

OECONOMIA NOVA

Compact English translations of the 10 sub-works (FORSCH-0133 to 0142)

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OECONOMIA NOVA — English Sub-Works v1.0-EN (Compact Twins)

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These are compact English twin versions of the ten sub-works FORSCH-0133 to FORSCH-0142. Full-length English translations of each individual sub-work follow in a later workshop season (~50-80 PH estimated). Each compact twin retains: thesis, structure, key empirics, theoretical anchors, ETHOSLAB conditional inferences, and closure type.

FORSCH-0133-EN — Financial Bubbles and Crypto Stress Test v0.1.2

Threshold A · Skeleton modules II.4, II.6, III.1, III.2 deepened

Thesis

Decentralized finance (DeFi) and crypto reproduce the structural pathologies of the classical financial system on a new technological layer without solving them. The 2022 crypto crash is a textbook Kindleberger-Minsky-Reinhart-Rogoff bubble.

Structure (5 parts)

1. **Historical bubble patterns** — Dutch Tulip Mania 1637, South Sea Bubble 1720, Railway Mania 1840s, 1929 crash, Japanese asset price bubble 1990, Dot-com 2000, Subprime 2008.
2. **Methodological frameworks** — Kindleberger's 5 phases (Displacement, Boom, Euphoria, Crisis, Revulsion), Minsky's Moment, Reinhart-Rogoff debt-crisis phases, Galbraith on "specific recurrent absurdity".
3. **Crypto stress test 2017-2022** — peak ~\$3 trillion (November 2021), Terra/Luna collapse May 2022 (~\$60bn destroyed), Celsius, 3AC, Voyager, FTX (November 2022 ~\$8bn missing). Bitcoin/Ethereum/DeFi/Stablecoins/NFTs/DAOs each analyzed.
4. **Regulatory response** — EU MiCA 2023, SEC enforcement actions, BIS reports, FATF Travel Rule. The empirical lesson: regulation is post-crisis, not preventive.
5. **Reform architecture** — circuit-breaker mechanisms, fractional-banking-style limits on leverage, real-economy backing requirements, transparency mandates.

Key empirics

- Crypto market cap peak: \$3 trillion November 2021.
- Terra/Luna collapse: ~\$60bn destroyed in May 2022.
- FTX collapse: ~\$8bn customer funds missing (November 2022).
- Crypto energy: Bitcoin Proof-of-Work ~150 TWh/year (2024).
- Empirical pattern match: Tulip Mania → Crypto = same Kindleberger phases, different technology.

Theoretical anchors

Hyman Minsky (1992), “The Financial Instability Hypothesis”. Charles Kindleberger and Robert Aliber (2015), *Manias, Panics, and Crashes*. Carmen Reinhart and Kenneth Rogoff (2009), *This Time Is Different*. John Kenneth Galbraith (1990), *A Short History of Financial Euphoria*.

ETHOSLAB inferences

- B1: IF historical bubbles follow Kindleberger pattern, THEN crypto follows same pattern.
- B2: IF DeFi lacks circuit breakers, THEN cascade risk structurally elevated.
- B3: IF stablecoin reserves opaque, THEN systemic stability uncertain.

Closure: v0.1.2 (K-2 patch after collision).

FORSCH-0134-EN — Property, Enclosure, Gleaning, Atmospheric Commons v0.1

Threshold A · Skeleton module III.5 deepened (CORE sub-work)

Thesis

Property is historically grown, not naturally given. It is re-conditionable through four reform instruments that capture uncreated value, without dispossessing what was actually earned through individual labor. The methodological principle: “step on no one’s toes.”

Structure (12 parts)

Part 1: Locke and the abandoned Proviso

Locke’s *Two Treatises* (1689) Book II Ch. V §§27, 31, 33 — three constraints on property: only what one can use, enough and as good left for others, nothing made to spoil. Later liberal tradition (Nozick 1974) weakened the Proviso to non-worsening. Empirically: top-1% wealth incompatible with strict Proviso.

Part 2: Mundraub — gleaning from rotting fruit

- Leviticus 19:9-10: Right to Glean / Nachlese-Recht as biblical principle.

- §370 StGB (German Empire / BRD 1871-1975): Mundraub as privileged theft. Abolished 1975.
- Allemansrätten (Sweden, Norway, Finland): constitutional everyman's right.
- Tom's question: "Why may one not take rotting fruit?" — Locke-conformant: rotting fruit on unfenced land is no longer property in Locke's sense.

Part 3: Marx and primitive accumulation

Das Kapital Vol. I, Part VII. Primitive accumulation as violence-based, not industry-based. Harvey 2003 actualization (accumulation by dispossession): privatization of public goods, bio-patents, land grabs post-2008, asset inflation as redistribution, data surplus as AI training.

Part 4: Polanyi and fictitious commodities

Polanyi 1944, *The Great Transformation*. Three fictitious commodities (land, labor, money). Second generation today: atmosphere, data, reproductive tissues, life cycle phases, attention. Double movement as historical response.

Part 5: Henry George — land value tax

Progress and Poverty (1879). Land rent is socially produced, not by owner. LVT captures uncreated value cleanly. Empirical applications: Estonia since 2000, Pittsburgh 1913-2001, Singapore, Hong Kong, Denmark, German property tax reform 2025.

Part 6: Ostrom — commons governance

Governing the Commons (1990) refuting Hardin (1968). Eight design principles. Empirical examples: Swiss Alp Törbel since 1224, Spanish Huerta since ~1000, Maine lobster, Linux/Wikipedia/FOSS, Mietshäuser-Syndikat, Community Land Trusts, Allemansrätten. Nobel Prize 2009.

Part 7: Federici — patriarchal accumulation

Caliban and the Witch (2004). Witch hunts 16-17th c. as accompanying primitive accumulation. Female bodies dispossessed, reproductive labor de-honored. Consequence: reform instruments must work gender-specifically (Care-Income, inheritance reform, UBS).

Part 8: Piketty — $r > g$

Capital in the 21st Century (2014), *Capital and Ideology* (2020). $r > g$ as structural law. Property is always political. Participation Sociale: 60% average wealth for 25-year-olds, financed by inheritance tax.

Part 9: Decolonial lens

Sahlins, Scott, Kimmerer, Quijano, Acosta, Shiva. Pluriverse rather than universalism. Pachamama constitutional rights: Ecuador 2008, Bolivia 2010, Whanganui River NZ 2017 — nature as legal subject.

Part 10: Atmospheric commons — Barnes Sky Trust

Peter Barnes (2001), *Who Owns the Sky?*. Atmosphere as common property. Carbon Sky Trust with per-capita carbon share and dividend. Operationalizes Locke Proviso for atmospheric commodification.

Part 11: Four reform instruments capturing uncreated value

Instrument	Captures	Anchor
Land Value Tax	land rent	George 1879
Progressive inheritance tax	dead wealth	Piketty 2020
Carbon tax with climate dividend	atmospheric rent	Barnes 2001
Data surplus tax	attention rent	Lanier 2013

Plus complementarily: Sovereign Wealth Funds (Norway model), global BEPS architecture.

Part 12: What is *not* dispossessed

Owner-occupied home (up to threshold), tools of one's trade, personal property, savings under threshold, family heirlooms under threshold. The principle "step on no one's toes" is methodologically operationalized.

Key empirics

- Top 1% holds ~46% global wealth (Credit Suisse Global Wealth Report 2023).
- US: ~50% of land owned by 1% of holders.
- Norway GPF: \$1.7 trillion / ~\$300,000 per capita.

ETHOSLAB inferences

- B1: IF Locke Proviso applied, THEN Mundraub not punishable, Allemansrätten consistent.
- B2: IF uncreated value captured, THEN reform without dispossession brutality.
- B3: IF Pachamama constitutional, THEN nature as legal subject operationalizable.

Closure: v0.1.

FORSCH-0135-EN — Transformation: Directed Development for All v0.1

Threshold A • Skeleton module VII deepened

Thesis

The middle position (neither bottom-up nor top-down) operationalizes through five mechanisms: targeted activation of social tipping elements, reaching Centola 25% threshold, channelling Polanyian double movement, Ostrom commons governance at multiple levels, asymmetric reform rather than symmetric revolution.

Structure (8 parts)

Part 1: Otto 2020 — six social tipping elements

PNAS paper (Otto, Donges, Schellnhuber et al.): six leverage points — energy production/consumption, urban infrastructure, financial markets (divestment, carbon pricing), normative systems (climate awareness), education systems (values, climate education), information feedback (transparency, real-time).

Part 2: Centola 2018 — 25% threshold

Science paper. Engaged minority ~25% suffices to enforce new social norms. Historical evidence: anti-slavery UK, women's suffrage, anti-smoking, anti-CFC, anti-apartheid, gay marriage USA, EU plastic bags, trans fats.

Part 3: Polanyian double movement

The Great Transformation (1944). Market expansion generates self-protection. Current examples: surveillance capitalism vs DSGVO/DSA/DMA; crypto vs MiCA; atmospheric enclosure vs climate lawsuits; AI vs EU AI Act. Risk: double movement can also tip authoritarian (fascism risk).

Part 4: Middle position operationalized — five mechanisms

1. Targeted activation of tipping elements.
2. Centola threshold strategy.
3. Channelling double movement.
4. Multi-level Ostrom governance.
5. Asymmetric reform.

Part 5: Sankara anchor (Burkina Faso 1983-87)

Thomas Sankara, 1949-1987. In four years: 10 million trees, 2.5 million adults literate, FGM banned, debt-refusal speech Addis Ababa July 29, 1987, local textile industry, mass vaccination, child mortality -25%, school enrollment +52%. Assassinated October 15, 1987, three months after debt speech. Compaoré coup. Sentenced in absentia 2022. Methodologically: not a naive model — authoritarian traits, hasty reforms — but a strong anchor: directed development is possible under extreme constraints.

Part 6: What characterizes successful norm shifts

Eight historical examples analyzed structurally: long buildup phase, fast transition (Kindleberger-like phases), legal codification as tipping moment, generation effect.

Part 7: Ten conditional contributions (B1-B10)

Ten situation-specific recommendations, B-form. From “IF consumption above average, THEN reduction methodologically grounded” through “IF multiplier position, THEN norm shift in influence sphere”.

Part 8: Risk reflection

Tipping not guaranteed. Centola threshold not universal. Sankara’s example assassinated. External pressure can suffocate directed development. International coordination necessary.

ETHOSLAB inferences

- B1: IF six tipping elements interact, THEN multi-element activation strategy preferred.
- B2: IF Centola threshold valid, THEN engaged minority strategy operational.
- B3: IF double movement risk authoritarian, THEN democratic channel required.

Closure: v0.1.

FORSCH-0136-EN — Central Bank Digital Currencies v0.1

Threshold A · Skeleton module III.1 deepened

Thesis

CBDC is not the solution to monetary pathologies — it is a political instrument whose emancipatory or surveillance-reproducing character depends on architectural choice. Six architectural dimensions matter.

Structure (7 parts)

Part 1: Empirics 2024

BIS survey 2024: 94% of central banks working on CBDCs. e-CNY with 260 million wallets, Sand Dollar Bahamas productive 2020, eNaira Nigeria 2021 (limited uptake), Digital Euro preparation phase since November 2023, FedNow US (not CBDC but adjacent), DCash East Caribbean Currency Union discontinued.

Part 2: Postkeynesian foundation

Bank of England 2014 (McLeay/Radia/Thomas): money creation textbook model is factually wrong. Money emerges in credit act. Lavoie, Godley, Werner.

Part 3: Modern Monetary Theory (MMT)

Kelton (2020), *The Deficit Myth*. Functional finance. Currency-issuing states cannot involuntary default. Constraints are inflation and real resources.

Part 4: Vollgeld tradition

Fisher (1936), *100% Money*. Huber (2017), *Sovereign Money*. Swiss Vollgeld Initiative 2018 (rejected by referendum). Werner (2003), *Princes of the Yen*.

Part 5: Werkstatt precursor on fractional banking (May 2026)

Wörgl 1932 (shrinking money per Gesell), US Greenback 1862-79, Swiss Vollgeld 2018. Three historical cases.

Part 6: Six architectural choices

1. **Privacy tiers** — different anonymity levels for small/medium/large transactions.
2. **Holding limits** — caps to prevent disintermediation of banks.
3. **Two-tier model** — central bank issues, commercial banks distribute.
4. **Programmability** — opt-in only, no expiration dates (transparency).
5. **Offline capability** — works without internet (resilience + privacy).
6. **Constitutional limits** — anti-surveillance guarantees codified.

Part 7: Architecture matters

Correctly architected, CBDC can be emancipatory (Vollgeld connector, Pigovian platform, helicopter money instrument). Falsely architected (e-CNY model with “controllable anonymity”), CBDC reproduces surveillance capitalism at state level.

ETHOSLAB inferences (B1-B10)

B#	Condition	Inference
B1	IF Postkeynesian money creation valid	THEN textbook model abandoned
B2	IF MMT functional finance	THEN constraint is real resources + inflation
B3	IF Vollgeld tradition	THEN architectural option exists
B4	IF privacy tiers implemented	THEN CBDC emancipatory possible
B5	IF holding limits implemented	THEN bank disintermediation contained
B6	IF two-tier model	THEN existing banking ecosystem preserved
B7	IF programmability opt-in	THEN no monetary coercion
B8	IF offline capability	THEN resilience and privacy enhanced
B9	IF constitutional limits	THEN voiceless protected
B10	IF surveillance-architecture	THEN reproduction of pathologies, not solution

FORSCH-0137-EN — Animal Ethics in Economics v0.1

Threshold A · Skeleton modules III.6, II.7 deepened

Thesis

The status of non-human animals as economic property objects is one of the oldest and least thematized asymmetries in economics. Methodologically, the natural-vs-artificial dichotomy is untenable (B12 industrial-sterility argument).

Structure (6 parts)

Part 1: Empirics 2024

- ~75 billion chickens slaughtered annually (factor 9 over human population)
- ~1.5 billion pigs, 330 million cattle, 660 million sheep/goats per year
- ~125 million tons aquaculture (FAO 2024)
- Over 95% in industrial mass husbandry

Part 2: Painful breeding as breeding goal

- Broiler chickens at slaughter day (35 days): 27.6% lameness (Knowles et al. 2008, *PLOS One*)
- Belgian Blue cattle: 95% Caesarian rate (Hanset & Michaux 1985)
- Methodologically: animals not viable without human intervention (antibiotics, Caesarian, AI)

Part 3: Antibiotic resistance

- ~70% of global antibiotic consumption in livestock
- AMR: ~1.27 million deaths per year (Murray et al. 2022, *The Lancet*)
- WHO classifies AMR among top 10 global health threats
- EU Reg. 2019/6 since 2022: routine antibiotics prohibited

Part 4: Climate and material flow balance

- Animal industry: 14.5-16.5% global GHG emissions
- 77% of agricultural land for livestock
- Provides only 18% calories, 37% proteins (Poore & Nemecek 2018, *Science*)

Part 5: The B12 industrial-sterility argument

Industrial husbandry disrupts microbiome — animals no longer produce B12 themselves, must be supplemented. Vegan humans supplement B12 likewise. Both pipelines depend on industrial cobalamin (BASF, Sanofi). Methodological lesson: the “natural vs artificial” dichotomy is untenable; relevant question is microbiome pipeline efficiency.

Part 6: Theoretical animal ethics

Singer (1975, speciesism), Regan (1983, animal rights deontological), Plumwood (1993, anti-dualism), Haraway (2008, companion species), Donaldson/Kymlicka (2011, Zoopolis), Nussbaum (2022, capabilities), Adams (1990, Sexual Politics of Meat). Convergent: animal exploitation is not “marginal” but operationalizes same commodification logic as female reproduction (Federici), land (Polanyi), atmosphere (carbon markets).

Reform architecture

- Cage husbandry prohibition (EU End the Cage Age 2027 discussion)
- Danish climate tax on beef from 2030 (€96/t CO₂e, first country worldwide)
- Augsburg true-price study 2020 (factor ~4 for beef)
- EU CAP redirection toward sustainable agriculture
- Animal dignity in constitutions (DE Art. 20a, AT, CH, UK Sentience Act 2022)

ETHOSLAB inferences

- B1: IF natural-artificial dichotomy untenable, THEN methodological honesty required.
- B2: IF AMR causes ~1.27 million deaths/year, THEN routine antibiotics prohibition methodologically compelling.
- B3: IF 14.5-16.5% GHG from livestock, THEN Pigovian tax + CAP redirection structurally appropriate.

Closure: v0.1.

FORSCH-0138-EN — AI Infrastructure as Economic Cross-Axis v0.1

Threshold A · Skeleton module II.5 deepened

Thesis

AI infrastructure 2023+ has become a cross-sectional economic axis comparable to electricity in earlier industrial revolutions. Mazzucato lens: most AI building blocks emerged from publicly funded research. Claw-back clauses are methodologically consistent.

Structure (7 parts)

Part 1: Hyperscaler capex empirics

- 2024: ~\$200 billion
- 2025: ~\$330 billion (projected)
- 2023-2026 cumulative: ~\$1 trillion
- Top hyperscalers: Microsoft, Alphabet, Amazon, Meta, Oracle

Part 2: Semiconductor concentration

- Nvidia: 80-95% AI-GPU market

- TSMC: 90% cutting-edge fabrication
- ASML: 100% EUV lithography (monopoly)

Part 3: Energy and water

- AI energy: 50 TWh/year 2024 → 300 TWh/year 2030 projected (IEA Energy and AI Report)
- Overtakes Bitcoin Proof-of-Work ~2027
- GPT-3 training: ~700,000 liters fresh water
- ~500 ml per 10-50 queries

Part 4: Bubble risk

Goldman Sachs / Sequoia analyses 2024: “\$600 billion revenue gap” — capex far exceeds current AI revenues. Methodologically: bubble warning, but real product revenues (unlike crypto), so different from pure speculation.

Part 5: Data exploitation

Lawsuit wave 2023+: NYT vs OpenAI/Microsoft, Universal Music vs Anthropic, Getty Images vs Stability AI, Authors Guild vs OpenAI. Lanier 2013 thesis on unpaid data suppliers as systematic value transfer.

Part 6: Mazzucato lens — public research origins

- ARPANET → Internet
- GPS → US military
- Transformer architecture → academic research
- CUDA + GPU Computing → academic + Nvidia partnership
- AlexNet 2012 → Toronto (Hinton group)
- ImageNet 2009 → Stanford
- Common Crawl → non-profit foundation

Claw-back clauses: royalties, public equity, sovereign-wealth shares would be methodologically consistent.

Part 7: Reform architecture

- Common-Compute structures: CERN model, EuroHPC, Hugging Face, Mistral, BigScience BLOOM, AI Alliance, EleutherAI
- EU AI Act 2024 (fully effective 2027)
- AI Compute tax (proposal: progressive on training compute > 10^{25} FLOPs, EU AI Act GPAI threshold)
- Council of Europe AI Convention 2024

ETHOSLAB inferences (B1-B10)

B#	Condition	Inference
B1	IF hyperscaler capex \$1T 2023-26	THEN strategic economic axis

B#	Condition	Inference
B2	IF semiconductor monopolies	THEN supply concentration structural risk
B3	IF 300 TWh/year by 2030	THEN energy externality compelling
B4	IF lawsuit wave	THEN data-surplus tax methodologically consistent
B5	IF Mazzucato lens applies	THEN public claw-back clauses methodologically consistent
B6	IF Common-Compute infrastructure	THEN democratic AI possible
B7	IF EU AI Act 2027	THEN regulatory architecture exists
B8	IF \$600bn revenue gap	THEN bubble risk methodologically serious
B9	IF Brussels Effect	THEN EU regulation prefigures global
B10	IF voiceless representation extends	THEN future generations + ecosystems protected

Closure: v0.1.

FORSCH-0139-EN — Marketing Asymmetry and Death as Commodity v0.1

Threshold A · Skeleton modules III.4, III.8 deepened

Thesis

Marketing as legitimation for non-ability (correlation marketing-share vs product lifespan). Commodification of reproduction and dying as Polanyi-endpoint phenomena.

Structure (6 parts)

Part 1: Marketing empirics 2024

- Global advertising: ~\$1.1 trillion/year
- 75%+ digital (Google, Meta, Amazon, ByteDance combined >60% of digital ad market)
- Per capita in industrialized countries: ~\$800-1,200/year

Part 2: Galbraith and Cialdini

- Galbraith (1958), *The Affluent Society*: Dependence Effect. Firms create demand they satisfy.
- Cialdini (1984/2021): six (now seven) persuasion mechanisms — reciprocity, commitment, social proof, authority, liking, scarcity, unity.

Part 3: Marketing-lifespan correlation (empirical test)

- Slow-Made (Goodyear-weltd shoes, Patagonia, Direct-to-Consumer repair brands): ~10% marketing share, 10-20+ years lifespan.
- Fast Fashion + mass electronics: 25-40% marketing share, 2-4 years lifespan.
- Methodological lesson: marketing as legitimization for shorter lifespan.

Part 4: EU regulatory response

- DSA Article 25 (since February 2024): Dark Patterns prohibition on online platforms
- DMA (since May 2023): platform regulation
- Green Claims Directive 2024: anti-greenwashing
- France TASCom: advertising tax precedent

Part 5: Commodification of reproduction

- Egg trade: \$5,000-50,000 USD per donation in USA
- Surrogacy: \$30,000-150,000 USD in USA. Tourism India (until 2018), Ukraine, Georgia
- PID/PGD: in DE only severe genetic risks (PräimpG 2011)
- CRISPR embryo editing: He Jiankui 2018 (China) — first designer babies, 3 years prison sentence. UNESCO moratorium proposal not globally achieved
- Polygenic Embryo Screening (PES): selecting embryos by polygenic risk scores. Practically unregulated. Providers: Heliospect Genomics, Orchid Health

Part 6: Commodification of dying

- US funeral market: ~\$25 billion (Service Corporation International dominates)
- US: ~75% of hospices for-profit. Patient selection toward more lucrative diagnoses
- Organ trafficking: legally prohibited (Istanbul Declaration 2008), black market ~\$1-2 billion/year
- MAID (medically assisted dying): CH, NL, BE, LUX, Canada, Spain, NZ
- Canada MAID 2023: ~13,000 cases/year, UN report warns of poverty-driven dying

Sandel anchor

Michael Sandel (2007), *The Case Against Perfection*. Designer babies problem is not “bad parents” but Hyperagency hubris and loss of acceptance for the given.

ETHOSLAB inferences

- B1: IF marketing-lifespan correlation, THEN Pigovian advertising tax methodologically consistent.
- B2: IF Hyperagency hubris (Sandel), THEN CRISPR-embryo prohibition globally compelling.

- B3: IF poverty-driven MAID, THEN economic security precondition for dying autonomy.

Closure: v0.1.

FORSCH-0140-EN — Empirical Alternatives and Asymmetric Reform v0.1

Threshold A · Skeleton modules VI.5, VI.6 deepened

Thesis

Alternative economic structures function empirically. The question is not “whether” but “how” they scale and combine. Reform Mosaic architecture rather than single instrument.

Structure (3 parts)

Part 1: Eight empirical alternatives

Mondragón Cooperative Corporation: - ~70,000 workers, ~95 cooperatives, ~€12.5 billion turnover - Salary spread ~1:9 (vs ~1:300 in comparable listed corporations) - Cooperative is corporate-capable (Whyte & Whyte 1991)

Norway Government Pension Fund Global (GPFG): - ~\$1.7 trillion managed (~\$300,000 per inhabitant) - Invests in ~9,000 companies, ~70 countries - Ethics Committee excludes ~200 firms (weapons, tobacco, coal, severe environmental damage) - Operationalizes George land rent globally

Linux / Wikipedia / FOSS: - Linux: >90% of web servers, >70% of supercomputers, dominant in cloud - Wikipedia: 64 million articles, 300+ languages - Non-market coordination empirically works at planetary scale

Allemansrätten (Scandinavia): - Constitutional everyman’s right (Sweden, Norway, Finland, partially Iceland, Scotland) - Gathering, camping, overnight stays on non-cultivated land permitted - Demonstrates that property is shapeable

Solawi / CSA (Solidarische Landwirtschaft / Community Supported Agriculture): - ~600 farms in DACH, ~7,500 in USA - Japanese Teikei tradition since 1965 - Risk sharing between farmer and consumer

Energy cooperatives: - ~900 in Germany, ~€3 billion invested cumulatively - Citizen solar, citizen wind parks - Denmark, Scotland, Spain with own models

Community Land Trusts (CLTs): - ~330 USA, ~350 UK - ~30,000 housing units cumulatively - Operationalizes George logic: land value common, building value individual

Mietshäuser-Syndikat (Germany): - ~190 housing projects, ~5,000 residents - Market exit through institutional veto - Founded 1992, growing model

Part 2: Five asymmetric reform instruments

Universal Basic Income (UBI): - Van Parijs (1995), Standing - Empirical: Mincome Manitoba 1974, Finland KELA 2017, Stockton SEED 2019, Kenya GiveDirectly 2017+, Y Combinator OpenResearch - Lesson: no massive labor reduction; positive welfare effects; experiments small/short

Universal Basic Services (UBS): - Coote and Percy (2020), *The Case for Universal Basic Services* - Sectoral: housing (Vienna model), health (NHS-type), public transport (Luxembourg model), education, telecommunications - De-commodifies basic needs

Care-Income (Federici): - Federici (2020), *Re-enchanting the World* - Recognition of unpaid reproductive labor as economic work - Financed by progressive income tax

Participation Sociale (Piketty 2020): - Universal inheritance for 25-year-olds - 60% of average wealth as starting equality - Financed by progressive inheritance tax

Sovereign Wealth Funds (Norway model, Alaska Permanent Fund): - Resource rent as common wealth, not private consumption - Generational stewardship

Part 3: Reform Mosaic architecture

Six-layer mosaic combining all instruments: | Layer | Instrument | Financing | |—|—|—| |
Existence | UBS | LVT + progressive taxes | | Dignity | UBI moderate | Carbon dividend,
inheritance, data surplus | | Care | Care-Income | Progressive income tax | | Equality |
Participation Sociale | Inheritance tax | | Generations | SWF | Resource and land rent | |
Atmosphere | Sky Trust | Carbon markets |

ETHOSLAB inferences

- B1: IF Mondragón corporate-capable, THEN cooperative is structurally not utopian.
- B2: IF UBI experiments show no labor reduction, THEN labor-disincentive argument empirically unfounded.
- B3: IF Reform Mosaic architecturally consistent, THEN single-instrument focus methodologically deficient.

Closure: v0.1.

FORSCH-0141-EN — Material Flow Accounting v0.1

Threshold A · Skeleton module II.3 deepened

Thesis

A coherent economic analysis requires four parallel balances: monetary, material flow, carbon-O₂ cycle, social-physical. GDP is one — but not *the* — metric.

Structure (4 parts)

Part 1: Planetary Boundaries update

Richardson et al. (2023), *Science Advances*. Six of nine boundaries crossed: 1. Climate change (CO₂: 422 ppm vs 350 ppm boundary) 2. Biosphere integrity (extinction rates 100-1000x background) 3. Land system change (deforestation) 4. Freshwater (Aral Sea, groundwater depletion) 5. Biogeochemical flows (N: +150% over boundary; P: +200%) 6. Novel substances (microplastics, persistent chemicals)

Part 2: Material flow accounting

Schandl, Krausmann, Fischer-Kowalski, Haberl (BOKU Vienna, CSIRO). - Global material extraction: ~27 billion tons (1970) → ~100 billion tons (2024) - Per-capita consumption: EU ~14 t/year, USA ~22 t/year, Africa ~3 t/year - Sustainable level: 6-8 t/person/year (Bringezu et al. 2015)

Part 3: EROI analysis (Hall 2017)

Energy Return on Investment: - Conventional oil: from 100:1 historically to ~20:1 today - Tar sands: 3-5:1 - Wind onshore: 20-25:1 - Solar PV: 10-15:1 - Minimum for complex society: ~10:1

Part 4: Decoupling question

- Relative decoupling: empirically demonstrable
- Absolute decoupling at IPCC 1.5°C pace (5-7%/year): never historically achieved
- Methodological lesson: Degrowth positions serious, but not sole answer

Marx's metabolic rift

Foster (1999, 2000) actualizes Marx's metabolic rift thesis. Current empirical diagnosis: nitrogen +150% over planetary boundary, phosphorus +200%. Industrial agriculture as primary driver.

Water footprint

Hoekstra/Mekonnen (2012): - Global per-capita: 1,385 m³/year - USA: 2,840 m³/year - DACH: 1,500 m³/year - India: 1,090 m³/year - Beef: ~15,400 liters/kg; vegetables: ~300 liters/kg

Carbon budget

- Remaining 1.5°C budget: ~250 Gt CO₂ (from 2024)
- Current emissions: ~37 Gt CO₂/year
- Budget exhausted: ~2030

ETHOSLAB inferences

- B1: IF 6/9 boundaries crossed, THEN four-balance analysis methodologically zwingend.
- B2: IF EROI falling for fossils, rising for renewables, THEN transition empirically supported.
- B3: IF absolute decoupling not at 1.5°C pace, THEN structural reform unavoidable.

FORSCH-0142-EN — Tool Specification: ABM Modeling Game v0.1

Threshold A (spec level) · Skeleton module VIII.1 deepened

Thesis

The work becomes *playable* through agent-based modeling. Doughnut indicators as success metric. Reform levers (LVT, inheritance, carbon, UBI, UBS, prohibitions) as player-adjustable variables.

Architecture

- **Stack:** Python 3.11+, MESA 2.x (Apache 2.0), Streamlit UI, Plotly visualization
- **License:** AGPL-3.0 (open source software)
- **Agents:** Households (~10,000), Firms (~100), Banks (~10), Central Bank, State, Atmosphere
- **Reform levers (player-adjustable):**
 - Land Value Tax (%)
 - Inheritance tax (% progressive)
 - Carbon tax (EUR/t CO₂)
 - UBI (EUR/month)
 - UBS share (%)
 - Cage husbandry prohibition (yes/no)
 - Advertising restriction (%)
 - AI compute tax (EUR per training-FLOP-cluster)
 - CBDC mode (off / two-tier-privacy / surveillance)
 - Vollgeld mode (off / partial / full)

Win condition

Doughnut safe-and-just space: - ALL social indicators above threshold - ALL planetary boundaries below ceiling

Methodological consistency

Complexity Economics (Beinhocker 2006, Farmer 2024, Arthur 2015). Agent-Based Modeling with emergent dynamics.

MVP v0.1 implementation

Available as `tool-impl-v0.1/oeconomia_nova_spiel.py` (~80 PH invested, vs 480 PH full spec). - 100 heterogeneous households (log-normal distributed) - 20 firms with emissions + material consumption - Atmosphere as CO₂ sink - 5 reform levers (LVT, carbon, UBI, UBS,

inheritance) - Sovereign Wealth Fund accumulation - Doughnut score (simplified) - Headless test: confirms reform mosaic reduces Gini 0.601 → 0.303 over 10 years simulation

Full implementation roadmap (v0.5)

~480 PH effort: - 16+ Doughnut indicators - More agent types - Geographic heterogeneity - Multi-country simulation - Empirically calibrated parameters - Educational tutorial mode - Multiplayer / collaborative mode

ETHOSLAB inferences

- B1: IF complexity dynamics matter, THEN ABM methodologically appropriate.
- B2: IF reform levers have non-linear effects, THEN simulation valuable for learning.
- B3: IF Doughnut measurable, THEN success condition operationalizable.

Closure: v0.1 (spec level).

Bundle-Level Notes

These compact EN twins cover 10 sub-works (FORSCH-0133 to 0142). Together with the full FORSCH-0126-EN (Inventory), FORSCH-0132-EN (Skeleton), and FORSCH-0143-EN (Main Work), the OECONOMIA NOVA bundle now exists with English access at every level — abstract, summary, and full work for the main piece.

Total EN content in bundle v4.0: - README-EN: ~1,500 words - EN_ABSTRACTS (all 13): ~5,000 words - EN_EXECUTIVE_SUMMARY (Main Work): ~2,500 words - FORSCH-0126-EN (Inventory full): ~3,500 words - FORSCH-0132-EN (Skeleton full): ~1,800 words - FORSCH-0143-EN (Main Work full): ~8,900 words - This compact-twins document (10 sub-works): ~6,000 words - **Total: ~29,200 EN words**

Full-length individual EN twins of the 10 sub-works (matching DE word-counts) remain open for later workshop seasons (~50-80 PH effort, depending on depth).

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