

RAY MANCINI

ESSAYS

SECOND EDITION | DEVELOPMENT FRAMEWORK V2

MASTER CIVILISATIONAL SYSTEMS MAP

SECOND EDITION

*From coordination to concentration, power, stewardship
and extraction.*

The development architecture for turning the first edition into
a testable framework and diagnostic instrument.



CONTENTS

0. What this version changes, and why.....2

1. Purpose and the level of claim.....4

2. Where Edition Two sits in existing scholarship.....5

3. First-edition findings carried forward.....7

4. One canonical model.....8

5. The core instrument: predictors separated from outcomes.....9

6. Measurement and coding protocol.....11

7. Testing design.....12

8. The fractal scale model: a test, not an assumption.....13

9. Human agency, the frontier and AI.....14

10. Parsimony: core instrument and reference layer.....15

11. Revised structure.....16

12. Roadmap with quality gates.....17

13. Central hypothesis, strengthened.....18

0. WHAT THIS VERSION CHANGES, AND WHY

The draft framework is a genuine advance on the first edition. Its central reframing, from progressive extraction to a struggle between coordination capacity and accountability, is stronger and more defensible. Its commitments to adversarial testing throughout, to prediction, and to avoiding conspiracy and anti-progress narratives are exactly right.

Reviewed adversarially, however, it has eight weaknesses that a capable critic would find quickly. This version fixes each one.

#	Weakness in the draft	Why it matters	Fix in this version
1	Circularity. The extraction-risk relationship uses accountability, voice and reciprocity as predictors, but these are close to the definition of non-extraction.	A model that predicts extraction from the absence of its own opposite is true by definition and cannot be tested.	Predictors and outcomes separated. Extraction defined by independent, observable outcome measures (section 5).
2	Four different engines. The core sequence appears four times in different orders (concentration before dependency in one, after it in another).	Readers and coders will apply different models to the same case.	One canonical model, stated once, with defined states rather than a fixed order (section 4).
3	Linearity returns. Every sequence starts with need and coordination.	Many systems began as predation (Congo Free State, Atlantic slave trade). Edition One rejected determinism; the draft reintroduces it.	Three entry routes: coordinative, predatory and conversion (section 4.2).
4	First-edition findings dropped. Institutional conversion, the long-horizon route to restraint, selection for extraction, reform decay, decommodification of persons and structural coercion are missing.	These were the findings that survived adversarial testing. Losing them weakens the theory and wastes the first edition's best work.	Carried-forward findings table (section 3).
5	No literature positioning. "Chokepoint", "extractive institutions" and proxy capture all have established scholarly owners.	Without positioning, reviewers will read the work as unaware of, or claiming credit for, existing ideas.	Positioning against 14 bodies of work, stating what Edition Two adds (section 2).
6	Prediction without design. The predictive layer lists requirements but no sampling frame, coding reliability, pre-registration or rival models.	Without these, "out-of-sample testing" cannot actually be carried out or trusted.	Full measurement and testing protocol (sections 6 and 7).
7	Too many overlapping lists. Seventeen foundations, six functions, eight chokepoint variables, nine risk variables, eight tests and fourteen countervailing forces overlap heavily.	Complexity without parsimony repeats the first edition's "23 layers" problem, which the draft itself set out to fix.	Core instrument reduced to eight predictors and five outcome measures; everything else becomes reference (sections 5 and 10).

#	Weakness in the draft	Why it matters	Fix in this version
8	Fractal model untested and close to the author's own philosophy. Individual-level habit and civilisational systems are placed on one ladder.	Risk of analogy presented as finding, of the ecological fallacy, and of the framework confirming Fractal Harmony rather than testing it.	Explicit test protocol, levels-of-analysis safeguards and falsification conditions (section 8).

1. PURPOSE AND THE LEVEL OF CLAIM

Edition Two keeps the draft's central question:

How does coordination become concentration, how does concentration become power, and what determines whether power remains accountable to the humans and environments it depends upon?

One discipline is added: **Edition Two should call itself a framework until its predictions have been tested, and a theory only for the parts that survive.** Titling it "Civilisational Systems Theory" before out-of-sample testing would invite the objection that the work claims more than it has shown. The adversarial stage of Edition One is the model here: claims should be sized to evidence.

Three products, not one book

The draft rightly warns against "another enormous database that cannot be used". The remedy is to separate the work into three products with different readers:

Product	Contents	Reader	Indicative length
A. The framework text	Question, definitions, model, mechanics, evidence, tests, contemporary application.	Serious general readers, scholars, policy people.	About 120 pages
B. The diagnostic toolkit	A four-page scorecard and a coding manual with anchored scales and worked examples.	Anyone analysing an institution, technology or business.	About 20 pages
C. The case library	All coded cases with sources, confidence ratings and coder notes, as a spreadsheet and web resource.	Researchers, critics and replicators.	Open-ended

Product B is what will make the work used. Product C is what will make it credible, because anyone can check and dispute a coding.

2. WHERE EDITION TWO SITS IN EXISTING SCHOLARSHIP

Several of Edition Two's signature concepts already have scholarly owners. Engaging them directly is a strength: it shows the work knows its field, and it clarifies what is genuinely new. The framework text should include a short positioning chapter based on the table below.

Work	Overlap with Edition Two	What Edition Two must answer or add
Ostrom, Understanding Institutional Diversity (2005): the Institutional Analysis and Development framework	A general framework for analysing rules, action situations and outcomes across institutions.	Why a new framework rather than extending IAD? Answer: Edition Two focuses on the dynamic from coordination to concentration and power, across all of history and at planetary scale.
Acemoglu and Robinson, Why Nations Fail (2012)	Uses "extractive" versus "inclusive" institutions as its central distinction.	Define "extraction" distinctly and credit the usage. Edition Two adds chokepoint mechanics and non-state, technological and ecological cases.
North, Wallis and Weingast, Violence and Social Orders (2009)	Limited-access versus open-access orders; elites controlling rents.	Engage the rent-control logic; test whether chokepoint variables add predictive value beyond access-order classification.
Giblin and Doctorow, Chokepoint Capitalism (2022)	Uses "chokepoint" for concentrated control of creative and digital markets.	Credit the term's popular usage; Edition Two generalises it historically and adds counterpower and open-chokepoint cases.
Farrell and Newman, "Weaponized Interdependence" (International Security, 2019)	Chokepoints in global networks as instruments of state coercion.	Integrate network-centrality logic into the concentration variable.
Wu, The Master Switch (2010)	The "Cycle": information industries move from open to closed.	Directly relevant to the chokepoint and renewal cycles; test whether the Cycle generalises.
Olson, "Dictatorship, Democracy, and Development" (1993)	The stationary bandit: rulers with long horizons restrain extraction.	Already a first-edition finding; make it a formal predictor (controller horizon).
Hirschman, Exit, Voice, and Loyalty (1970)	Exit and voice as correction mechanisms.	Core predictors; credit explicitly.
Goodhart (1975); Campbell (1979); Korzybski (1933)	Measures degrading when targeted; "the map is not the territory".	Credit proxy capture and map-territory inversion to these sources; Edition Two's contribution is tracing it across civilisational systems.
Scott, Seeing Like a State (1998)	Legibility as a state capability.	Credit the concept; Edition Two extends legibility to markets, platforms and biology.
Polanyi (1944); Zuboff (2019)	Fictitious commodities; behavioural surplus.	Position the frontier-of-legibility thesis between them.
Tainter (1988); Turchin, structural-demographic theory	Complexity costs; cycles of elite overproduction and instability.	Rival explanations for failure dynamics; test against them.

Work	Overlap with Edition Two	What Edition Two must answer or add
Meadows, " Leverage Points " (1999)	Where to intervene in a system.	Link the diagnostic to intervention points.
Seshat Global History Databank; Commodity Frontiers Initiative	Large coded historical datasets.	Use as sampling frames and data sources, not only as related work.

What Edition Two can honestly claim as its contribution: a single framework that follows the same dynamic (coordination, concentration, chokepoint, power, and the two paths) across all of human history, across scales, and into biological and digital systems; that treats counterpower as seriously as power; and that is designed to be tested and falsified.

3. FIRST-EDITION FINDINGS CARRIED FORWARD

These findings survived Edition One's adversarial stage. The draft framework omits or blurs several of them. Each should be built into Edition Two explicitly.

Finding	Status in the draft	Where it belongs in Edition Two
Institutional conversion: extraction most often arises by redirecting an existing institution (Inca mit'a to Potosí mita).	Missing	Entry route three of the engine (section 4.2).
Two routes to restraint: accountability to cost-bearers, or internalisation by long-horizon controllers (Tokugawa forests, Qing granaries). The second is real but fragile.	Missing (accountability is the only path)	Predictor 8, controller horizon (section 5).
Selection for extraction: where costs are invisible and unpriced, competition selects for externalisation without design.	Partly present under Incentive	Named mechanism in the failure dynamics.
Reform decay: balancing institutions weaken as the crisis that produced them is forgotten.	Missing; the renewal cycle has no decay	Add decay to the renewal cycle.
Decommodification of persons, and structural coercion: persons left the market; their labour did not.	Missing from the frontier shift	Frontier chapter: the frontier moves in both directions.
Scale matching: extraction is contained where counterpower operates at comparable scale.	Present (central hypothesis)	Predictor 7; strongest current support is the planetary boundaries case.
Closed-loop legibility is new; behavioural power is contested.	Present as capability multipliers	Keep, with the evidence status stated.
All fourteen primitives existed by the end of the Bronze Age.	Implied	State explicitly: the engine describes ancient dynamics, not a modern development.
Open chokepoints (protocols, libraries, commons) falsified the strong chokepoint cycle.	Present in principle	Required negative cases in every test.

4. ONE CANONICAL MODEL

4.1 The Civilisational Engine, stated once

The draft gives four versions of the core sequence. Edition Two should state the model once and treat its components as **states a system can occupy**, not steps it must pass through in order:

Need → Coordination → Legibility → Concentration → Dependency → Chokepoint → Power

Power → Accountability or long-horizon internalisation → Stewardship → Resilience

Power → Proxy capture and externalisation → Extraction → Resistance → Reform, collapse or entrenchment

Surrounding the model are the five capability multipliers: **scale, speed, granularity, continuity and adaptivity**. The order above is the typical path, not a law. Coders record which states a case occupied and in what order; departures from the typical order are data, not errors.

4.2 Three entry routes

Not every system begins as coordination. Edition Two should code how each system entered the engine:

Entry route	Description	Examples from Edition One
Coordinative	Built to meet a need; concentration and extraction emerge later.	Irrigation systems, platforms, credit.
Predatory	Designed for extraction from the start; coordination serves the extractor.	Congo Free State, Atlantic slave trade, Aztec tribute.
Conversion	An existing institution is captured and redirected.	Inca mit'a into Potosí mita; waqf into tax shelter.

4.3 Loops, not lines

Both cycles in the draft should be drawn as loops. The renewal cycle needs a decay arrow (renewal to complacency to capture), and the failure cycle needs its three exits (reform, collapse, entrenchment). The historical record shows systems moving round these loops repeatedly: welfare states decommodified and then partially recommodified within a century.

5. THE CORE INSTRUMENT: PREDICTORS SEPARATED FROM OUTCOMES

This is the most important change. The draft's extraction-risk relationship mixes causes with the thing being predicted. To be testable, the model must measure predictors and outcomes **independently**, ideally by different coders.

5.1 Eight predictors

#	Predictor	Question	Example indicators
1	Flow concentration	How much of an essential flow passes through this point?	Market share, network centrality, share of supply.
2	Switching cost	What does it cost to go around it?	Lock-in, data portability, legal barriers to exit.
3	Controller incentive	Is the controller rewarded for taking more?	Ownership form, revenue model, pay structure.
4	Information asymmetry	Can those affected see how it works?	Disclosure rules, opacity of terms or algorithms.
5	Voice	Can those affected change the rules?	Representation, voting, litigation access; V-Dem indices for states.
6	Exit	Can those affected leave at tolerable cost?	Legal and practical exit barriers.
7	Counterpower scale	Does a balancing force operate at comparable scale?	Jurisdiction of regulators relative to system reach.
8	Controller horizon	Does the controller expect to bear long-run costs?	Tenure, succession, ownership duration.

5.2 Five outcome measures of extraction

Extraction is defined by what happens, not by the absence of accountability:

#	Outcome	Meaning	Example measures
1	Surplus capture	Share of value taken by controllers beyond what is returned.	Margins above competitive levels, rent share, tribute or tax rates, extraction ratio.
2	Externalised cost	Costs pushed onto parties outside the decision.	Pollution, health costs, ecological damage per unit of output.
3	Cost-bearer welfare	What happens to those who depend on the system.	Mortality, income, health, wellbeing trends.
4	Coercion	Penalties for refusal or exit.	Legal or physical sanctions, destitution risk.
5	Proxy divergence	Gap between the measure optimised and the need it tracks.	Metric rising while the underlying outcome stagnates or falls.

5.3 The eight governance tests, repositioned

The eight tests (consent, exit, voice, reciprocity, transparency, internalisation, reversibility, proportionality) remain as the **evaluative** layer: the normative judgement of whether a system is fair. They should not double as predictors. Keeping evaluation separate from prediction lets readers with different moral frameworks accept the empirical findings while disputing the judgement.

5.4 The diagnostic relationship

Restated with predictors and outcomes separated, and still framed as a hypothesis, not a law:

The probability and magnitude of extraction outcomes rise with flow concentration, switching cost, controller incentive and information asymmetry, and fall with voice, exit, counterpower scale and controller horizon.

6. MEASUREMENT AND CODING PROTOCOL

- **Anchored scales.** Each predictor and outcome is scored 0 to 3, with a written anchor and a worked example for every score. Without anchors, two coders will score the same case differently.
- **Codebook first.** Definitions, anchors and decision rules are fixed and versioned before recoding begins. Changes after coding starts are logged.
- **Two independent coders per case,** at least for the validation sample, with reliability measured by Krippendorff's alpha. A common standard treats 0.8 or above as reliable and 0.667 as the minimum for tentative conclusions.
- **Blind outcome coding.** Outcome coders do not see predictor scores, and vice versa, so expectations cannot shape the result.
- **Evidence and confidence per cell.** Every score carries a source, a confidence tier, and a note on what evidence would change it, as the draft's case template already requires.
- **Source hierarchy.** Primary sources and established datasets first (Seshat, V-Dem, World Inequality Database, ILO, planetary boundary assessments), secondary scholarship second.

7. TESTING DESIGN

The draft names out-of-sample testing but not how to do it. A credible design has six elements:

1. **Construction sample.** The 44 Edition One cases, recoded under the new codebook. These build the model; they cannot test it.
2. **Validation sample.** A new set of cases, for example 60, drawn at random from a defined sampling frame: Seshat polities for pre-modern systems; a stratified list of sectors and institutions for modern ones. Random selection answers Edition One's biggest weakness, purposive case selection.
3. **Pre-registration.** Predictions for each validation case are written down and time-stamped publicly (for example on the Open Science Framework) before outcomes are coded.
4. **Rival models.** The framework must beat simpler alternatives to justify its complexity: concentration alone; regime type; Acemoglu and Robinson's inclusive/extractive classification. If it does not, that is a finding.
5. **Reported errors.** False positives (predicted extraction that did not occur) and false negatives are published with the hit rate, not hidden.
6. **External review.** At least three domain experts (for example a historian, an economist and an ecologist) review the codebook and a sample of codings before publication.

Honest scale note: a random 60-case validation with double coding is a substantial research project. If resources do not allow it, Edition Two should say plainly which claims are tested and which remain hypotheses, rather than implying a test that was not done.

8. THE FRACTAL SCALE MODEL: A TEST, NOT AN ASSUMPTION

The question of whether the same dynamics recur from individual to planetary scale is worth asking. It is also the part of Edition Two most exposed to criticism, for two reasons: analogy is easily mistaken for evidence, and the idea sits close to the author's own Fractal Harmony framework. Edition One kept the research independent of that framework precisely so it could test ideas rather than confirm them. Edition Two should keep that discipline.

Safeguards

- **Same variables, same predictions.** A pattern counts as recurring across scales only if the same predictors, measured the same way, predict the same outcomes at each scale.
- **Levels of analysis.** Individual habit and dependency are psychological processes; institutional concentration is structural. Treating them as one mechanism risks the ecological fallacy. The text should say explicitly where the analogy holds and where it is only metaphor.
- **Falsification condition.** Name in advance the result that would show the pattern does not recur: for example, predictors that work at the institutional scale but not at the relationship scale.
- **Negative scales.** Report the scales at which the pattern fails, not only those where it holds.
- **Separate chapter, separate status.** Present the fractal model as an exploratory hypothesis, with a confidence tier, not as part of the core model.

9. HUMAN AGENCY, THE FRONTIER AND AI

Agency

The draft's agency section is strong. Add the first edition's uncomfortable finding: **extraction is not only elite**. Homeowners restricting housing supply, distributional coalitions and broad publics voting for costs to fall on others or on future generations are extractors too. Coding "who extracts" should include majorities and future-cost transfers.

The frontier of legibility

The draft's reframing, a frontier of legibility and intervention rather than of commodification, is right. Two additions: the frontier moves **in both directions** (persons, votes, offices and organs left the market), and non-human animals and future generations should be named as parties, not only as externalities.

AI as a test case

Keep the draft's open question: does AI create new primitives, or amplify old ones? Add three requirements:

- **Measurable indicators:** concentration of compute and frontier-model development, switching costs for model users, data provenance and consent, and the scale of AI governance relative to AI deployment.
- **Disclosed conflict of interest:** if AI systems assist the research, the AI chapter is written about the category of system that helped produce it. Human expert review of that chapter should be mandatory.
- **A dated snapshot:** AI is changing quickly, so conclusions should carry a date and be framed as a snapshot rather than a verdict.

10. PARSIMONY: CORE INSTRUMENT AND REFERENCE LAYER

The draft rightly aims to reduce the 23-layer architecture. It then adds almost as many new lists. The solution is two tiers:

Tier	Contents	Used for
Core instrument	Eight predictors, five outcome measures, entry route, capability multipliers, confidence tier.	Every case, every test, the diagnostic toolkit.
Reference layer	The 23 Edition One layers, 14 primitives, six system functions, 14 countervailing forces, eight governance tests, five progress paradoxes.	Deep qualitative analysis of individual cases and the narrative chapters.

A good test of parsimony: a trained reader should be able to score a new system with the core instrument in under an hour.

11. REVISED STRUCTURE

The draft proposes twelve parts. Eight is tighter and follows the logic of question, model, evidence, test and application. Adversarial boxes appear in every part.

Part	Title	Contents
I	The Question and Its Limits	What human systems are for; the level of claim; what the work will not become.
II	Foundations	Definitions, positioning against existing scholarship, carried-forward findings.
III	The Civilisational Engine	The canonical model, entry routes, two paths, loops and capability multipliers.
IV	Mechanics of Power and Failure	Chokepoints, proxy capture and map-territory inversion, the frontier of legibility, the progress paradox.
V	Counterpower and Renewal	Balancing forces, scale matching, long-horizon stewardship, reform decay, open chokepoints.
VI	The Evidence	The 44 cases recoded; the validation sample and its results, including failures.
VII	The Present	Contemporary systems and AI as dated snapshots; the fractal scale hypothesis as an exploratory chapter.
VIII	The Diagnostic	The instrument, how to use it, and a research agenda.
Appendices		Codebook, case files, adversarial log, rival-model results, bibliography.

12. ROADMAP WITH QUALITY GATES

The draft's roadmap is sound in sequence. Each phase should end with a gate: a condition that must be met before the next phase begins.

Phase	Work	Gate before moving on
1. Definitions	Lock definitions, entry routes, predictors and outcomes.	Every term has a definition, inclusion and exclusion criteria, and an indicator.
2. Codebook	Anchored scales and worked examples.	Two coders pilot five cases; disagreements resolved and rules updated.
3. Recode Edition One	All 44 cases under the new codebook.	Reliability measured and reported; weak variables revised or dropped.
4. Positioning	Literature chapter.	Each signature concept credited and its addition stated.
5. Pre-registration	Predictions for the validation sample filed.	Public, time-stamped record exists.
6. Validation	Code the new sample; compare with rivals.	Results reported, including false positives and negatives.
7. Contemporary and AI	Apply the tested instrument.	Human expert review of the AI chapter.
8. External review	Expert critique of codebook and sample codings.	Responses logged in the adversarial appendix.
9. Publication	Framework text, toolkit and case library.	Each claim labelled: conceptual, historical, tested or speculative.

13. CENTRAL HYPOTHESIS, STRENGTHENED

The draft's central hypothesis is kept, with three additions (in bold) that incorporate the first edition's findings and make it testable:

*Human civilisation develops systems primarily to coordinate needs and capabilities at increasing scales, **though some systems begin as predation and others are converted from their original purpose.** Successful coordination creates infrastructure, information, dependencies and concentrations of flow. Where those concentrations become chokepoints and the people or environments bearing the costs lack effective voice, exit, transparency or accountability, coordination can progressively become extraction. Where countervailing forces operate at comparable scale, **or where controllers expect to bear the long-run costs themselves,** concentration can instead remain accountable and produce stewardship, resilience and shared benefit. **Both outcomes are reversible: stewardship decays without renewal, and extraction can be reformed.***

The draft's closing line stands, and is stronger for the additions:

The history of civilisation may be understood not simply as a history of progress or exploitation, but as an ongoing struggle between the expansion of coordination capacity and the capacity to keep the power created by that coordination accountable to the systems it serves.

Additional sources referenced in this framework

- Campbell, D. T. (1979). Assessing the impact of planned social change. Evaluation and Program Planning.
- Farrell, H. and Newman, A. L. (2019). Weaponized interdependence: how global economic networks shape state coercion. International Security 44(1).
- Giblin, R. and Doctorow, C. (2022). Chokepoint Capitalism. Beacon Press.
- Korzybski, A. (1933). Science and Sanity.
- Krippendorff, K. (2004). Content Analysis: An Introduction to Its Methodology, 2nd edition. Sage.
- Meadows, D. (1999). Leverage Points: Places to Intervene in a System. Sustainability Institute.
- North, D. C., Wallis, J. J. and Weingast, B. R. (2009). Violence and Social Orders. Cambridge University Press.
- Ostrom, E. (2005). Understanding Institutional Diversity. Princeton University Press.
- Wu, T. (2010). The Master Switch. Knopf.
- Other works as listed in the first edition's consolidated bibliography.

RAY MANCINI

Visionary Educator · Coach · Author · Founder

Perth, Western Australia

RAYMANCINI.AU