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SCIENCE & IDEAS

The Commoditization Trap: Why AI Efficiency May Devour Its Own Market

A Structural Critique of the Abundance Thesis and a Proposed Alternative: The Freedom Pool

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The Central Provocation

AI is doing something qualitatively different from previous efficiency revolutions. It is not merely making cognitive labor cheaper. It is progressively substituting for the very class of human workers whose incomes constitute the demand for the services AI is replacing. This is not a temporary displacement. It is a structural commoditization that, if it proceeds far enough, undermines the economic basis of the market it claims to serve.

The Jevons Paradox, which holds that efficiency improvements increase total resource consumption rather than decrease it, is the standard techno-optimist defense against this concern. When steam engines became more efficient, coal consumption rose. Cheaper energy per unit meant more units demanded. Applied to AI: as intelligence becomes cheaper, demand for it will expand exponentially, generating more economic activity, not less.

The paradox holds when efficiency improvements open genuinely new categories of demand. The key condition is that the underlying resource is an input into production, not a substitute for the consumer of the product. When efficiency improvements eliminate the economic actor who generates the demand, the paradox breaks down. That is precisely what is happening now, and the consequences run from individual balance sheets to the financial architecture of the entire AI infrastructure boom.

The Commoditization Cascade: Legal Services as a Case Study

To understand the cascade structurally, follow one industry through it completely. In 2020, a mid-sized American law firm billed associate time at $200–$350 an hour for contract review, legal research, due diligence, and drafting. These were not artificially high prices. They reflected genuine scarcity: a J.D. required three years of postgraduate education, bar passage, and several years of supervised practice before an associate could work independently. The knowledge was real, the training costs were high, and the supply was constrained by institutional gatekeepers. The American legal services market was valued at approximately $350 billion annually.

The AI incursion followed a predictable sequence. First came augmentation: tools like Kira Systems and Luminance (2016–2019) allowed junior associates to review contracts faster. Firms adopted them and passed some savings to clients while capturing the rest as margin. Headcount in document review, previously the entry point for thousands of new lawyers, began falling. Then came substitution: by 2023, large language models could perform first-pass contract review, legal research, and routine drafting at a quality firms had to acknowledge was commercially acceptable for a wide range of matters.

The price progression is the key data. Tasks that were billed at $300 an hour in 2020 now bill at $150 where AI assistance is disclosed, and sophisticated clients are beginning to treat certain categories of legal work as

near-commodity services to be put out to competitive tender. The endpoint of this progression is not difficult to project: routine legal services become a software subscription. The $350 billion market does not disappear, the underlying need for legal work is real and persistent, but the revenue per unit of work collapses.

This is not a legal industry story. It is the template. Financial analysis, software development, medical coding, architectural drafting, accounting, consulting: each follows the same logic, at roughly the same pace, because each is a domain of structured cognitive work that AI targets with the same underlying capabilities. The cascade is not moving through one industry at a time. It is moving through all knowledge-intensive industries simultaneously.

The Infrastructure Valuation Problem

This cascade creates a direct contradiction at the heart of the AI investment thesis. The financial case for hyperscale data centers rests on a projection of sustained, high-margin demand for AI services. But that projection embeds the assumption that AI-delivered cognitive services will remain premium-priced. The commoditization cascade demonstrates they will not.

> *Revenue per unit of compute collapses even as the volume of compute consumed may grow, precisely the dynamic that destroyed telecommunications infrastructure valuations in 2001.*

More fundamentally, the framing of AI value as residing in computational capacity is itself a category error. The end product is not processing cycles. It is the successful completion of a cognitive task. The data center is a supplier to that product, not the product itself. And suppliers in competitive markets are systematically squeezed toward their cost of production.

The incentive structure of the industry drives relentlessly in one direction: perform the task at maximum proficiency with minimum energy and cost. Every algorithmic innovation that reduces compute requirements—model compression, distillation, more efficient architectures, edge deployment—is a direct attack on the revenue model of the infrastructure layer. DeepSeek’s demonstration that frontier-level reasoning could be achieved at a fraction of the compute cost of its predecessors was not a technical anomaly. It was a preview of the secular trend that will define the next decade of AI economics.

Abundance Without Freedom: The Human Agency Deficit

The optimistic response to all of this is the abundance argument: as AI makes cognitive services cheaper, everyone benefits. Healthcare becomes more accessible. Education becomes personalized. The deflationary logic is presented as unambiguously positive, a rising tide of cheap intelligence lifting all boats.

This argument contains a hidden assumption: abundance generates human welfare only if people are actually free to benefit from it. And freedom, as the historian Timothy Snyder argues, is not merely the absence of tyranny. It is the presence of the material and institutional conditions that allow people to exercise genuine agency.

> *The deflationary power of AI, if it flows only to those already positioned to capture it, produces not abundance but a new and more sophisticated form of stratification: a world in which intelligence is cheap and freedom remains scarce.*

The “No Next Layer” Problem

There is a standard rebuttal to displacement arguments. The rebuttal holds that creativity, judgment, relational intelligence, and physical presence will remain distinctly human domains, and that the economy will reorganize around these capacities as it has reorganized around new human strengths after every previous wave of automation.

The question is not whether such domains persist. They do, and will for the foreseeable future. The question is whether they generate enough economic value at scale to sustain a middle class, whether the number of people who can command a living wage from distinctly-human cognitive work is sufficient to maintain the consumer demand that market economies require to function.

Previous automation waves displaced physical and routine clerical labor while expanding demand for cognitive labor. AI breaks this bargain because it targets the cognitive layer that absorbed displaced workers from previous waves. Creativity and judgment are real human advantages. They are also, almost by definition, scarce, and an economy whose middle class is composed entirely of people competing in scarce creative and relational domains is not a stable middle class.

The Freedom Pool: AI as an Amplifier of Human Freedoms

What is required is not simply a redistribution mechanism but a purposive redeployment of AI’s deflationary power toward the specific domains where the absence of infrastructure most constrains human freedom. Call this the Freedom Pool: a structural commitment to direct the surplus generated by AI efficiency toward eliminating the material impediments that prevent people from becoming their better selves.

The concept draws directly from Snyder’s argument that genuine liberty requires positive conditions, not merely negative ones. Freedom is not just freedom from—from coercion, from arbitrary power. It is freedom

for: for meaningful work, for health, for learning, for participation in civic and cultural life.

The Freedom Pool differs from a Universal Basic Income in its purpose and structure. Cash transfers address the income dimension of displacement. The Freedom Pool addresses the capability dimension: the actual conditions that determine what people can do with their lives. Rather than putting money in people's hands and trusting markets to translate it into flourishing, it uses the power of AI to target specific infrastructures of freedom directly: the housing, healthcare, education, clean water, nutrition, and mobility that allow a person to exercise meaningful agency regardless of where they were born.

The Electrification Precedent

The historical analog that clarifies both the problem and the solution is electrification, and specifically, the institutional architecture required to make it universal. In the late nineteenth century, electricity generation was a high-margin business dominated by a few innovative companies with proprietary technology and enormous capital advantages. Within decades, competition, standardization, and regulatory intervention had converted it into a commodity service priced at cost.

The Rural Electrification Administration, established in 1936, extended electrical infrastructure to the rural communities that private utilities had no financial incentive to serve. Regulated utilities were given monopoly franchises in exchange for universal service obligations. The result was that the transformative power of electricity reached the people whose lives most needed transforming, not because electricity companies were philanthropic, but because institutions were designed to make universal access a structural requirement rather than a market outcome.

AI requires an analogous institutional architecture. The Freedom Pool is the mechanism by which the deflationary surplus of AI is converted into the enabling conditions for human agency. A tax on automated labor substitution, a sovereign seed fund financed by returns on publicly-funded AI research, or data dividends compensating individuals for the training data that made large AI systems possible are all viable funding mechanisms.

Intelligence Infrastructure as an Accelerant of Positive Human Freedom

AI is on a structural trajectory toward becoming a low-margin cognitive utility, the electricity of the mind. Like electricity, its transformative power lies not in the generation infrastructure but in what it enables when reliably and universally available. Like electricity, that universal availability will not emerge spontaneously from market mechanisms. It requires deliberate institutional architecture whose purpose is explicit: not efficiency for its own sake, but freedom as the destination.

> *The Freedom Pool is the answer: a commitment to use AI's deflationary power not merely to make things cheaper, but to make people freer. Markets require consumers. Democracy requires citizens. Freedom requires the material conditions within which it can actually be exercised.*

AI that destroys those conditions in the process of generating its surplus is not building the future. It is undermining the foundations of the civilization it purports to serve. The resolution of that paradox is not a technical problem. It is a political commitment: to the proposition that intelligence, like electricity before it, should be the infrastructure of human freedom rather than its replacement.

Based on the analytical framework developed in "The Deflationary Paradox of Artificial Intelligence" (Clippinger, First Principles First / Fintropic AI) and "Causal Active Inference: An Explainable Architecture for Adaptive Portfolio Management" (Montanez-Jacquez and Clippinger, Fintropic AI), incorporating Timothy Snyder's conception of positive freedom developed in *On Freedom* (2024).