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SECS ANALYST REPORT

# R-006b — Maturity-Controlled Structural Forensics

SECS v1.6 Public Results — Campaign C-006b

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**Campaign** C-006b  
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**Date** 2026-03-01  
**System** SECS Sovereign  
**Baseline**  
**Result** 2 MATURITY EFFECT, 3 AI EFFECT, 1 MIXED.

**PUBLIC RELEASE** Empirical Results Reproducible

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SECS Sovereign Execution & Collapse Substrate  
[https://github.com/JustNothingJay/SECS\\_Sovereign](https://github.com/JustNothingJay/SECS_Sovereign)

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C-006 enforcement candidates H7 (fileToDirRatio) and H9 (subTreeCV) did NOT survive maturity control.  
0/2 enforcement candidates valid for v1.9 design.

**System Under Test:** 300 GitHub repositories (100 historical, 100 pre-AI early, 100 recent) **Suite:** Structural Scanner v1.0.0 + Three-Way Hypothesis Engine v1.0 **Campaign Result:** 6 hypotheses tested via three-way comparison **Constitutional Source:** D-66, D-68 (measurement before enforcement) **Version Arc:** v1.8 – measurement only, no enforcement **Directed by:** Änti (adversarial audit) **Parent Campaign:** C-006 Structural Forensics Sweep

## §0 – Executive Summary

C-006b resolves the primary confound in C-006: were the observed structural differences between historical and recent repos caused by AI influence, or by project maturity?

A maturity-matched control cohort (100 repos created 2018-2019, 50-2000 stars, pre-Copilot/ChatGPT) was scanned with the same instrument and compared against both the historical and recent cohorts from C-006.

### Cohort Design – Age at Scan

All three cohorts were scanned as they exist today (March 2026). The pre-AI early cohort captures repos that were created in the pre-AI era but have had 6–7 years to mature.

Cohort	Created	Scanned	Age at scan
Historical	pre-2015	2026	10+ years
Pre-AI early	2018–2019	2026	6–7 years
Recent	2025–2026	2026	weeks–months

**Interpretation matrix:** - Pre-AI early  $\approx$  historical  $\rightarrow$  maturity drives structure, enforcement candidates survive - Pre-AI early  $\approx$  recent  $\rightarrow$  era drives structure, enforcement candidates need re-examination - Pre-AI early intermediate  $\rightarrow$  both effects present, metric-by-metric triage

### Maturity-Control Verdicts

Hypothesis	Metric	C-006 Verdict	C-006 d	Pre-AI vs Recent d	Pre-AI vs Recent p (BH)	Maturity Verdict
H1b	m1_maxDep	FALSIFIED	-1.416	0.208	0.022499	AI EFFECT
H2b	m2_rootFileI	FALSIFIED	0.829	-0.256	0.179388	MATURITY EFFECT
H3b	m3_namingE	FALSIFIED	-1.385	0.420	0.006687	AI EFFECT
H4b	m4_duplicat	FALSIFIED	-0.994	0.356	0.003057	AI EFFECT
H7b	m7_fileToDir	SUPPORTED	-0.265	-0.263	0.211491	MATURITY EFFECT
H9b	subTreeCV	SUPPORTED	-0.946	0.403	0.011829	MIXED – PRE-AI IS DISTINCT FROM BOTH

## Summary

Verdict	Count
MATURITY EFFECT	2
AI EFFECT	3
MIXED	1

**Overall finding:** The results are mixed – some C-006 findings are maturity effects, others are genuine AI signals. Enforcement candidates must be evaluated metric-by-metric.

## Enforcement Candidate Survival

C-006 Candidate	Metric	C-006 d	Pre-AI vs Recent d	Survives?
H7b	m7_fileToDirRatio	-0.265	-0.263	NO
H9b	subTreeCV	-0.946	0.403	NO

**Neither C-006 enforcement candidate survives maturity control.** H7 is a maturity effect. H9 is mixed – pre-AI early repos differ from both cohorts, suggesting the metric tracks something other than simple maturity or AI influence.

## §1 – H8/H9 Identical-Statistic Verification

Änti flagged that C-006's H8 (rootConfigCount) and H9 (subTreeCV) reported identical Mann-Whitney U (2554.5), z-score (5.975), and Cliff's  $\delta$  (-0.489).

**Verification result:** One coincidence, not four. Source data arrays are entirely different (rootConfigCount = integers with 173 tied ranks; subTreeCV = floats with 10 tied ranks). No data leakage. The identical rank-sum (U = 7445.5) is the single coincidence; z,  $\delta$ , and p are mechanically derived from U given fixed  $n_1 = n_2 = 100$ :

$$z = \frac{U - n_1n_2/2}{\sigma_U}, \quad \delta = \frac{2U}{n_1n_2} - 1$$

Same U, same  $n_1$ , same  $n_2 \rightarrow$  same everything downstream. With U ranging over ~10,000 possible integer values for these cohort sizes, one rank-sum collision is unusual but not extraordinary (~1/10,000 if independent). **Issue CLOSED – no atlas correction needed.**

## §2 – Three-Way Hypothesis Results

### H1b: m1\_maxDepth

**Claim:** Pre-AI early-stage repos have similar max folder depth to recent repos (both shallow because both are young).

**Resolves:** If similar  $\rightarrow$  C-006 H1 falsification was a maturity effect.

**C-006 reference:** H1 – FALSIFIED (d = -1.416)

Statistic	Historical	Pre-AI Early	Recent
n	100	100	100
Mean	8.9600	3.8800	4.4300
Trimmed Mean (20%)	8.4500	3.3167	4.3667
Median	8.5000	3.0000	4.0000

Statistic	Historical	Pre-AI Early	Recent
Std Dev	3.8767	2.9346	2.3323
IQR	5.0000	4.0000	3.0000
Min	3.0000	0.0000	0.0000
P25	6.0000	2.0000	3.0000
P75	11.0000	6.0000	6.0000
Max	23.0000	14.0000	12.0000

### Pairwise Comparisons

Test	Pre-AI vs Recent	Pre-AI vs Historical	Historical vs Recent (C-006)
$\Delta$ (mean)	0.5500 (14.2%)	5.0800 (130.9%)	-4.5300 (-50.6%)
Cohen's d	0.208 (small)	1.478 (very large)	-1.416 (very large)
Cliff's $\delta$	0.199 (small)	0.737 (large)	-0.701 (large)
U	4004.5	1317.5	1497.0
z	2.432	8.998	8.559
p (raw)	0.014999	0.000000	0.000000
BH q	0.022499	0.000000	—
BH significant	<b>PASS</b>	<b>PASS</b>	—
Bootstrap 95% CI	[-0.2100, 1.2900]	[4.1100, 6.0100]	[-5.4300, -3.6700]
CI crosses zero	Yes	No	No

**Primary Verdict (Pre-AI Early vs Recent): SIGNIFICANTLY DIFFERENT†**

**Maturity-Control Verdict: AI EFFECT**

**Implication:** C-006 H1 (FALSIFIED) reflects a genuine AI-era structural shift. Enforcement candidate SURVIVES.

## H2b: m2\_rootFileRatio

**Claim:** Pre-AI early-stage repos have similar root-file ratio to recent repos.

**Resolves:** If similar → C-006 H2 falsification was a maturity effect.

**C-006 reference:** H2 – FALSIFIED (d = 0.829)

Statistic	Historical	Pre-AI Early	Recent
n	100	100	100
Mean	0.0166	0.2056	0.1418
Trimmed Mean (20%)	0.0079	0.1081	0.0771
Median	0.0063	0.0920	0.0651
Std Dev	0.0350	0.2816	0.2107
IQR	0.0141	0.2055	0.1128
Min	0.0002	0.0003	0.0013
P25	0.0024	0.0335	0.0321
P75	0.0165	0.2390	0.1449
Max	0.2500	1.0000	1.0000

## Pairwise Comparisons

Test	Pre-AI vs Recent	Pre-AI vs Historical	Historical vs Recent (C-006)
$\Delta$ (mean)	-0.0637 (-31.0%)	-0.1889 (-91.9%)	0.1252 (752.7%)
Cohen's d	-0.256 (small)	-0.941 (large)	0.829 (large)
Cliff's $\delta$	-0.110 (negligible)	-0.787 (large)	0.796 (large)

Test	Pre-AI vs Recent	Pre-AI vs Historical	Historical vs Recent (C-006)
U	4450.5	1064.5	1020.5
z	1.343	9.616	9.723
p (raw)	0.179388	0.000000	0.000000
BH q	0.179388	0.000000	–
BH significant	<b>FAIL</b>	<b>PASS</b>	–
Bootstrap 95% CI	[-0.1322, 0.0036]	[-0.2477, -0.1366]	[0.0865, 0.1698]
CI crosses zero	Yes	No	No

**Primary Verdict (Pre-AI Early vs Recent):** NOT SIGNIFICANTLY DIFFERENT

**Maturity-Control Verdict:** MATURITY EFFECT

**Implication:** C-006 H2 (FALSIFIED) was a maturity effect. Enforcement candidate INVALID.

**H3b: m3\_namingEntropy**

**Claim:** Pre-AI early-stage repos have similar naming entropy to recent repos.

**Resolves:** If similar → C-006 H3 falsification was a maturity effect.

**C-006 reference:** H3 – FALSIFIED (d = -1.385)

Statistic	Historical	Pre-AI Early	Recent
n	100	100	100
Mean	8.3481	5.7813	6.4575
Trimmed Mean (20%)	8.2936	5.9985	6.6669

Statistic	Historical	Pre-AI Early	Recent
Median	8.3938	6.0435	6.6202
Std Dev	1.2068	1.7100	1.5066
IQR	1.6004	2.1346	1.7343
Min	5.8646	1.0000	1.5850
P25	7.4825	4.8066	5.8517
P75	9.0830	6.9411	7.5859
Max	11.1740	10.4899	8.9020

### Pairwise Comparisons

Test	Pre-AI vs Recent	Pre-AI vs Historical	Historical vs Recent (C-006)
$\Delta$ (mean)	0.6762 (11.7%)	2.5668 (44.4%)	-1.8907 (-22.6%)
Cohen's d	0.420 (small)	1.734 (very large)	-1.385 (very large)
Cliff's $\delta$	0.250 (small)	0.817 (large)	-0.688 (large)
U	3748.5	915.0	1559.0
z	3.058	9.981	8.408
p (raw)	0.002229	0.000000	0.000000
BH q	0.006687	0.000000	—
BH significant	<b>PASS</b>	<b>PASS</b>	—
Bootstrap 95% CI	[0.2400, 1.1230]	[2.1665, 2.9758]	[-2.2715, -1.5292]
CI crosses zero	No	No	No

**Primary Verdict (Pre-AI Early vs Recent): SIGNIFICANTLY DIFFERENT**

**Maturity-Control Verdict: AI EFFECT**

**Implication:** C-006 H3 (FALSIFIED) reflects a genuine AI-era structural shift. Enforcement candidate SURVIVES.

**H4b: m4\_duplicatePurpose**

**Claim:** Pre-AI early-stage repos have similar duplicate-purpose directory counts to recent repos.

**Resolves:** If similar → C-006 H4 falsification was a maturity effect.

**C-006 reference:** H4 – FALSIFIED (d = -0.994)

Statistic	Historical	Pre-AI Early	Recent
n	100	100	100
Mean	9.9400	1.3900	2.7300
Trimmed Mean (20%)	7.9000	0.2833	1.4667
Median	6.5000	0.0000	1.0000
Std Dev	9.4343	3.4812	4.0298
IQR	14.0000	1.0000	3.0000
Min	0.0000	0.0000	0.0000
P25	2.0000	0.0000	0.0000
P75	16.0000	1.0000	3.0000
Max	42.0000	22.0000	24.0000

**Pairwise Comparisons**

Test	Pre-AI vs Recent	Pre-AI vs Historical	Historical vs Recent (C-006)
Δ (mean)	1.3400 (96.4%)	8.5500 (615.1%)	-7.2100 (-72.5%)
Cohen's d	0.356 (small)	1.202 (very large)	-0.994 (large)

Test	Pre-AI vs Recent	Pre-AI vs Historical	Historical vs Recent (C-006)
Cliff's $\delta$	0.284 (small)	0.746 (large)	-0.557 (large)
U	3577.5	1271.5	2216.5
z	3.476	9.110	6.801
p (raw)	0.000510	0.000000	0.000000
BH q	0.003057	0.000000	—
BH significant	<b>PASS</b>	<b>PASS</b>	—
Bootstrap 95% CI	[0.3100, 2.3500]	[6.6300, 10.5500]	[-9.2500, -5.2000]
CI crosses zero	No	No	No

**Primary Verdict (Pre-AI Early vs Recent):** SIGNIFICANTLY DIFFERENT

**Maturity-Control Verdict:** AI EFFECT

**Implication:** C-006 H4 (FALSIFIED) reflects a genuine AI-era structural shift. Enforcement candidate SURVIVES.

### H7b: m7\_fileToDirRatio

**Claim:** Pre-AI early-stage repos have similar file-to-directory ratio to recent repos.

**Resolves:** Tests whether the one supported structural candidate holds under maturity control.

**C-006 reference:** H7 — SUPPORTED (d = -0.265)

Statistic	Historical	Pre-AI Early	Recent
n	100	100	100
Mean	7.6884	8.6818	5.5495

Statistic	Historical	Pre-AI Early	Recent
Trimmed Mean (20%)	5.7016	5.0501	4.4375
Median	5.4660	4.9650	4.0335
Std Dev	10.4401	16.2272	4.5699
IQR	4.1140	4.3038	3.0745
Min	1.2690	0.8570	1.4000
P25	3.8165	3.2967	3.1723
P75	7.9305	7.6005	6.2468
Max	97.6280	140.0000	33.0000

### Pairwise Comparisons

Test	Pre-AI vs Recent	Pre-AI vs Historical	Historical vs Recent (C-006)
$\Delta$ (mean)	-3.1323 (-36.1%)	-0.9934 (-11.4%)	-2.1389 (-27.8%)
Cohen's d	-0.263 (small)	-0.073 (negligible)	-0.265 (small)
Cliff's $\delta$	-0.111 (negligible)	0.094 (negligible)	-0.222 (small)
U	4446.5	4531.5	3888.5
z	1.352	1.145	2.716
p (raw)	0.176242	0.252322	0.006611
BH q	0.211491	0.252322	—
BH significant	<b>FAIL</b>	<b>FAIL</b>	—
Bootstrap 95% CI	[-6.7737, -0.3003]	[-4.8824, 2.4648]	[-4.6616, -0.1959]
CI crosses zero	No	Yes	No

**Primary Verdict (Pre-AI Early vs Recent): NOT SIGNIFICANTLY DIFFERENT**

**Maturity-Control Verdict: MATURITY EFFECT**

**Implication:** C-006 H7 (SUPPORTED) was a maturity effect. Enforcement candidate INVALID.

**H9b: subTreeCV**

**Claim:** Pre-AI early-stage repos have higher sub-tree CV than recent repos (less uniform, closer to historical).

**Resolves:** Tests whether the strongest enforcement candidate ( $d = -0.946$ ) survives maturity control.

**C-006 reference:** H9 – SUPPORTED ( $d = -0.946$ )

Statistic	Historical	Pre-AI Early	Recent
n	100	100	100
Mean	1.9644	1.0591	1.3215
Trimmed Mean (20%)	1.9831	1.0949	1.3347
Median	2.0323	1.1601	1.3153
Std Dev	0.6990	0.6422	0.6591
IQR	1.0294	0.8080	0.7667
Min	0.5194	0.0000	0.0000
P25	1.4095	0.6363	0.9499
P75	2.4389	1.4443	1.7167
Max	4.1176	2.9226	2.9737

**Pairwise Comparisons**

Test	Pre-AI vs Recent	Pre-AI vs Historical	Historical vs Recent (C-006)
$\Delta$ (mean)	0.2624 (24.8%)	0.9053 (85.5%)	-0.6430 (-32.7%)
Cohen's d	0.403 (small)	1.349 (very large)	-0.946 (large)

Test	Pre-AI vs Recent	Pre-AI vs Historical	Historical vs Recent (C-006)
Cliff's $\delta$	0.225 (small)	0.648 (large)	-0.489 (large)
U	3873.5	1759.5	2554.5
z	2.752	7.918	5.975
p (raw)	0.005915	0.000000	0.000000
BH q	0.011829	0.000000	—
BH significant	PASS	PASS	—
Bootstrap 95% CI	[0.0839, 0.4382]	[0.7193, 1.0886]	[-0.8279, -0.4538]
CI crosses zero	No	No	No

**Primary Verdict (Pre-AI Early vs Recent):** SIGNIFICANTLY DIFFERENT

**Maturity-Control Verdict:** MIXED — PRE-AI IS DISTINCT FROM BOTH

**Implication:** Pre-AI early differs from both historical and recent. The metric tracks something other than simple maturity or AI influence. Enforcement candidate requires further investigation.

### §3 — Three-Way Cohort Profiles

Metric	Historical (mean)	Pre-AI Early (mean)	Recent (mean)	Pre-AI closer to
m1_maxDepth	8.9600	3.8800	4.4300	Recent
m1_meanDepth	4.0951	2.1275	2.3819	Recent
m2_rootFileRatio	0.0166	0.2056	0.1418	Recent
m3_namingEntro	8.3481	5.7813	6.4575	Recent

Metric	Historical (mean)	Pre-AI Early (mean)	Recent (mean)	Pre-AI closer to
m4_duplicatePur	9.9400	1.3900	2.7300	Recent
m5_templateFing	0.6033	0.3917	0.5750	Recent
m6_orphanDirRa	0.3194	0.2598	0.3381	Historical
m7_fileToDirRatic	7.6884	8.6818	5.5495	Historical
rootConfigCount	10.5400	4.0900	5.6400	Recent
subTreeCV	1.9644	1.0591	1.3215	Recent

#### §4 – Correction Robustness (Primary Comparisons)

Hypothesis	p (raw)	BH q	BH Sig	Holm Sig	Bonf Sig	Primary Verdict
H1b	0.014999	0.022499	PASS	PASS	FAIL	SIGNIFICANTLY DIFFERENT†
H2b	0.179388	0.179388	FAIL	FAIL	FAIL	NOT SIGNIFICANTLY DIFFERENT
H3b	0.002229	0.006687	PASS	PASS	PASS	SIGNIFICANTLY DIFFERENT
H4b	0.000510	0.003057	PASS	PASS	PASS	SIGNIFICANTLY DIFFERENT
H7b	0.176242	0.211491	FAIL	FAIL	FAIL	NOT SIGNIFICANTLY DIFFERENT
H9b	0.005915	0.011829	PASS	PASS	PASS	SIGNIFICANTLY DIFFERENT

#### §5 – Implications for v1.8 Enforcement Design

##### Mixed results – metric-by-metric triage required

The picture is mixed. Some C-006 findings are maturity effects; others are genuine AI signals.

##### Metrics confirmed as MATURITY EFFECTS (enforcement INVALID):

- m2\_rootFileRatio – H2 (FALSIFIED, d=0.829)
- m7\_fileToDirRatio – H7 (SUPPORTED, d=-0.265)

**Metrics confirmed as AI EFFECTS (enforcement SURVIVES):**

- **m1\_maxDepth** – H1 (FALSIFIED,  $d=-1.416$ ), maturity-controlled  $d=0.208$
- **m3\_namingEntropy** – H3 (FALSIFIED,  $d=-1.385$ ), maturity-controlled  $d=0.420$
- **m4\_duplicatePurpose** – H4 (FALSIFIED,  $d=-0.994$ ), maturity-controlled  $d=0.356$

**Mixed / requires further investigation:**

- **subTreeCV** – H9: Pre-AI early differs from both cohorts

**§6 – Limitations**

1. **Star-count proxy:** “Stars 50-2000 today” is a rough proxy for “early-stage at creation.” Some 2018-2019 repos with 2000 stars may now be mature. However, the star ceiling (2000) excludes mega-projects that dominate the historical cohort.
2. **Pre-AI early star clustering:** All 100 pre-AI early repos cluster at ~1965–2000 stars (min 1965, max 2000, median 1982) due to GitHub API `sort=stars&per_page=100` selecting from the ceiling of the 50–2000 range. Results may not generalise to lower-popularity repos in the same era. Stars were a quality filter (exclude toy repos and mega-projects), not a controlled variable – neither existing cohort was star-controlled, so adding a star-uniform third cohort would introduce a new asymmetry rather than remove one.
3. **Temporal gap:** The pre-AI cohort is from 2018-2019 (5-6 years old today), while recent is from Jan-Mar 2026. Ecosystem-wide changes (not just AI) may have shifted structural norms.
4. **Language/domain confounds:** Star-sorted selection may produce different language/domain mixes across cohorts. This is not controlled.
5. **Maturity ≠ age alone:** A 2018 repo with 100 stars may still receive active AI-assisted contributions in 2025-2026, introducing AI effects into the “pre-AI” cohort.
6. **Same limitations as C-006:** API tree truncation, vendor filtering, template signature coverage, no content analysis, single timepoint.

**§7 – Constitutional Record**

Item	Value
Campaign	C-006b Maturity-Controlled Structural Forensics
Parent campaign	C-006 Structural Forensics Sweep
Directed by	Änti (adversarial audit)

Item	Value
Constitutional source	D-66 (measurement before enforcement)
Version arc	v1.8 (measurement only)
Hypotheses tested	6
MATURITY EFFECT	2
AI EFFECT	3
MIXED	1
C-006 enforcement candidates tested	2
Enforcement candidates surviving	0
H8/H9 verification	CLOSED – one coincidence (rank-sum), no bug
Substrate modifications	Zero (D-68 compliance)
Total repos scanned	300
Scanner version	1.0.0
Engine version	1.0

### Cohort Precondition Verification

Constraint	Result
Zero overlap with C-006 200 repos	<b>0 overlap</b> <b>PASS</b>
Creation dates 2018-01-01 to 2019-12-31	<b>All 100 in range</b> (earliest 2018-01-05, latest 2019-12-15) <b>PASS</b>
Star count 50–2000	<b>All 100 in range</b> (min 1965, max 2000, median 1982) <b>PASS</b>

*The Änti asks questions that make the substrate stronger. This campaign exists because one question – “is this maturity or AI?” – could not be answered without measurement.*