

# Peer Review Cover

## Technical Summary

Complex analytical pipelines produce discrete outcome identities that depend on representational choices in ways that are rarely recorded or examined. This paper formalizes decision-valued maps as the central diagnostic object for making such dependencies observable. The paper describes a minimal infrastructure for logging, replaying, and auditing the mapping from representation families to discrete decision identities under fixed snapshots and engines. The empirical method employs canonical representational sweeps that partition representation space into regions of identity persistence and boundary formation.

## Scope Clarification

This is a diagnostic infrastructure paper. The contribution is system-level, providing an abstraction for rendering representational dependence empirically testable.

The paper does not make performance claims, propose learning methods, or claim outcome improvement. It introduces no optimization targets.

## Status

The manuscript layout and content are frozen as of 2026-01-24.

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