *by*-locus or to a predecessor he named. Two worth keeping straight: "differences in kind vs degree" is Bergson's own distinction that Deleuze *named* as a rule; and "intuition as method" is, in fact, Bergson's own phrase — *ériger l'intuition en méthode* — not only Deleuze's.

Rebuilt from the standardized *bergson/* corpus (17 books · 586 sections). French quoted verbatim from the corpus; English renderings follow the standard translations (Pogson, Mitchell, Andison). Every citation verified to round-trip to its source file.