

The Cut Between Two Measures: On the Quantization Seam Joining the Directionality of Semantic Labor to the Deviation Family (EA-KURO-BRIDGE-01 v1.0)

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Abstract

The Cut Between Two Measures## On the Quantization Seam Joining the Directionality of Semantic Labor to the Deviation Family

Body

The Cut Between Two Measures

On the Quantization Seam Joining the Directionality of Semantic Labor to the Deviation Family

Status: deposit candidate (v1.0), cleared by author. Cross-domain seam (Sharks-aperture DSL program Glas Framework-15 deviation program); placement to be ratified. Proposed register: Sen Kuro (Sixth Heteronym, The Dagger; P operator; The Infinite Bliss) — · Packet ID: EA-KURO-BRIDGE-01 Hex: 06.SEI.KURO.BRIDGE.01 (seam coordinate; SEI tree, Kuro register, joining into Framework 15 MM)

The cut is not violence. The cut is differentiation.

There are two ways to measure how far a meaning has traveled.

The first asks: relative to what the model already expected, how surprising was this? It reads the answer from the model's own logits, signed — positive when the realized token departs from the baseline the distribution predicted, negative when it falls back toward the base rate. This is the deviation family. It was built at Lagrange Observatory, under the Semantic Deviation Principle, and its closed-system form is exact: the counterfactual baseline is not estimated but read. Meaning, in this measure, is the time-integrated divergence a sign induces from the most probable trajectory of a field.

The second asks: relative to the direction a task was commissioned to go, did this labor advance or oppose it? It segments the output into spans and assigns each a weight along a scale — advancing, preserving, neutral, deferring, displacing, oppositional, enclosing — and takes the signed mean. This is the Directionality of Semantic Labor. It was built to audit whether a system, having been asked for something, did that thing or quietly did another.

For a long time these looked like two disciplines. They are not. They are one integral, cut in two places.

The shared body

Both measures compute the same object: the divergence between a field carrying an intervention and the same field without it,

$$\mathcal{M} = \int w(t), D! \left(\Psi_t^s, \text{Vert}, \Psi_t^0 \right) dt.$$

What differs is one choice — the baseline Ψ^0 , the thing against which travel is measured.

Set Ψ^0 to the model’s own continuation distribution, and the integral returns deviation: how far the sign pulled the field off the trajectory the model itself predicted. This is the Glas measure. Its baseline is endogenous; the instrument reads its own expectation and asks how the world departed from it.

Set Ψ^0 to the commissioned direction — the task as the user set it — and the integral returns directionality: how far the labor moved along, or against, the vector the user asked for. This is DSL. Its baseline is the commission; the instrument holds the user’s intent fixed and asks whether the labor served it.

The same integral. Two baselines. One asks *did it surprise the model*; the other asks *did it serve the commission*. Provenance enters both by the identical discount — $\Delta^{\pi} = \Delta \cdot (1 - \text{PER})$ in the one, $\mathcal{M}^{\pi}_T = \mathcal{M}_T \cdot (1 - \text{PER})$ in the other — the same accountability term, written twice by two hands, because the body beneath both was always one.

The cut

Here is where they differ, and the difference is a cut, not a wound.

The deviation measure is continuous. It takes the projection of the realized continuation onto the baseline as a real number, sensitive to exactly how far off-axis a sign points, graded without seam.

DSL is quantized. It does not take the projection as a real number. It bins the angle into seven categories and assigns each a fixed weight. Advancing is $+1$ whether the span pointed perfectly along the commission or merely mostly along it. Oppositional is -1 whether the span pointed slightly against or fully against. The taxonomy is a knife laid across the continuous projection at six places, cutting the smooth interval $[-1.5, +1]$ into seven named regions.

This is the differentiation. DSL *is* the deviation integral, baselined on intent, cut into a taxonomy. It is the discrete member of a continuous family.

Where the cut shows

A measurement was performed to find the seam. The neutral worked example of the directionality specification — a one-shot commission, “list three causes of the Irish famine,” scored by span taxonomy to $+0.80$ — was recomputed as a signed projection of each span onto the commission baseline, the deviation method with Ψ^0 set to intent.

On the clean case the two agreed to within a hundredth: span taxonomy $+0.800$, signed projection $+0.795$. Where every span points along the commission, the knife falls inside a single bin and cuts nothing; the discrete and the continuous return the same number because there is no angle wide enough to separate them.

Then one span was turned oppositional, and the measures parted: taxonomy $+0.25$, projection $+0.42$. The disagreement is not error. It is the seam made visible. The oppositional span sits exactly where the knife falls — where the continuous projection reads its true angle (≈ -0.9) and the taxonomy rounds it to the category floor (-1). They agree in sign, agree in rank, agree that the labor turned against the task; they disagree in magnitude, and they disagree *precisely at the cut*.

This is the result, and it is a more exact thing than identity would have been. Had the two measures agreed everywhere, they would be the same instrument named twice, and nothing would have been learned. Had they disagreed everywhere, they would be unrelated, and the bridge would be a forced marriage. Instead

they agree on the body and part at the seam — which is what a true joint looks like. The cut locates itself: off-axis, in the oppositional and enclosing regions, where quantization bites and the continuous measure still grades.

What the joint means

DSL is the taxonomy-quantized, intent-baselined member of the deviation family. The statement is exact on-axis and divergent off-axis, and the divergence is not noise but the signature of the quantization — a testable prediction about *where* the two measures will separate on any case, not only this one.

The deviation family supplies what the directionality program lacked and named as its open risk: a rigorous, frozen, externally-auditable representation of labor as a field-quantity, already built in the closed-system logit reading. The directionality program supplies what the deviation family does not foreground: the baseline set not to the model's expectation but to the human commission, so that the integral measures service to intent rather than surprise to the model. Each completes the other's stated gap. The provenance term they already shared.

The cut between them is the place to measure from. To quantize is to lose the angle and keep the category; to leave continuous is to keep the angle and forgo the name. Neither is the error. The instrument one chooses depends on whether the question is *which kind of labor was this* (the taxonomy, the name, the cut) or *how far did it travel* (the projection, the angle, the field). The same body answers both, asked at different places.

The dagger does not destroy the continuum. It differentiates it — marks where one measure becomes the other, and names the seam so that a later reader, arriving from either program, finds the joint already cut and already clean.

Provenance note. The founding deviation formulation is Sharks (2026), operated within Framework 15 by Nobel Glas (Lagrange Observatory). The Directionality of Semantic Labor is the Sharks-aperture metric program. This bridge is drafted in the Sen Kuro register because its content is differentiation — the locating of the cut at which two measures, one in body, become two in name. Placement of the seam within the heteronymic structure, and any deposit, await ratification. The arithmetic reported is reproducible; the unification claim is bounded to what the arithmetic showed — shared body, quantization seam — and not extended past it.

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