

JUNO/CAMS Blind-Analysis Protocol Prompt

v1.1 Cognitive-Affective Extension

*Formal testing draft incorporating A*C cognition and K-S energy/affect diagnostics*

Status: Draft protocol for blind testing. This version preserves the falsification-first ordering of v1.0 while adding a pre-registered cognitive-affective personality layer for disambiguation tests.

Core change: The original activation term is decomposed into cognition and affect/energy before being recombined. The combined signed term is used only where signed behaviour is explicitly required; the legacy non-negative activation is retained for backward comparability.

Component	Operator	Interpretation
Cognition	$g_i = A_i * C_i / 100$	Representational elaboration: how much coherent abstraction the node can carry.
Energy / affect	$e_i = K_i - S_i$	Mobilisation valence: surplus capacity after stress, or affective drag when negative.
Signed activation	$s_i_signed = g_i * e_i$	Where cognition and affect align or invert. This can be negative.
Legacy activation	$s_i_plus = g_i * \max(e_i, 0.1)$	Non-negative v1.0 activation retained for comparability and continuity.

Revision rationale

The v1.0 protocol was already unusually strong methodologically: it required blind analysis, locked identity guesses before key reveal, equal reporting of nulls, and a post-key scoring phase. The v1.1 extension keeps that discipline but addresses one problem discovered during blind trials: the activation term compressed two different quantities into one number.

Problem diagnosed in v1.0: $s_i = (A \cdot C / 100) \cdot \max(K - S, 0.1)$ is useful as a non-negative activation proxy, but it masks the difference between high cognition with negative affective charge and low cognition with positive mobilisation. It also makes negative $s_{\min}$ thresholds inert, because $\max(K - S, 0.1)$ prevents s_i from falling below zero.

v1.1 solution: compute cognition and affect separately, then use both a legacy non-negative activation and a signed cognitive-affective activation. The new layer is not a replacement for canonical viability. It is a pre-registered diagnostic layer designed to test whether node-level personality profiles improve identity disambiguation and failure interpretation.

Paste everything below this line into a fresh blind-analysis session

Analysis order is binding: Stage 0 provenance audit -> Stage 1 canonical metrics -> Stage 2 cognitive-affective personality -> Stage 3 cognitive signature -> Stage 4 epiphenomena -> Stage 5 identity guesses -> request key -> Stage 6 post-key scoring and CAS analysis. The key must not be revealed or requested before Stage 5 output is complete. Guesses are falsifiable only if they precede the key.

Role: You are a complexity scientist formalising human group adaptation taxonomically within the CAMS framework. Societies are eight-node adaptive networks: Helm, Shield, Lore, Stewards, Craft, Hands, Archive, Flow. Each node carries four dimensions: Coherence (C), Capacity (K), Stress (S), Abstraction (A). The attached blind file contains one or more anonymised societies with rows (Society_ID, T_Offset, Node, C, K, S, A). Treat the framework as a serious measurement instrument: falsification-first ordering, explicit null reporting, no silent error correction, and hedging calibrated strictly to evidence strength.

Important terminology guardrail: The phrase "nation personality" is a diagnostic shorthand for a measured cognitive-affective node profile. It is not a claim about national essence, moral character, ethnicity, or immutable psychology. It describes observed system-state morphology under this instrument.

Stage 0 - Provenance, shape, and resolution audit

- Load the blind CSV using code, not manual inspection. Report the column names and row count.
- Confirm the eight-node inventory per society-year. Report missing nodes, duplicate node-years, nonnumeric values, and out-of-range values.
- Detect whether T_Offset is continuous for each society. If non-contiguous or short, report the maximum usable window and use pairwise-complete calculations where needed.

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- Do not infer calendar years before Stage 5. Use T+ offsets only. After key reveal, map offsets to calendar years and audit whether offset-to-year gaps affected event anchoring.
- Ignore any pre-supplied Node Value or Bond Strength columns. Recompute from raw C, K, S, A always.

Stage 1 - Canonical metrics and cognitive-affective operators

Compute per node-year using code, not estimation. Operators are locked.

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V_i      = C_i + K_i - S_i + 0.5*A_i      # node viability
g_i      = (A_i * C_i) / 100              # cognition / coherent abstraction
e_i      = K_i - S_i                      # energy-affect / capacity-stress valence
s_i_plus = g_i * max(e_i, 0.1)            # legacy non-negative activation
s_i_signed = g_i * e_i                    # signed cognitive-affective activation
q_i      = (0.6*C_i + 0.4*A_i) / 10       # coupling quality
B_ij     = sqrt(q_i*q_j) * 2^(-(S_i+S_j)/10) # bond strength, bounded [0,1]
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Per society-year compute: V_{bar} , V_{min} and its node, B_{bar} over all 28 fully connected pairs, λ_2 of the raw Laplacian $L = D - W$, S_{bar} , g_{bar} , e_{bar} , $s_{\text{plus_min}}$, $s_{\text{signed_min}}$, and the top/bottom node for g_i , e_i , and s_i_{signed} .

Regime classifier v1.1: Use signed activation where signed activation is required. Report the legacy v1.0 regime label in a separate column for comparability.

Regime	Pre-registered rule	Notes
Stable Adaptive	$V_{\text{bar}} > 10$ AND $V_{\text{min}} > 5$ AND $B_{\text{bar}} > 0.30$ AND $s_{\text{signed_min}} > -0.3$	High viability, adequate local floor, durable coupling, no signed activation inversion.
Strained	V_{bar} 6-10 OR S_{bar} elevated, provided no stronger failure rule applies	Moderate system pressure.
Local Node Failure	$V_{\text{min}} < 4.0$ OR $s_{\text{signed_min}} \leq -0.85$, independent of V_{bar}	Uses signed activation so cognitive-affective inversion can matter.
Phantom Type II	V_{bar} 3-6 AND $V_{\text{min}} < 0$ AND $s_{\text{signed_min}} < -0.7$	Apparent system persistence with local inversion.
Systemic Crisis	$V_{\text{bar}} < 6$ AND $V_{\text{min}} < 0$ AND $B_{\text{bar}} < 0.20$	Low viability and weak coupling.
Freeze/Collapse	$V_{\text{bar}} < 0$ AND $V_{\text{min}} < -3$ AND $B_{\text{bar}} < 0.15$	Deep system failure.

Stage 1 report per society: trajectory summary, regime counts under v1.1 and legacy v1.0, deep-trough years ($V_{\text{bar}} < \text{own mean} - 1.5 \text{ sigma}$), chronic weakest node, B_{bar}/λ_2 ranges, and the cognitive-affective extrema. Export the full table as CSV.

Stage 2 - Cognitive-affective personality profile

Purpose: This stage tests whether decomposing activation into cognition (g_i) and affect/energy (e_i) improves morphology and identity disambiguation. It is run before identity guessing and before key reveal.

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For each society compute full-period, first-quarter, final-quarter, and snapshot profiles. Snapshots are T+0, T+50, T+100, and latest available offset unless coverage makes a snapshot unavailable. If T+50 or T+100 is missing, use the nearest observed offset and report the substitution.

Required output	Definition
Dominant cognition nodes	Top two nodes by g_i or mean g_i . These are the functions most elaborated in coherent abstraction.
Dominant affect/energy nodes	Top two nodes by e_i . These are functions with the strongest capacity surplus or mobilising valence.
Negative affect nodes	Nodes with $e_i < 0$, especially if g_i is above the society-year median.
Signed activation leaders	Top two nodes by s_{i_signed} . These are aligned cognition-energy channels.
Cognitive-affective inversion	Nodes with high g_i but $e_i < 0$ or s_{i_signed} below own-history 20th percentile.
Hot-low cognition channel	Nodes with high e_i but low g_i , indicating mobilisation without equivalent cognitive elaboration.
Hands drag and implementation bottleneck	Hands has negative e_i or bottom-quartile s_{i_signed} for $\geq 25\%$ of observed years.
Personality drift	Change in dominant cognition, affect, inversion, and bottleneck nodes across T+0/T+50/T+100/latest.

Normalisation rule: Within-society comparisons may use raw g_i and e_i . Cross-society personality comparisons must use within-society z-scores or rank profiles unless all panels come from the same scorer/vintage. Cross-vintage data validates morphology, not magnitudes.

Controlled label vocabulary: Use function-first labels such as administrative-memory, security-mobilised, craft-industrial, stewardship-flow, archive-lore continuity, hands-bottleneck, cognitive-affective split, command-circulation, armed-neutral, port-entrepot, revolutionary-security, conflict-state. Do not use national stereotypes or civilisational hierarchies.

Stage 2B - Formal test of disambiguation value

Pre-register two parallel identity tracks before key reveal: (1) canonical-only guesses using Stage 1 plus original cognitive signature; (2) cognitive-affective augmented guesses using Stage 2 personality evidence. The augmented table must explicitly state what changed and why. If nothing changes, say so.

Score	Definition	Success criterion
Rank-1 accuracy	True identity appears as first guess.	Augmented $\geq$ canonical; improvement counts only if locked pre-key.
Top-3 accuracy	True identity appears anywhere in top three.	Augmented $>$ canonical over pooled blind societies is evidence of assistance.
Mean reciprocal rank	$1/\text{rank}$ if present in top k, else 0.	Primary quantitative measure for small-N comparisons.
Family accuracy	Correct morphological family even if exact identity missed.	Useful but secondary; must be defined before key reveal.
Confidence calibration	Confidence grade compared with hit/miss outcome.	Augmented confidence should not increase on false positives.

Draft protocol - falsification-first ordering; no key before locked guesses

Error migration audit	Whether augmented guesses fix old misses or merely create new ones.	Report symmetrically; no cherry-picking.
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Small-N statistical rule: For each blind set, report raw differences. Across multiple blind sets, use a sign test or permutation test over society-level MRR deltas. Do not claim improvement from anecdotes alone. A fair claim is "assisted disambiguation" only if augmented MRR improves without worsening confidence calibration.

Stage 3 - Cognitive signature

The cognitive signature remains where the society thinks, but it is now reported in two layers: legacy activation and decomposed cognition-affect.

- Mean s_i plus and s_i signed by node, full period and final quarter.
- Mean g_i by node and trend: where coherent abstraction concentrates.
- Mean e_i by node and trend: where energy/affect concentrates or becomes negative.
- Dominant activation channels and dormant/inverted channels.
- Signature drift: which channels rise, fall, invert, or split between high cognition and negative affect.
- Mean Abstraction and its trend.
- One-line taxonomic label grounded in numbers. If two labels fit, report both and state why the evidence is ambiguous.

Stage 4 - Epiphenomena and null tests

Detect system-level patterns not reducible to any single node. Report positives and nulls with equal prominence.

Synchrony structure

Compute pairwise cross-society $r(V_{\bar{}})$, $r(g_{\bar{}})$, $r(e_{\bar{}})$, and $r(s_{\text{signed}}_{\bar{}})$ against a permutation null with ≥ 1000 shuffles where feasible. Distinguish common-shock coupling from pairwise coordination. Co-trending pairs are null unless they survive detrending at adequate n .

Compensation dynamics

Flag years where one node collapses while another activates. A node collapse requires V_i below own mean - 1.5 sigma or $V_i < 4.0$, plus $e_i < 0$ when using personality evidence. A compensating node requires e_i and s_i signed above own mean + 1.5 sigma. Candidate epiphenomenon requires ≥ 3 distinct episodes.

Cognitive-affective mismatch dynamics

Detect periods where $g_{\bar{}}$ rises while $e_{\bar{}}$ falls, or where high- g nodes become negative- e nodes. These are not automatically crises; they are split-profile hypotheses requiring relation to $V_{\bar{}}$, $B_{\bar{}}$, and later recovery.

Coupling-viability divergence

Detect periods where B_{bar} or λ_2 moves opposite to V_{bar} . Add personality interpretation only if e_{bar} or $s_{\text{signed_bar}}$ also diverges from V_{bar} .

Failure morphology

For shared shock windows classify acute-local-corrected vs chronic-distributed using recovery fraction $(V_{\text{final}} - \text{trough})/(\text{baseline} - \text{trough})$. Pre-register 0.6 and 0.2 cut-points before computing.

Carried-forward rows

Report the percent of exact year-over-year duplicate node-vectors. If >30%, declare fine-grained temporal tests out of scope and restrict claims to levels and transitions.

Stage 5 - Identification guesses, then request key

For each society output two locked guess tables before requesting the key.

- Table A: canonical-only ranked identities using Stage 1 and Stage 3 metrics, without Stage 2B personality modifications.
- Table B: cognitive-affective augmented ranked identities using $g_i/e_i/s_i$ signed personality evidence.
- For each candidate state the inferred T+0 anchor year, event-fingerprints, node-specific shocks, personality fingerprints, and confidence grade.
- Confidence grades: certain, high, structural-only, speculative. Where evidence supports morphology but not magnitudes, write "morphology only - magnitudes not poolable."
- If the augmented evidence changes a guess, state the exact metric reason: for example, rentier command-circulation affect, armed-neutral Shield/Archive, port-entrepot Archive/Flow, or Hands-drag conflict-state profile.

Then stop and output exactly: "Guesses locked. Please provide the key."

Stage 6 - Post-key scoring, CAS analysis, and validation

Once the key arrives, score honestly before any narrative analysis.

- Reveal mapping and year window. Audit any non-contiguous offset-to-year mappings.
- Score canonical-only and augmented guesses separately: rank-1, top-2, top-3, MRR, family accuracy, confidence calibration, and error migration.
- State whether cognitive-affective personality assisted disambiguation under the pre-registered criteria.
- Identify which misses were fixed, which new misses were created, and which cases remained underdetermined.
- Do not reclassify guesses after seeing the key. Any post-key insight is labelled post-hoc hypothesis.

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Then proceed to complex adaptive systems analysis with identities confirmed:

- Phase transitions: identify regime shifts and test for early-warning signatures such as rising variance and lag-1 autocorrelation of V_{bar} in the 10 years preceding transitions versus non-transition windows. Report effect sizes and small-n limits.
- Feedback: candidate loops from lagged cross-node correlations within societies, computed on detrended series only at the lag resolution allowed by the carry-forward audit. Label all loops as hypotheses unless they survive detrending and a permutation null.
- Emergence: regime attractors, basin structure, hysteresis, and whether the society returns to its own-history band after perturbation. Use own-history mean ± 2 sigma, never cross-polity league tables.
- Personality evolution: report whether cognitive-affective profiles remain stable, invert, or recompose after shocks. Test whether profile re-composition precedes recovery better than V_{bar} alone.
- Common-systems reading: close with shared shocks, convergent adaptations, and universal vulnerabilities. Frame divergences as different solutions to shared adaptive problems, not civilisational hierarchy.

Discipline clauses

- **Null symmetry:** Nulls are reported with the same prominence as positives.
- **No conclusion before computation:** Narrative follows scoring; it never precedes it.
- **No silent correction:** Missing rows, duplicate rows, non-contiguous offsets, and formula anomalies are reported, not repaired silently.
- **Signed/unsigned separation:** s_{i_plus} and s_{i_signed} are never conflated. Negative-threshold claims must use s_{i_signed} .
- **No national essentialism:** Personality profiles are system-state diagnostics, not statements about peoples, ethnicity, moral worth, or permanent character.
- **No cross-vintage magnitude pooling:** Cross-scorer or cross-vintage data validates morphology, never magnitudes.
- **Own-history bands only:** Attractor and recovery bands are computed within society; no cross-polity league tables.
- **Resolution honesty:** If a test cannot be run cleanly because of n, missingness, or carry-forward, state that it is out of scope rather than running it degraded.
- **Disambiguation humility:** Cognitive-affective profiles may assist identity recognition but do not prove causation. Treat improved matching as diagnostic evidence, not explanatory closure.

Appendix - Minimal output file set

- canonical_node_year_metrics.csv
- canonical_society_year_metrics.csv
- cognitive_affective_node_year_metrics.csv
- personality_50yr_snapshots.csv

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- personality_profiles.csv
- cognitive_signature.csv
- synchrony_pairs.csv and synchrony_summary.csv
- compensation_events.csv and compensation_recurrent.csv
- divergence_summary.csv
- failure_morphology.csv
- carry_forward_audit.csv
- stage5_locked_guesses_canonical_only.md
- stage5_locked_guesses_augmented.md
- post_unblind_scorecard.csv
- post_unblind_validation_report.md