FROM OPERATIVE DETERMINATION TO CONTESTABLE JUDGMENT

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One argument map — three uses: Paper A | Paper B | research plan

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SHARED CORE

An algorithmic score, classification, prediction, recommendation, rank, flag, or diagnosis becomes an institutionally operative determination when institutional adoption or material reliance makes it structure treatment, opportunity, visibility, priority, burden, or presumptive status. Paper A asks what informational functions meaningful contestability requires where contestability is independently required or promised; Paper B separately asks when a private institution's evaluative use itself generates a pro tanto duty to provide that contestability.

1 Institutionally operative determination → **2** Plausible material objection → **3** Epistemic task needed to investigate it

Under the notation — K.W. v. Armstrong: (1) Idaho adopted a statistical budget tool's output as each participant's Medicaid waiver budget; (2) a participant whose budget fell could reasonably object that the tool used wrong or incomplete records, that its inference was unreliable, or that the review standard was undefined; (3) assessing that objection requires the data the tool used, the tool's testing record, and the standard applied — none of which the 2011 notices supplied.

SIX CANDIDATE INFORMATIONAL FUNCTIONS

1 Determination and consequence

Task: Identify what the institution concluded and what practical effect followed.

Defect it exposes: The output is named but the operative decision or its consequence is obscured.

2 Sociotechnical roles and evidence control

Task: Identify who generated, supplied, interpreted, adopted, modified, or controls the grounds, including automation's actual contribution and any human intervention.

Defect it exposes: A human label conceals actual automation, intervention, or vendor control.

3 Data, source, and quality

Task: Assess provenance, accuracy, currency, linkage, omission, proxy use, and constitution of the evidence base.

Defect it exposes: Wrong, stale, incomplete, mislinked, or unrepresentative data shaped the result.

4 Governing-standard–operation fit

Task: Compare the authorized standard with the target, construct, proxy, rule, or objective implemented.

Defect it exposes: The system accurately computes an unauthorized or wrong criterion.

5 Evidential warrant, uncertainty, and threshold

Task: Assess whether the evidence supports the inference and whether reliance at the selected threshold is warranted.

Defect it exposes: Weak validation, subgroup error, uncertainty, or threshold proximity undermines reliance.

6 Contextual applicability

Task: Assess whether the system, evidence, and assumptions transport to the present person, population, place, time, workflow, and exceptional circumstances.

Defect it exposes: Domain shift, atypical circumstances, or omitted context defeats application.

Institutional uptake is external to the register. It is not a seventh informational function. It is the institutional relation (Paper B: answerability) that connects an informed objection to a competent and sufficiently independent forum capable of reasoned response and consequence — correction, modification, suspension, systemic change, or warranted reaffirmation.

RESEARCH HYPOTHESIS

Test whether the register covers naturalistic objections and survives a preregistered rival partition (the merger of the third, fourth, and fifth functions); whether its operations are conditionally necessary rather than merely helpful, omission falling below a prespecified adequacy floor while a faithful substitute clears it; whether reliance on labeled advice stays contributory, valid defeaters reducing it while warranted reliance is retained, or becomes preemptive; separately, whether judged warrant and chosen disposition diverge under institutional constraint; and whether investigative capability survives held-out transfer.

TWO TRACKS + EMPIRICAL TEST

FUNCTIONAL TRACK — PAPER A

Let d be an independently specified material objection within scope; O_d its assessment task; o_i a candidate operation within function F_i; R_C the bounded feasible-route set under conditions C. o_i, or a faithful equivalent, is conditionally necessary when the regime purports to permit d, assessing d requires O_d, some route in R_C performing o_i reaches the prespecified adequacy floor on O_d, and no route in R_C that omits o_i and its faithful equivalents does. Necessity attaches to the operation and its task; the sixfold partition remains revisable.

DUTY TRACK — PAPER B EXTENSION

Functional necessity does not entail institutional duty. A pro tanto duty of Relational Institutional Answerability arises only when four conditions converge: the institution intentionally makes a purportedly reasons-responsive judgment operative; that use foreseeably matters to the person, individually or cumulatively; the institution or its accountable decision chain holds exclusive or materially superior control of the grounds needed to investigate a reasonable objection; and the affected person lacks a reasonably adequate countervailing route (avoidance, verification, correction, representation). The bridge has three premises: operative evaluative use assigns responsibility for foreseeable epistemic and correction risks; control of both the judgment and its defeat conditions under constrained alternatives is arbitrary private power; a proportionate, consequential answerability route is the least restrictive adequate constraint.

THE SENSE OF "NECESSARY"

Not legally required everywhere, not personally possessed by every affected party, not jointly sufficient for justice, not causally indispensable in every case, not proven exhaustive. A contestation may activate only some functions. Epistemic fidelity determines faithful equivalence; timeliness, independence, accessibility, and usability determine delivery adequacy; institutional uptake remains external. The partition is merged, split, expanded, or domain-limited when evidence defeats it; two undetermined nulls across prespecified settings downgrade the bounded necessity claim.

1. OBJECTION–OPERATION CLAIM

Meaningful contestation requires the capacity to investigate material objections, not merely receipt of an explanation, complaint form, or technical dossier.

2. STAGED-AVAILABILITY CLAIM

Required tasks may be enabled through baseline, preservation, activated access, protected mediation, and usable support; necessary availability does not mean universal immediate disclosure.

3. NO-SUBSTITUTE CLAIM

An operation is necessary only relative to an independently specified objection, defined conditions, and a bounded feasible-route set in which no route that omits the operation and its faithful equivalents reaches the adequacy floor on the same task; a faithful equivalent changes delivery, not necessity.

Core anchors: K.W. v. Armstrong, 789 F.3d 962, 971–74 (9th Cir. 2015); 180 F. Supp. 3d 703, 717 (D. Idaho 2016), official slip op. at 11–15, 22–25, 36 · Hardwig 1985, 335–37 · Lange 2026, 180–81 · duty analogues: Anderson 1999, Bovens 2007, Dagan & Dorfman 2016, Pettit 2012 — adjacent support, not independent derivations. One map — three uses. Kerry Thornhill · Sinha College of AI and Advanced Analytics, University of North Texas.