# SY-07 Cross-cutting principles (meta-prompt, run with the library attached)

The permanent loss of industrial supply chains and the reach of the centralized state represents a hard reset on the energetic subsidies that have financed globalized institutional complexity. Joseph Tainter, in his 1988 work *The Collapse of Complex Societies*, established that complexity in a social context—measured by layers of government, economic specialization, and military structures—operates on a curve of diminishing marginal returns[1]. As energy inputs become scarce, the overhead costs of maintaining sprawling bureaucracies outpace their benefits, forcing societies to shed complexity rapidly to survive[1].

In the aftermath of such a collapse, human communities must rely on older social software: the cultural algorithms of self-governance developed across deep time. This report provides an exhaustive, rigorous analysis of the governance arrangements that have historically managed the tensions between egalitarian survival, resource allocation, and the ever-present threat of authoritarian capture by individuals exhibiting dark-triad traits (narcissism, Machiavellianism, psychopathy). By examining empirical data, ethnographic records, and historical case studies, this document distills the cross-cutting principles of self-governance. It systematically applies a "Scale Ledger" and a "Capture Test" to each arrangement, deliberately avoiding the naturalistic fallacy—recognizing that ancient systems were often deeply exclusionary, and that small-scale communities can be profoundly oppressive.

## Deep-Time Governance Arrangements

### Reverse Dominance Hierarchies in Foraging Bands

The baseline social organization of human evolutionary history is the egalitarian foraging band, which operated effectively for tens of thousands of years[3]. Rather than lacking a hierarchy, these groups maintained an inverted one. Anthropologist Christopher Boehm (1993, 1999) documented that in these societies, the weak systematically combined forces to actively dominate the strong, deliberately preventing the accumulation of coercive authority[4].

According to the participants' own accounts, these practices were consciously deployed to prevent arrogance. Informants in Kalahari hunter-gatherer societies explicitly stated the intent of their customs regarding the distribution of meat. When a hunter made a large kill, custom dictated he downplay his achievement, stating, "Ah, I'm no good for hunting"[3]. The community actively insulted the meat, calling it worthless. As one informant noted, "When a young man kills much meat, he comes to think of himself as a chief or a big man... We refuse one who boasts, for someday his pride will make him kill somebody"[3].

However, the historical and ethnographic record demonstrates that this egalitarianism was maintained through continuous, high-tension social friction and violence. The regulatory mechanisms escalated gradually from criticism and mockery to ostracism, and ultimately, to

pre-emptive collective execution[3]. In systems like the !Kung, credit for a kill went not to the shooter, but to the owner of the arrow (arrow-swapping), effectively redistributing status across the band[3]. It is critical to note that this egalitarianism rarely applied within the household; Boehm notes that men routinely beat their wives without community consequence[3].

Synthesizing these realities, modern scholarship infers that human egalitarianism is not an automatic, peaceful state of nature, but a deliberate, high-effort political construct. It relies on "socially enforced altruism" and utilizes mechanisms like playfulness to suppress innate mammalian dominance drives[3].

The strongest case against this framework comes from ecological anthropologists who argue that Boehm's evolutionary model is an oversimplification. Critics point out that the reverse-dominance effect holds tightly only in specific ecological settings—namely, mobile foragers without highly defendable resource surpluses. When foragers become sedentary, the effect fades, indicating that reverse dominance was an ecological adaptation rather than a ubiquitous evolutionary default[8].

| Scale Ledger | Status | Reasoning |
|---|---|---|
| Household (4 to 10 people) | Failed | Often exempt from reverse dominance; patriarchal violence frequently went unsanctioned[3]. |
| Hamlet or band (30 to 50) | **Worked** | High face-to-face contact allows constant social monitoring and immediate sanctioning. |
| Village (150 to 500) | Strained | Requires formalizing into councils; informal mockery loses its sharp regulatory power at this scale. |
| Parish or district (1,500 to 5,000) | Never Tried | Face-to-face reputation management cannot scale beyond Dunbar's number without breaking down. |
| Town or watershed (15,000 to 50,000) | Never Tried | Requires formal institutional hierarchies to manage |

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| | | logistics. |
| Region or bioregion (0.5 to 5 million) | Never Tried | Exceeds the capacity of informal social friction. |
| Nation or continent (50 to 500 million) | Never Tried | Incompatible with mass anonymous societies. |
| Planet (8 billion) | Never Tried | Incompatible with mass anonymous societies. |

| Capture Test | Dynamics |
|---|---|
| **Dark-Triad Vector** | A highly skilled, narcissistic hunter attempts to hoard credit for kills, monopolize the women of the band, and use physical intimidation to coerce followers into a personal retinue[3]. |
| **Historical Cases** | Emergence of aggressive political ambitions in sedentary horticultural groups, such as Wape gamblers attempting to refuse to step down when winning[3]. |
| **Resistance Features** | Coordinated, culturally grounded resistance: structured mockery, forced redistribution (arrow-swapping), organized withdrawal of social support, and pre-emptive collective assassination organized by subordinate males[3]. |

## Segmentary Lineage Systems

In societies completely lacking centralized state apparatuses or formal legal judiciaries, kinship networks often scaled to manage conflict and resource distribution over large geographic areas. This model is most famously documented among pastoralists, particularly the Nuer of South Sudan, studied extensively by E.E. Evans-Pritchard in 1940[9].

According to the participants' own accounts, the primary drivers of their social order were absolute loyalty to their cattle herds and the spiritual terror of ancestral wrath. The Nuer stated that cattle were their dearest possession, for which they would gladly risk their lives[12]. Moral logic dictated that to kill a man without confessing and paying restitution put both sides of the

kinship network in spiritual jeopardy, as unpropitiated ghosts would bring catastrophic misfortune[12].

The historical record shows that these societies were highly violent, with blood feuds and livestock raiding forming a constant baseline of activity. Yet, internal tribal raiding was regulated to prevent total mutual destruction. Conflicts were mediated by sacred, non-political figures known as Leopard-skin chiefs. These figures possessed zero coercive authority, no police force, and no ability to dictate a verdict. Instead, they provided temporary sanctuary to murderers and facilitated the negotiation of blood-wealth (cattle transfers) between warring lineages[10].

Modern scholarship, particularly within political economy, infers that this "ordered anarchy" functions essentially as a large-scale, multi-player game theory construct. The threat of endless, mutually assured blood feud, combined with cross-cutting cleavages of kinship, acts as a decentralized deterrent mechanism. Because lineages are segmentary (branching like a tree), any two men fighting might belong to different minor lineages but the same major lineage, meaning their broader kin network will pressure them to settle before the conflict tears the larger alliance apart[12].

The strongest case against the utility of segmentary lineages is that they are inherently xenophobic engines of warfare. Critics argue that while the system minimizes internal violence through cross-cutting kin ties, it fosters extreme in-group loyalty and out-group hostility. As documented by historians and economists, segmentary lineages frequently translate to predatory, unconstrained violence against non-lineage neighbors, preventing broader regional economic integration[12].

| Scale Ledger | Status | Reasoning |
|---|---|---|
| Household (4 to 10 people) | **Worked** | The elementary property-holding unit for cattle[12]. |
| Hamlet or band (30 to 50) | **Worked** | Immediate extended family network providing mutual defense. |
| Village (150 to 500) | **Worked** | Minor lineages bound by frequent intermarriage and shared pasture. |
| Parish or district (1,500 to 5,000) | **Worked** | Major lineages capable of mobilizing hundreds of warriors. |

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| Town or watershed (15,000 to 50,000) | **Worked** | Maximal lineages coordinating regional defense through decentralized alliances[14]. |
| Region or bioregion (0.5 to 5 million) | **Worked** | The Nuer network effectively mobilized against colonial state incursions without a central commander. |
| Nation or continent (50 to 500 million) | Failed | Cannot integrate non-kin populations or sustain industrial legal complexity. |
| Planet (8 billion) | Failed | Fundamentally incompatible with globalist cooperation. |

| Capture Test | Dynamics |
|---|---|
| **Dark-Triad Vector** | A psychopathic actor repeatedly raids neighbors' cattle to build personal wealth, disregarding the risk to his own kin and escalating local feuds[12]. |
| **Historical Cases** | Nuer raiding neighboring Dinka populations without restraint, or internal actors refusing to pay blood wealth, sparking multi-generational feuds[12]. |
| **Resistance Features** | The actor's own kin will forcibly restrain or abandon him, because the entire lineage is held liable for blood vengeance by the victim's kin. The psychological deterrent of the "curse" enforces compliance[12]. |

## Matrilineal and Kin-Bound Property Confederacies

Complex governance can be engineered by permanently separating the ownership of property, the delegation of authority, and the execution of power across gender and clan lines. This sophisticated constitutional engineering is prominently seen in the Haudenosaunee

(Iroquois) Confederacy of North America and the Minangkabau of West Sumatra.
According to the participants' own accounts, these systems were founded on sacred covenants that established peace through strict gendered divisions of power. The Haudenosaunee spoke of the Great Law of Peace, brought by the Peacemaker and Hiyenwatah to end a devastating era of cannibalistic warfare. It established that peace is the active pursuit of justice, and rooted the society in matrilineal descent where women held the land and the political titles[16]. Similarly, ethnographically informed Minangkabau spoke of *matriarchaat*—a custom of matrilineal descent and matrilocal residence that provided the basic framework for their existence and identity, successfully hybridized with Islamic law[19].
The historical record shows that these confederacies demonstrated massive regional resilience. The Haudenosaunee maintained a unified confederacy of five (later six) nations for centuries prior to European colonization. Society was organized into nine cross-cutting clans (Turtle, Bear, Wolf, etc.). Nine Clan Mothers (*Iakoiane*) selected the 50 male chiefs (*Hoyanah*) who sat on the Grand Council, holding the absolute power to recall them[18]. In West Sumatra, the Minangkabau village (*Nagari*) governance model proved highly resilient to Dutch colonial interference, maintaining local autonomy through lineage property control[19].
Modern scholarship infers that these systems prevent tyranny through a deeply entrenched separation of powers and cross-cutting cleavages. The Haudenosaunee clan system ensured that a Bear clan member in the Mohawk nation viewed a Bear clan member in the Seneca nation as family, mathematically disrupting the ability of any single nation to declare war on another[20]. The Minangkabau system provided immense structural resilience; despite being a demographic minority, their robust local governance culture produced 47% of the first generation of Indonesian national leaders in the 1930s, including key socialist, revolutionary, and feminist figures[19].
The strongest case against romanticizing these arrangements comes from post-colonial and feminist historians who point out that matrilineal does not mean matriarchal or peaceful. While women selected leaders and controlled agricultural property, the execution of political and military power remained overwhelmingly male. Furthermore, the Haudenosaunee engaged in brutal, imperialistic warfare against neighboring tribes (the Beaver Wars) and practiced extensive captive-taking and torture, proving that internal democratic confederation does not preclude external imperialism.

| Scale Ledger | Status | Reasoning |
|---|---|---|
| Household (4 to 10 people) | **Worked** | The basic matrilineal hearth unit inside the longhouse[20]. |
| Hamlet or band (30 to 50) | **Worked** | Multiple related families under the direction of a matriarch. |

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| Village (150 to 500) | **Worked** | The communal longhouse structure and Minangkabau *Nagari* tightly managed daily governance[20]. |
| Parish or district (1,500 to 5,000) | **Worked** | The individual Nation (e.g., Seneca, Mohawk) coordinating territorial hunting and defense. |
| Town or watershed (15,000 to 50,000) | **Worked** | The Grand Council coordinated diplomatic and military action across the North American northeast for centuries[16]. |
| Region or bioregion (0.5 to 5 million) | Strained | The confederacy struggled to manage massive geographical expansion and shifting colonial alliances[20]. |
| Nation or continent (50 to 500 million) | Failed | The U.S. assimilation policies (Dawes Act, 1887) and state interventions (Kinzua Dam, 1960) effectively shattered the formal political authority of the system at a continental scale[17]. |
| Planet (8 billion) | Never Tried | Relies on deep cultural hegemony and clan integration incompatible with massive multicultural states. |

| **Capture Test** | **Dynamics** |
|---|---|
| **Dark-Triad Vector** | A charismatic *Hoyanah* attempts to |

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| | centralize military power, bypass the Grand Council, and enrich himself through unsanctioned raids or land sales[18]. |
| **Historical Cases** | The breakdown of the Confederacy in 1777 during the American Revolution. Disease killed key chiefs, the Council gridlocked, and charismatic warlords split the nations (Oneida supporting America, Seneca supporting Britain). This led to the Battle of Oriskany, where the cross-cutting clans failed and Haudenosaunee slaughtered each other[20]. |
| **Resistance Features** | The "Three Strikes" recall rule. The Clan Mother warns the chief three times (witnessed by a female niece, then a male partner). If the chief persists in violent or greedy behavior, he is stripped of his title and his "antlers" of office[18]. |

## Common Pool Resource (CPR) Design Principles

Elinor Ostrom's Nobel-winning research overturned the assumption that the "tragedy of the commons" was inevitable. She demonstrated that communities could successfully self-govern common resources (forests, fisheries, irrigation systems) without privatization or top-down state regulation, relying instead on specific design principles.

According to the participants' own accounts, local farmers, fishers, and foresters did not speak of abstract economic theory, but of highly practical, mundane rules: who is allowed to withdraw water, when they can fish, and the exact fines for taking too much or failing to contribute to maintenance[24].

The historical and empirical record strongly validates these systems. Cox et al. (2010) conducted a massive meta-analysis of 91 empirical studies across all inhabited continents, examining a wide range of water, forest, and fishery CPRs[26]. The studies confirmed that Ostrom's eight design principles heavily correlated with successful resource management and systemic longevity. Sample sizes in these systems varied enormously, from dozens of local families to massive watersheds involving up to 15,000 individuals[25].

Modern scholarship infers that these design principles represent fundamental evolutionary requirements for group efficacy. Success requires clearly defined boundaries (both of the resource and the authorized users), proportional equivalence between costs and benefits, collective-choice arrangements, active mutual monitoring, graduated sanctions, fast conflict resolution, local autonomy, and nested enterprises for larger systems[24].

The strongest case against the universal applicability of Ostrom's principles comes from

scholars analyzing methodological gaps. Barnett et al. (2016) critiqued the empirical base by pointing out "Type 2 cases"—instances where resources were managed successfully despite lacking several of the design principles. Furthermore, critics argue the principles fail when powerful external economic variables, such as global market demand or rapid technological shifts, penetrate the boundary and overwhelm local institutional controls[24].

| Scale Ledger | Status | Reasoning |
|---|---|---|
| Household (4 to 10 people) | Not Needed | Purely internal resource allocation does not require formal CPR design principles. |
| Hamlet or band (30 to 50) | **Worked** | Optimal scale for face-to-face monitoring and informal social sanctioning[25]. |
| Village (150 to 500) | **Worked** | Core operating scale for communal forests, pastures, and small fisheries[24]. |
| Parish or district (1,500 to 5,000) | **Worked** | Successful in medium-scale irrigation systems when managed by localized councils[25]. |
| Town or watershed (15,000 to 50,000) | **Worked** | Functions effectively when organized into "nested enterprises" (federations of smaller CPRs)[24]. |
| Region or bioregion (0.5 to 5 million) | Strained | Highly vulnerable to external market capture and state interference[28]. |
| Nation or continent (50 to 500 million) | Failed | Impossible to maintain boundaries or monitor users without a massive state apparatus. |

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| Planet (8 billion) | Failed | Global commons (oceans, atmosphere) suffer from severe free-rider problems; boundaries are impossible to enforce without a planetary state[25]. |

| Capture Test | Dynamics |
|---|---|
| **Dark-Triad Vector** | A sociopathic farmer systematically withdraws excess water at night, ignoring the negotiated quota, knowing the community relies on trust and is hesitant to escalate[24]. |
| **Historical Cases** | Widespread collapse of fisheries or forests when external commercial actors or aggressive internal defectors penetrate the boundary and ignore local rules, overpowering the monitoring system[27]. |
| **Resistance Features** | Mutual monitoring by resource users themselves (not external police) coupled with graduated sanctions. The first offense yields a warning; repeated offenses result in fines, and terminal defection results in total expulsion from the resource[24]. |

## Classical Sortition and Assembly

The use of lottery (sortition) combined with strict term limits, supermajorities, and financial auditing to manage large-scale civic administration was prominently utilized in classical Athens and the merchant republics of Italy (Florence and Venice).

According to the participants' own accounts, these systems were explicitly designed to prevent the concentration of power. The Athenians stated that democracy was rule by the many, asserting that any citizen over 30 was equally capable of serving as a magistrate or juror[29]. The Venetians claimed their complex election protocols preserved the Serene Republic from the factional civil wars that destroyed other Italian city-states[30].

The historical record shows that these systems achieved massive logistical scale. In Athens (403-322 B.C.), the state was run by an assembly (*ekklesia*) requiring a quorum of 6,000 citizens, meeting 40 times a year[29]. The administrative *Boule* (500 members) and a judicial panel of 6,000 jurors were selected annually by lot from a pool of approximately 30,000

eligible adult male citizens. Mogens Herman Hansen calculates that this system required an influx of 525 to 610 new 30-year-old citizens annually to function constitutionally[29]. In Venice, following the chaotic papal election of 1268 in Viterbo (where cardinals were locked in and starved to force a decision), the Republic adopted a dizzying 10-round protocol to elect the Doge. This alternated sortition (drawing lots) and approval voting with high super-majority thresholds (e.g., 25 out of 41)[30].

Modern scholarship infers that sortition mathematically neutralizes factional block-voting and prevents the formation of professional political classes. The Venetian system of iterated lotteries and super-majorities mathematically maximized the probability that the winning candidate was a centrist compromise, raising the capital cost of bribery exponentially[30].

The strongest case against these systems is that they were structurally oligarchic and relied on a massive, disenfranchised underclass. Athens functioned entirely on the labor of slaves and excluded women and metics (total population ~300,000; participating citizens ~30,000)[29]. Furthermore, in 1297, the Venetian *Serrata del Maggior Consiglio* permanently closed the Great Council to new members. Puga and Trefler's analysis of 8,178 members of the Great Council between 1261 and 1296 shows that the *Serrata* effectively cemented a hereditary oligarchy, using the facade of complex sortition to manage power exclusively among the ultra-wealthy[34].

| Scale Ledger | Status | Reasoning |
|---|---|---|
| Household to Band (4 to 50) | Not Needed | Too small to require complex randomization; consensus or direct voting suffices. |
| Village to Parish (150 to 5,000) | **Worked** | Can be implemented easily to select local magistrates and juries. |
| Town or watershed (15,000 to 50,000) | **Worked** | Functioned effectively in Athens (30,000 citizens) and the Venetian Great Council[29]. |
| Region or bioregion (0.5 to 5 million) | Strained | The logistical burden of drawing lots and gathering assemblies becomes highly expensive. |
| Nation to Planet (50M to | Strained | Never applied universally at |

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| 8B) | | scale, though modern scholars propose permanent minipublics as a proxy[36]. |

| Capture Test | Dynamics |
|---|---|
| **Dark-Triad Vector** | A wealthy, Machiavellian oligarch attempts to buy the legislature, stack the courts, or eliminate term limits to establish a permanent dynasty[35]. |
| **Historical Cases** | The Medici capture of Florence (1434). Cosimo de' Medici did not abolish the republic; he captured the *accoppiatori* who managed the *tratte* (the bags of names for the lottery), ensuring only his loyalists were drawn[37]. The Venetian *Serrata* (1297) restricted access to long-distance galley trade to the closed nobility[34]. |
| **Resistance Features** | Drawing lots on the morning of a trial (preventing juror bribery), strict one-year term limits (serving twice in a lifetime maximum), and rigorous post-term financial audits of magistrates[29]. |

# Meta-Vulnerabilities and Systemic Failure Modes

To build resilient governance after the fall, communities must understand not just how systems work, but how they inherently fail. The research library highlights three critical vulnerabilities that cross-cut all scales.

## The Tyranny of Structurelessness

The feminist movement of the 1970s attempted to create perfectly egalitarian, leaderless organizations to avoid the hierarchies of the patriarchal state. As Jo Freeman (1972) documented empirically in her seminal essay, this generated the "tyranny of structurelessness"[40]. When formal power structures are abolished, they are immediately replaced by informal, opaque friendship networks. Because there are no formal mechanisms for accountability, voting, or recall, Machiavellian actors who control the informal communication channels become un-fireable, shadow elites[40]. "Leaderless" actually means unaccountable. To survive after the fall, communities must design explicit, visible structures of

power.

### Parochial Altruism and Intergroup Conflict

Samuel Bowles and Herbert Gintis (2011) demonstrate that human cooperation (altruism) evolved in tandem with lethal inter-group violence. This is known as "parochial altruism"[42]. Solidarity is highly dependent on an external threat; "in-group love" is inextricably linked to "out-group hate"[45]. The historical record demonstrates this powerfully: during World War II, Walter Süskind, a member of the Jewish Council in Amsterdam, utilized immense prosocial self-sacrifice to smuggle 600 children to safety, ultimately dying in 1944[45]. This extreme in-group altruism was triggered by the ultimate out-group threat of the Nazis. The vulnerability here is capture: a narcissistic leader will artificially manufacture or exaggerate an external threat to trigger parochial altruism, forcing the community to accept internal authoritarianism to survive the supposed conflict[44].

### The Bounding Constraint: Diminishing Returns on Complexity

Joseph Tainter's analysis of collapse dictates that every governance arrangement has a strict energy cost[1]. To solve a socio-political problem, societies add a layer of complexity (a new council, a new tax, a new bureaucratic protocol). Eventually, the energetic cost of maintaining the bureaucracy (salaries, infrastructure, military) outpaces the societal yield[1]. The society becomes fragile. The core application for the post-collapse era is that governance *must* be low-energy. Information processing (records, voting, laws) must be cheap in calories and time, or the governance structure will consume the community it is meant to protect.

## Modern Inventions (Not Deep-Time, But Highly Robust)

While deep-time provides the behavioral hardware, modernity generated three specific institutional technologies that block elite capture and must be preserved post-collapse.

1. **The Secret Ballot (Australian Ballot):** Prior to the 1880s, voting was public. Parties printed their own tickets and watched citizens cast them, allowing precise verification of vote-buying and physical intimidation[47]. Kuo and Teorell (2017) document that the introduction of the secret ballot in the US reduced voter turnout by 13.2% in midterm elections, precisely because it destroyed the vote-buying market (a candidate will not pay for a vote they cannot verify)[47]. The secret ballot is essential for post-fall local assemblies to prevent strongmen from intimidating dependents.
2. **Risk-Limiting Audits (RLAs):** Developed by Philip Stark, an RLA is a statistical method to verify election tallies manually without counting every single ballot[50]. The sample size is mathematically tied to the margin of victory. Using the ClipAudit formula, $\beta(n, \alpha) \approx 0.075 \ln(n) + 0.700\text{isf}(\alpha) + 0.860$, if a margin is wide, only a few dozen ballots need manual checking[52]. If the margin is razor-thin, it forces a near-total recount. This allows a post-fall village of 3,000 to verify a paper election in two hours of labor, mathematically proving immunity from tally-tampering.
3. **The Permanent Minipublic:** A modern adaptation of Athenian sortition, where a

randomly selected, demographically representative group of citizens is given the time, information, and facilitation to deliberate on a specific policy. It bypasses professional politicians and ideological polarization, providing a highly legible, low-energy decision-making apparatus[36].

# Implementability after the Fall

**Minimum Viable Version (MVV)**

- **Hardware & Infrastructure Required:** Literacy (essential for record keeping and sortition), paper or durable recording mediums (charcoal/bark), a shared physical calendar for coordination, a secure central meeting place (longhouse/hall), and opaque voting tokens (beans/stones).
- **Household (4 to 10 people):** Governance relies strictly on Ostrom's boundary principles and Boehm's reverse dominance. Resources (food, tools, caloric labor) have clear withdrawal rules. Boasting, hoarding, or patriarchal dominance is met with immediate, graduated social mockery and withdrawal of labor support. No formal voting is required.
- **Village (150 to 300 people):** This is the upper limit of face-to-face monitoring. Implement the Haudenosaunee "Clan Mother" model: the community is divided into cross-cutting lineages (e.g., agricultural vs. mechanical guilds). Property holding and resource allocation are separated from security/civic execution. A council of delegates is appointed by elder women, subject to a strict 3-strike recall rule. Ostrom's CPR rules apply to the surrounding forests and water supply, with graduated sanctions applied by the users themselves.
- **District (1,500 to 3,000 people):** Face-to-face monitoring completely fails at this scale. Implement classical sortition and modern verification. A governing council (minipublic) of 50 people is selected annually by lottery to manage inter-village trade and defense. Voting on district policy is done via Secret Ballot (dropping beans into an opaque box behind a screen). Tallying is verified using a manual Risk-Limiting Audit, requiring minimal labor to prove the outcome mathematically.

**The First Failure to Expect:** The first failure will be the **"Serrata" effect** (the closing of the council). During the first major crisis (a multi-year drought, a severe pathogen, or a violent bandit raid), highly charismatic, competent, dark-triad leaders will emerge. The community, paralyzed by fear and the demands of parochial altruism, will voluntarily surrender the lottery system, the secret ballot, or the recall mechanism to keep these "strong men" in power for immediate physical safety. Once the crisis passes, these leaders will use their entrenched position to rewrite the rules, close the pools of sortition, and establish an inherited oligarchy, exactly as occurred in Venice in 1297 and Florence in 1434.

# Principles

The following principles are extracted from the research library, validated across multiple eras, and formatted as testable hypotheses.

**Seeded Candidates to Drop:** Utopian seeded candidates such as "Absolute consensus guarantees fairness," "Leaderless organizing prevents hierarchy," and "Unconditional trust builds community" must be permanently dropped. The empirical record, specifically Freeman (1972)

and Ostrom (1990), proves that these concepts are mathematically and socially illiterate, failing instantly to dark-triad capture[24].

| Rank | Principle (Testable Form) | Independent Instances | Counter-Example / Failure | Rungs Confirmed | Capture Mechanisms Blocked | Evidence |
|---|---|---|---|---|---|---|
| 1 | **Separation of Property and Political Appointment:** If the entity that holds the economic capital is categorically separate from the entity that executes political authority, authoritarian consolidation fails. | 1. Haudenosaunee (Clan mothers hold land, men sit on council).<br><br>2. Minangkabau (Matrilineal land, male religious leaders).<br><br>3. Sparta (Women controlled wealth, male kings fought). | Florentine Republic (The Medici successfully combined immense private banking wealth with political appointment manipulation). | Household to Region | Nepotism; Economic monopolization of the political sphere. | **Strong** |
| 2 | **Graduated Friction (Reverse Dominance):** If a communi | 1. !Kung San (Kalahari arrow swapping). | The 1970s feminist movement (The "Tyranny of | Hamlet to Village | Charismatic dominance; Free-riding by narcissist | **Strong** |

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| | ty responds to status-seeking behavior with immediate, graduated social friction (mockery -> ostracism -> expulsion), coercive authority cannot take root. | 2. Ostrom's CPRs (Graduated sanctions for water/forest use).<br><br>3. Wape of New Guinea (Winners forced to keep gambling until they lose). | Structurelessness" failed to apply friction to informal leaders, allowing shadow elite capture). | | s. | |
| **3** | **The Iron Law of Formalized Accountability:** If a group refuses to formalize its decision-making structure to appear egalitarian, an unaccountable, | 1. Haudenosaunee (Strict 3-strike recall rules for Chiefs).<br><br>2. Ostrom CPRs (Locally tailored, explicit boundaries).<br><br>3. US | Leaderless activist collectives (Jo Freeman's analysis of 1970s feminism). | Household to Town | Shadow elite capture; Machiavellian informal control. | **Strong** |

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| | invisible hierarchy will inevitably form. | Secret Ballot (Formalized privacy preventing intimidation). | | | | |
| **4** | **Mathematical Dilution of Faction (Sortition):** If political allocation utilizes layered randomization and strict term limits, the capital cost of bribing a decisive faction approaches infinity. | 1. Athenian Boule (Daily lottery for juries).<br><br>2. Venetian Doge Election (1268 protocol of alternating lot/voting).<br><br>3. Modern Risk-Limiting Audits (Randomized batch auditing). | Venetian Serrata of 1297 (The Great Council closed the initial pool, permanently cementing an oligarchy despite sortition). | Village to Nation | Vote-buying; Formation of entrenched political classes. | **Moderate** |
| **5** | **Cross-Cutting Cleavages:** If a citizen's | 1. Nuer Segmentary Lineage (South | Parochial Altruism (When loyalties perfectly | Village to Region | Ethno-nationalism; Escalation of civil war. | **Strong** |

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| | loyalties (kinship, economic guild, geographic location) intersect rather than overlap, inter-group warfare is heavily mitigated. | Sudan).<br><br>2. Haudenosaunee (9 Clans cross-cut the 5 Nations).<br><br>3. Cleisthenic Athens (Trittyes cut across city, coast, and inland). | overlap, producing severe in-group/out-group boundaries leading to total war). | | | |
| **6** | **Information Asymmetry as Defense (Secret Ballot):** If the buyer of a political action (a vote) cannot verify that the seller performed the action, the market | 1. US Secret Ballot Adoption (1880s).<br><br>2. Roman Republic (Secret ballot limited patrician bribery).<br><br>3. British Ballot Act of 1872. | 19th Century US (Public tickets allowed Tammany Hall to verify purchased votes with physical intimidation). | Village to Planet | Vote-buying; Voter intimidation; Bribery. | **Strong** |

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| | for corruption collapses. | | | | | |
| **7** | **Energetic Bounding (Tainter's Limit):** If the caloric and temporal cost of maintaining a governance mechanism exceeds the surplus yield of the resource it manages, the mechanism will collapse. | 1. Collapse of the Roman Empire.<br><br>2. Collapse of the Maya centers.<br><br>3. Abandonment of overly complex modern supply chains post-collapse. | N/A (A universal physical constraint, not a policy choice). | Household to Planet | Bureaucratic bloat; State overreach. | **Strong** |
| **8** | **In-Group Altruism Requires Out-Group Hate:** If a | 1. Walter Süskind (Amsterdam 1940-1944). | Multi-ethnic democratic states during prolonge | Village to Nation | Psychopathic manipulation of external threats to | **Strong** |

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|---|---|---|---|---|---|---|
| | community exhibits extreme internal altruism and self-sacrifice, it is almost certainly mobilizing against a perceived existential external threat. | 2. Nationalistic war mobilizations.<br><br>3. Tribal warfare (Nuer vs. Dinka). | d peacetime (Altruism generally declines without external pressure). | | seize internal power. | |

## Contested or Open Questions

- **The Evolutionary Default:** Is reverse dominance truly the evolutionary default of the Pleistocene, or an adaptation specific only to highly mobile, low-resource foragers?
- **Scaling Sortition:** Can classical sortition function effectively without a massive underclass (like Athenian slaves) to subsidize the free time of the participating citizens?
- **Decoupling Altruism from War:** Is it possible to generate high-cohesion altruism and prosocial behavior (in-group love) without the presence of a hostile out-group (out-group hate), as Bowles and Gintis suggest?

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