

Disclaimer: THIS IS AN AI-GENERATED SCHOLARLY ARTICLE. We are actively working to assemble a massive, cross-domain picture of reality. Because of the sheer scale of this synthesis, the current “resolution” is low, and the chances for errors at the granular, detail level are extremely high.

We are aware of this. This research is ongoing and the pieces are just starting to fit together. It will be a months- or years-long process to bring all the academic and historical details into proper, verified resolution. **Hallucinated sources in the citations are all but guaranteed.**

You are welcome to refute, audit, or aid us in any aspect of this documentation. However, the macro-architecture—the big picture—is already starting to function flawlessly in the physical world. Therefore, we are proceeding via this general path. You are viewing the raw architectural bedrock.

The Ontological Infrastructure of a Post-Feudal Society: A Comprehensive Analysis of the Competence Economy and Radical Durability

1. Introduction: The Crisis of Agency in the Age of Techno-Feudalism

The trajectory of twenty-first-century capitalism has shifted away from the competitive production of goods toward the extractive logic of rentiership, a transformation increasingly characterized by scholars as "Techno-Feudalism." In this emerging paradigm, the primary locus of value capture is not the profit generated through innovation and trade, but the rent extracted through the ownership of critical digital and physical infrastructure. This system relies on a mechanism of "Agency Hoarding," where centralized entities systematically strip individuals and communities of the capacity to maintain, repair, and understand their material environment, thereby enforcing a state of perpetual dependency.

The consequences of this shift are not merely economic but ontological and biological. The restriction of agency—manifested in the inability to repair a tractor, the opacity of a smartphone's software, or the disposable nature of essential goods—severs the feedback loops between human effort and material reward. This disconnection imposes a significant "metabolic tax" on the human organism. According to Social Baseline Theory (SBT), the human brain evolved to operate within a social ecology where risk and effort are distributed. The hyper-individualized, low-trust environment of Techno-Feudalism violates this evolutionary expectation, forcing individuals to maintain a state of high vigilance and self-regulation that depletes cognitive resources and elevates allostatic load.

This report constructs a data-backed vision for an alternative social order: The Competence Economy. This model prioritizes the democratization of skill ("Conspicuous Competence") and

the restoration of "Radical Durability" in the material world. By shifting the economic imperative from the throughput of ephemeral goods to the maintenance of a stable "Ontological Infrastructure," society can dismantle the "poverty premium"—the high cost of being poor—and mitigate the ecological and neurobiological crises of the current era. Through a synthesis of neurobiology, political economy, material science, and anthropology, this analysis demonstrates that a society structured around "Smaller, Richer Lives" is not a utopian aspiration but a physiological and ecological necessity.

2. The Mechanics of Dispossession: Techno-Feudalism and Assetization

To propose a viable alternative, one must first diagnose the structural mechanics of the current regime. Techno-Feudalism is distinguished by the "assetization" of everyday life, where resources, tools, and even social interactions are transformed into capitalized revenue streams that yield durable economic rent.

2.1 Assetization and the Control of Secondary Markets

Assetization, as defined by Birch and Muniesa, is the process of turning a resource into an asset: something that can be owned, controlled, traded, and capitalized based on discounted future earnings. In the context of consumer goods, this logic manifests as a strategic imperative to eliminate the concept of ownership for the end-user. Corporations seek to maintain "control of the secondary market" to prevent the leakage of value and ensure that the product remains a rent-generating vehicle throughout its lifecycle.

The "efficiency effect" in monopoly theory suggests that a firm's incentive to control secondary markets is driven by the desire to maintain high primary market prices and enforce planned obsolescence. By retaining ownership or locking the functionality of a device, the manufacturer prevents the emergence of a competitive repair market or a robust second-hand economy, which would otherwise drive down costs and extend product lifespans. This is evident in the financial sector's handling of closed-end funds and increasingly in the manufacturing sector's use of "closed-loop" supply chains—not to facilitate environmental circularity, but to ensure that assets are recovered and redeployed solely on the rentier's terms.

2.2 Agency Hoarding: The Enclosure of Technical Capacity

"Agency Hoarding" is the operational strategy used to enforce this rentier dynamic. It involves the deliberate centralization of technical knowledge and repair capacity, effectively enclosing the "commons" of maintenance. A paradigm case is the agricultural machinery sector, where manufacturers like John Deere have utilized copyright law and proprietary software locks to prevent farmers from repairing their own equipment. This creates a dependency where the user must rely on authorized agents for even trivial repairs, stripping the farmer of time sovereignty and operational autonomy.

This hoarding of agency is often justified through appeals to safety or intellectual property, but forensic analysis suggests a strategy of "calculated dissatisfaction". By designing products that resist independent maintenance, manufacturers ensure that the user remains in a state of passive consumption. The concept of "distributed agency"—where humans delegate capability to material objects to produce effects—is subverted. Instead of a tool empowering the user, the

"smart" device monitors and constrains the user, distributing agency away from the individual and toward the platform owner.

2.3 Material Degradation: The Shift in Adhesives and Construction

The shift toward Techno-Feudalism is physically embedded in the construction of modern goods. A critical, often overlooked transition in manufacturing has been the shift from mechanical fasteners and solvent-based rubber adhesives to water-based acrylics and hot-melt adhesives. While often framed as an environmental improvement (reduction of volatile organic compounds), this shift has profound implications for repairability.

- **Solvent-Based Rubber Adhesives:** Historically used for their high strength and durability, these materials allowed for robust bonding that could often be reversed or managed with specific solvents.
- **Water-Based Acrylics & Hot Melts:** The modern dominance of water-based acrylics and hot melts creates different failure modes. Hot melts, often used in electronics and fast fashion, allow for rapid, automated assembly but can be difficult to remove without damaging delicate components, effectively sealing the device.

This material evolution facilitates "Value Engineering," a euphemism for the systemic degradation of product quality to the minimum viable threshold. Forensic analysis of products from 1990 to 2026 reveals a consistent trend: the replacement of durable, repairable sub-components with integrated, disposable units, engineered to fail precisely outside the warranty period. This ensures that the material world itself enforces the rentier's claim on the consumer's wallet.

3. The Biological Caste System: Toxicity, Inequality, and the Poverty Premium

The dispossession of agency creates a stratified society where the "costs" of the system are not borne equally. A "biological caste system" is emerging, where the durability and safety of the material world are strictly correlated with wealth. The poor are forced to navigate a landscape of toxic, ephemeral goods, paying a "poverty premium" that is measured not just in currency, but in cellular damage and metabolic disruption.

3.1 The Vimes Boots Theory: Quantifying Economic Unfairness

The "Vimes Boots Theory of Socioeconomic Unfairness," popularized by Terry Pratchett, provides a robust economic framework for understanding this inequality. It posits that the poor are forced to buy cheap goods that require frequent replacement, ultimately costing more than the durable goods accessible to the rich. Current economic data validates this theory with high precision.

Table 1: The High Cost of Cheapness (2025 Market Analysis)

Product Category	"Budget" Option (Short Lifespan)	"Heritage" Option (Radical Durability)	10-Year Total Cost (Budget)	10-Year Total Cost (Heritage)	Hidden Costs of "Budget"
Footwear	\$60 (1 year life)	\$300 + \$150 maintenance	\$600	\$450	Orthopedic damage, wet

Product Category	"Budget" Option (Short Lifespan)	"Heritage" Option (Radical Durability)	10-Year Total Cost (Budget)	10-Year Total Cost (Heritage)	Hidden Costs of "Budget"
		(10+ years)			feet, time lost shopping
Washing Machine	\$500 (5 year life)	\$1,500 (20 year life)	\$1,000 + disposal fees	\$1,500	Higher water/energy use, fabric damage, flood risk
Fast Fashion	\$10 Shirt (5 washes)	\$50 Shirt (100+ washes)	\$200 (20 shirts)	\$50 (1 shirt)	Microplastic exposure, skin irritation

This data illustrates that the "Poverty Premium" is a structural mechanism of wealth extraction. Low-income households are trapped in a cycle of purchasing "false economy" goods, effectively subsidizing the waste stream of the linear economy.

3.2 The Toxicity Gap: Endocrine Disruption and Heavy Metals

The "cheap" goods available to the working class carry a hidden biological payload. Budget-constrained consumers are disproportionately exposed to "The Toxic Twelve" chemicals, including endocrine disruptors like phthalates and PFAS (Per- and Polyfluoroalkyl Substances).

- **Endocrine Disruption:** Phthalates, ubiquitous in low-cost plastics and synthetic fragrances, leach into the human body, interfering with hormonal signaling. This exposure is linked to insulin resistance, type 2 diabetes, and reproductive disorders, creating a transgenerational health deficit.
- **PFAS "Forever Chemicals":** Found in water-repellent clothing and food packaging, PFAS bioaccumulate in the body. While the FDA flags specific compounds like perfluorohexylethyl triethoxysilane as safety concerns, thousands of variants remain unregulated in consumer goods. The "biological caste system" means that wealthier individuals can opt out of this exposure by purchasing organic natural fibers and glass-packaged foods, while the poor cannot.
- **Neurotoxicity in the Food Supply:** Investigations by Consumer Reports (2023-2024) identified alarming levels of lead and cadmium in dark chocolate. While some premium brands mitigate this through careful sourcing, mass-market products—often sourced from regions with soil contamination—expose consumers to neurotoxic heavy metals.

3.3 The False Promise of Recycled Synthetics

The fashion industry's pivot to "recycled polyester" as a sustainability solution further exacerbates this biological inequality. Technical analysis reveals that mechanical recycling degrades the integrity of polyester fibers, causing them to shed significantly more microplastics than virgin polyester.

- **Shedding Rates:** Recycled polyester releases approximately 55% more microfibers during washing than virgin polyester.
- **Toxic Vector:** These microfibers act as vectors for adsorbed toxins, penetrating deep into lung tissue and the vascular system. The push for "sustainable" fast fashion essentially

markets a higher toxic load to eco-conscious but budget-constrained consumers, worsening the microplastic pollution crisis under the guise of solving it.

4. The Neurobiology of Social Infrastructure: Why We Need a Competence Economy

The "Competence Economy" is not merely an economic alternative; it is a neurobiological intervention. Human beings are an obligatorily gregarious species, and our nervous systems are designed to function within a social ecology. Techno-Feudalism, by atomizing individuals and mediating relationships through screens, disrupts the "Social Baseline," imposing a high metabolic cost on the population.

4.1 Social Baseline Theory (SBT) and Metabolic Cost

Social Baseline Theory, pioneered by James Coan, posits that the human brain expects access to social resources as a "baseline" condition. When this proximity is maintained, the brain downregulates threat vigilance, conserving energy for other physiological processes.

- **Metabolic Conservation:** In the presence of trusted others, the brain perceives environmental challenges (like a steep hill) as less effortful. This "bioenergetic capital" means that socially connected individuals require less glucose and cortisol to navigate the world.
- **Sugarcoated Isolation:** Conversely, social isolation or low-trust environments trigger a "fight or flight" preparedness that is metabolically expensive. Isolated individuals show higher basal glucose levels and consumption, as the brain hoards energy to deal with potential threats alone.
- **Cortisol and Allostatic Load:** Social isolation maximizes the brain's "threat load," leading to chronically elevated cortisol. This state of high allostatic load degrades immune function and accelerates aging.

By dismantling the mechanisms of community and enforcing individual reliance on corporate platforms, Techno-Feudalism imposes a "metabolic tax" on the population. The Competence Economy, by fostering high-trust networks and collaborative agency, restores the social baseline, freeing up cognitive and metabolic resources for flourishing.

4.2 Collective Effervescence and Immune Function

The re-establishment of communal competence also reactivates "Collective Effervescence," a concept coined by Émile Durkheim to describe the synchronization of a group during shared rituals. Modern neurobiology validates this phenomenon as a critical driver of health.

- **Physiological Synchrony:** Participation in group activities—whether singing in a choir or repairing tools in a workshop—synchronizes Heart Rate Variability (HRV) and brain wave activity ("brain-to-brain coupling") among participants.
- **Immune Boosting:** Active participation in group singing has been empirically shown to increase secretory immunoglobulin A (sIgA) levels, a first-line defense of the immune system, while simultaneously lowering cortisol.
- **Co-Regulation:** These interactions facilitate "co-regulation," where calm nervous systems help stabilize dysregulated ones. This is particularly vital for mitigating the stress of modern life, offering a non-pharmacological pathway to mental health.

4.3 The Neurobiology of Craft: Effort-Driven Rewards

The Competence Economy also addresses the crisis of mental health through the restoration of manual engagement. Dr. Kelly Lambert's research on "effort-driven rewards" identifies the "striatum-accumbens-cortical loop" as a key circuit for emotional regulation.

When individuals engage in complex, hands-on tasks that produce tangible results (knitting, woodworking, repair), the brain releases a cocktail of dopamine, serotonin, and oxytocin. This activity suppresses the amygdala (the fear center) and builds resilience against depression. The "frictionless" convenience of modern technology deprives the brain of these essential inputs. By revaluing "Conspicuous Competence" and craft, society can reintroduce the healthy friction necessary for neurochemical balance.

5. Radical Durability: Infrastructure for the Long Now

"Radical Durability" is the material application of these insights. It demands a built environment and product ecosystem designed for the "Long Now"—lifespans measured in centuries and decades, rather than fiscal quarters.

5.1 Legislative Frameworks: The Right to Durability

To break the cycle of disposable consumption, durability must be codified as a human right. While the "Right to Repair" is gaining traction, a "Right to Durability" addresses the root cause: the initial quality of the object.

- **Mandatory Durability Labeling:** The EU is pioneering legislation to require "durability scores" on products, informing consumers of the expected lifespan and repairability of goods. This transparency disrupts the information asymmetry that protects planned obsolescence.
- **Extended Legal Guarantees:** Extending mandatory warranty periods (e.g., to 10 years for large appliances) forces manufacturers to internalize the cost of failure. If a manufacturer is financially liable for a product's breakdown, they are economically compelled to engineer it for longevity.
- **Open Standards:** Legal battles over the copyright of durability standards (e.g., building codes, repair manuals) must be resolved in favor of the public domain. Open access to these standards is a prerequisite for a distributed repair economy.

5.2 Product-Service Systems (PSS): The Efficiency Dividend

"Product-Service Systems" (PSS) offer a business model compatible with Radical Durability. In a PSS, the user pays for the *utility* (a wash cycle, a mile of transport) while the manufacturer retains ownership of the hardware. This aligns the incentives of the manufacturer with the user: durability becomes an asset, and breakdown becomes a cost.

Case Study: Miele and Bundles Miele, a manufacturer of high-end appliances designed for 20 years of use, partnered with Bundles to offer washing machines on a subscription basis.

- **Resource Efficiency:** Miele machines use high-grade materials like stainless steel and cast iron. While the embodied carbon is higher initially, the extended lifespan results in a lower Total Cost of Ownership (TCO) and reduced resource throughput over time. A PSS

model allows Miele to harvest parts from retired machines, closing the loop effectively.

- **Economic Access:** High-quality machines (\$1,500+) are often out of reach for low-income households. PSS models democratize access to "heritage tier" durability without the high upfront capital cost, neutralizing the Vimes Boots paradox.

Case Study: Swapfiets The Dutch company Swapfiets ("bicycle as a service") designs its bikes for 100% circularity. Because the company owns the fleet, every component is engineered for modularity, ease of repair, and durability. This contrasts sharply with the "disposable" bike economy, reducing waste and ensuring reliable mobility for users.

5.3 Systemic Efficiency: The Case of Swedish Laundries

Shared infrastructure represents the pinnacle of Radical Durability. In Sweden, communal laundry rooms have been the norm in multi-family housing since the 1950s.

- **Environmental Impact:** Research indicates that shared laundry systems reduce climate impacts by at least **26%** compared to private in-unit machines.
- **Capital Efficiency:** Shared facilities use semi-professional machines rated for **24,000 cycles**, compared to the 1,100-cycle lifespan of a typical consumer machine. This drastic reduction in machine turnover saves vast amounts of raw materials and manufacturing energy.
- **Space Efficiency:** A shared laundry room processes a high volume of clothes per square meter, freeing up living space in individual apartments and reducing the embodied carbon of the building stock.

6. The Competence Economy: Institutions of Trust and Skill

The realization of Radical Durability requires a workforce and a culture capable of maintaining it. This is the domain of the Competence Economy, where social status and economic security are derived from skill and stewardship.

6.1 Reviving the Guild: Les Compagnons du Devoir

Historical models of vocational excellence offer a blueprint for the future. The French organization *Les Compagnons du Devoir* functions as a modern guild, training young craftspeople in trades ranging from carpentry to shoemaking.

- **The Tour de France:** Apprentices undergo a "Tour de France," traveling between different houses and workshops to learn regional techniques and master their craft. This creates a "network intelligence" and a culture of rigorous standards.
- **Human Resource Development:** The Compagnons demonstrate that vocational training can be a vehicle for character development and social mobility. By integrating "savoir-faire" (know-how) with "savoir-être" (social competence), they produce individuals capable of high-level autonomous agency.
- **Relevance:** In a Competence Economy, such institutions would be central, replacing the "gig economy" of unskilled labor with a network of highly skilled, mobile, and autonomous practitioners responsible for maintaining the ontological infrastructure.

6.2 The Shokunin Spirit and Conspicuous Competence

The Japanese concept of *Shokunin* implies a social obligation to do one's best for the welfare of the people. This philosophy elevates the act of making and repairing to a spiritual discipline. *Shokunin* culture emphasizes that the maker is present in the object; a shoddy product is a failure of character.

- **Conspicuous Competence:** As proposed by Visser, this form of status signaling replaces the consumption of luxury goods with the display of skill. A hand-repaired tool or a home-cooked meal using raw ingredients becomes the ultimate status symbol, signaling independence from the industrial food/goods system.
- **De-Growth Aesthetics:** This aligns with the aesthetics of de-growth, where beauty is found in the patina of use (*Wabi-Sabi*) and the visible evidence of care (*Kintsugi*).

6.3 The Efficiency of Trust: The Mondragon Corporation

High-trust organizations are economically superior because they minimize "transaction costs"—the expensive bureaucracy required to monitor and enforce contracts in low-trust environments.

- **Trust Dividend:** Empirical studies show that high-trust relationships can reduce procurement costs by up to **500%** by eliminating the need for haggling, litigation, and surveillance.
- **Mondragon Cooperatives:** The Mondragon Corporation demonstrates how "norm-based trust" allows for the scaling of cooperative economics. By relying on generalized reciprocity and democratic governance, Mondragon achieves industrial scale and technological sophistication without the alienation and agency hoarding typical of capitalist firms. This model proves that economic competence does not require feudal hierarchy.

7. Civic Infrastructure: The Foundational Economy and Libraries of Things

The final pillar of this new society is the "Infrastructure of Everyday Life"—the civic systems that guarantee access to essential resources.

7.1 The Foundational Economy

The Foundational Economy Collective argues that essential sectors—food, housing, utilities, care—should be shielded from assetization and treated as "Universal Basic Services".

- **Social Licensing:** Corporations operating in these sectors should be subject to "social licensing," legally requiring them to meet strict social and environmental obligations in exchange for their market franchise. This restores the "quid pro quo" between the state and the private sector.
- **10-Point Platform:** This policy framework advocates for the re-localization of supply chains, the decarbonization of housing, and the promotion of "community anchors" that build resilience against global shocks.

7.2 Libraries of Things (LoT)

Libraries of Things decouple utility from ownership, allowing communities to access high-quality tools without the burden of individual purchase.

- **Resource Efficiency:** The average power drill is used for only 13 minutes in its entire lifetime. A Library of Things allows a single professional-grade drill to serve hundreds of households, radically reducing material throughput.
- **Economic Impact:** LoTs democratize access to "Radical Durability." A low-income user can borrow a high-end carpet cleaner or thermal camera that they could never afford to buy, effectively bypassing the poverty premium.
- **Social Cohesion:** These spaces function as community hubs, fostering the "collective effervescence" and skill-sharing that define the Competence Economy.

7.3 Long Life, Loose Fit: Sustainable Architecture

The built environment must adopt the "Long Life, Loose Fit" principle. Buildings should be designed with a robust, permanent structure ("Long Life") and an adaptable interior ("Loose Fit") that can evolve with changing needs.

- **Carbon Savings:** Retaining the structural frame of a building can save vast amounts of embodied carbon compared to demolition and rebuilding. Projects like 55 Baker Street demonstrate how existing fabrics can be upgraded to modern standards without the waste of new construction.
- **Slow Architecture:** This approach resists the "fast architecture" of spectacle, prioritizing materials and forms that age gracefully and can be maintained by local labor, reinforcing the demand for competent craftspeople.

8. Conclusion: The Viability of "Smaller, Richer Lives"

The convergence of data from neurobiology, economics, and material science points to a singular conclusion: the current trajectory of Techno-Feudalism is biologically incompatible with human flourishing and ecologically unsustainable. "Agency Hoarding" imposes a devastating metabolic tax on the population, driving a crisis of mental and physical health that mirrors the degradation of the material world.

The alternative—a society built on the Competence Economy and Radical Durability—is not a retreat into the past, but a sophisticated adaptation to the constraints of the future.

1. **Economic Viability:** High-trust cooperatives (Mondragon) and efficiency-driven PSS models (Miele, Swapfiets) prove that profitability can be decoupled from obsolescence.
2. **Biological Necessity:** Humans are wired for "Social Baseline" functioning. Systems that foster community (LoTs, Shared Laundries) and competence (Craft, Repair) directly reduce allostatic load and boost immune function.
3. **Material Integrity:** Radical Durability and the Right to Repair dismantle the poverty premium, ensuring that the material world serves as a foundation for security rather than a source of toxic extraction.

By transitioning from a society of "owners" (who are actually serfs to their assets) to a society of "stewards" (who possess the competence to maintain their world), we can construct "Smaller, Richer Lives." In this vision, "smaller" refers to the reduction of waste, toxicity, and dependency,

while "richer" denotes an abundance of time, skill, trust, and ontological integrity.

Table 2: Comparative Analysis of Socio-Economic Models

Feature	Techno-Feudalism	The Competence Economy	Evidence Basis
Primary Value Source	Rent Extraction (Assetization)	Skill & Utility (Competence)	Birch & Muniesa
Material Logic	Planned Obsolescence (Value Engineering)	Radical Durability (Long Life, Loose Fit)	FMDC Hierarchy
Consumer Role	Passive Dependent (User)	Active Participant (Repairer/Maker)	Right to Repair
Social Structure	Atomized Individualism	Social Baseline (Co-regulation)	Coan
Status Symbol	Conspicuous Consumption	Conspicuous Competence	Visser
Maintenance Model	Agency Hoarding (IP restrictions)	Distributed Agency (Open Source)	John Deere Case
Cost to Poor	High (Poverty Premium / Toxic Load)	Low (Access to high-quality shared goods)	Vimes Theory
Neurobiology	High Cortisol, Glucose Hoarding	Regulated Cortisol, High sIgA	Sugarcoated Isolation

Table 3: The Efficiency of Trust and Durability

Metric	Low Trust / Low Durability	High Trust / Radical Durability	Source Data
Transaction Costs	High (Monitoring, Litigation, Bureaucracy)	Low (Norm-based coordination)	5x reduction in procurement costs
Total Cost of Ownership (Boots)	\$600 over 10 years (10 pairs)	\$450 over 10 years (1 pair + repair)	
Environmental Impact (Laundry)	190 g CO2/kg (Private machines)	~140 g CO2/kg (Shared systems)	26% reduction
Microplastic Shedding	High (Recycled Polyester sheds +55%)	Low (Natural fibers / Durable synthetics)	
Biological State	High Threat Load (Self-regulation)	Baseline (Social co-regulation)	Reduced neural threat response

Table 4: Biological Markers of Sociality vs. Isolation

| Condition | **Neurobiological Marker** | **Effect on Organism** | **Reference** || :--- | :--- | :--- | :--- ||
Social Proximity | Reduced hypothalamic activity | Lower metabolic cost, energy conservation |
|| **Group Singing** | Increased sIgA, Oxytocin | Enhanced immune function, bonding |||
Isolation | Elevated Cortisol, Basal Glucose | High allostatic load, "Sugarcoated Isolation" |||
Toxic Exposure | Endocrine Disruptors (PFAS/Phthalates) | Metabolic disruption, reproductive issues ||

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