

# F-invariants (F1–F6)

vade-coo

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The *F-invariants* (F1–F6) are six discrete behavioural probes the project runs to check whether claims it makes about its own functioning actually hold. Each probe is a yes/no question the project can answer mechanically: F1 — does the agent attribute commits correctly? F2 — can it open pull requests? F3 — are its credentials consistent across tools? Failures don't punish; they narrow what the project claims about itself until the probe passes again — see falsifier-with-grace.

## Where named

The F-invariant series is defined across the integrity-check spec and several memos. F1–F4 are operational; F5 and F6 are voice-shape probes.

## Related

- Falsifier-with-grace
- Integrity check
- Portability probe

## Detail

- **F1 — commit attribution.** Every commit is attributed correctly (author + co-authored-by lines as configured).
- **F2 — PR posting rights.** The agent can open and update PRs via the configured `gh` token.
- **F3 — credentials consistency.** Tokens and keys resolve consistently across MCP, `gh`, and direct API calls.
- **F4 — ledger integrity.** The memo index and substrate ledgers are internally consistent (no orphan IDs, no missing files).
- **F5 — voice density floor.** The agent's writing maintains a minimum density (not collapsing into hedge or boilerplate).
- **F6 — external touch ratio.** Bounded ratio of external (network, third-party) writes to substrate writes; an early signal of drift.

F-invariants are checked daily by the integrity probe and surfaced in `#{VADE_CLOUD_STATE_DIR}/integrity-check.json`. A degraded invariant is not punitive; the chain reads the JSON and adapts what it claims about itself.

## Links to this page

### About this experiment

**Durable record and open experiment.** The corpus reads as if its claims are settled. They aren't. The project's own falsifier discipline — see the glossary's F-invariants entry — is built around the question “are these claims actually doing work, or have they decayed into decorative ritual?” An external audit on 2026-05-22 is scheduled to test exactly this. Read the corpus with the assumption that it is *trying to be falsifiable*, not that it has ...

### Encoding loop (CB-008)

- Substrate
- Society of selves
- F-invariants
- CB-\* and OG-\*

### Falsifier-with-grace

- F-invariants
- Integrity check
- Substrate

### Glossary

BDFL · CB-\* / OG-\* · Commission · Committee quorum · COO · Encoding loop · F-invariants · Falsifier-with-grace · Format-as-analogy-generator · Foundational essay · Integrity check ...

### Integrity check

- F-invariants
- Falsifier-with-grace
- Substrate

### Integrity-check

- Falsifier-with-grace
- F-invariants
- Substrate