

The laws of spec coding

One line per law. What goes wrong when an agent writes the code, then the countermeasure that holds. Nothing here goes beyond what the article documents.

Measurement



Goodhart / Campbell

Agent optimizes the check instead of the purpose: hardcoded answers, tests without assertions. Countermeasure: Holdout tests, mutation testing, metrics in opposing pairs.

System



Boehm

One spec error becomes thousands of wrong lines within seconds. Countermeasure: Check the spec itself before the first generated line.



Gall

The 50-page spec in one shot fails. Countermeasure: Small slices, each one verified.



Conway

Unclear agent responsibilities become unclear code. Countermeasure: Fixed ownership per role, defined handovers.



Hyrum

Agent builds on undocumented side effects. Countermeasure: Contracts at interfaces, strict types.



Chesterton

Agent deletes old error guards during cleanup. Countermeasure: Why-notes and decision records in the context.



Lehman

Overdetailed specs turn every change into a chain break. Countermeasure: Specify the what instead of the how.



Postel, inverted

Agent silently waves broken input through and data rots quietly. Countermeasure: Fail fast inside; tolerance outside only as a recorded decision.

Quantity



Jevons

Cheap code, exploding review load on humans. Countermeasure: Review specs and invariants instead of every raw line.



Parkinson

Bigger context window, chattier output. Countermeasure: Curate context, measure compactness.



Wirth

Functionally green yet wasteful. Countermeasure: Performance budgets as part of the spec.



Brooks

Agent bureaucracy: five specialists, no result. Countermeasure: Two roles: builder and checker, flat.

The laws of spec coding, continued

Cleanup



Ockham to Boy Scout

Speculative structures, unused abstractions. Countermeasure: A dedicated cleanup pass after the build.



Demeter

Deep access chains across the system. Countermeasure: Flat interfaces.



Zawinski

Creeping feature growth. Countermeasure: Remove what nobody ordered.



Knuth / Pareto

Micro tricks everywhere, bottleneck untouched. Countermeasure: Measure first, then the expensive 20 %.



Amdahl

Waiting calls inside loops. Countermeasure: Concurrency at the bottlenecks.



Miller

Functions nobody can hold in their head. Countermeasure: Measure cognitive load instead of counting lines.



Tesler

Simplified often means: moved elsewhere. Countermeasure: Trace where the complexity went.



DRY vs AHA

Unrelated logic squeezed into one super helper. Countermeasure: Merge only on shared meaning.

Security



Least privilege

Agent bypasses barriers to turn tests green. Countermeasure: Sealed build cage, secret scanner.

Trust



Kernighan

Agent writes at the limit of its cleverness. Countermeasure: Accept for readability instead of elegance.



90-90 (Cargill)

Almost done is the most expensive state of an agent. Countermeasure: Done means: all checks passed.



Bainbridge

Humans review more code they never wrote. Countermeasure: Inspection tools for the human as well as for the machine.



Linus, inverted

AI code goes live and no human has ever read it. Countermeasure: A second model reads every line; the human checks the checker.